

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 16, 2010)

**COMMENTS OF THE  
CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES  
ON THE PROPOSED DECISION ADOPTING  
ENERGY STORAGE PROCUREMENT FRAMEWORK AND DESIGN PROGRAM**

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits these Comments on the Proposed Decision Adopting Energy Storage Procurement Framework and Design Program (Proposed Decision). The Proposed Decision was issued in Rulemaking (R.) 10-12-007 on September 3, 2013. These Comments are timely filed and served pursuant to Article 14 of the Commission's Rules of Practice and Procedure and the instructions accompanying the Proposed Decision.

**I.  
INTRODUCTION**

CEERT commends Commissioner Peterman and her staff for thoughtfully evaluating and addressing parties' comments on the Assigned Commissioner's Ruling Proposing Storage Procurement Targets and Mechanisms (ACR) issued in this rulemaking on June 10, 2013. This was no small task in light of the many comments submitted and differing requests made by each party.

In doing so, the Proposed Decision makes several responsive modifications to the ACR and Storage Proposal. As discussed further below, CEERT particularly appreciates the Proposed Decision's revisions on issues related to the Loading Order, Reverse-Auction Mechanism (RAM), and timing of the implementation of the framework and targets.

However, as discussed in Section III, the Proposed Decision, like the ACR, continues to inappropriately exclude large-scale pumped storage from the adopted Energy Storage Procurement Framework (Storage Framework). This exclusion results in the Commission not only acting contrary to statute, but also ignoring the multiple benefits of pumped storage that include cost-effectively reducing both greenhouse gas (GHG) emission and reliance on fossil resources to meet energy needs. Although the Proposed Decision leaves open the possibility that large-scale pumped storage may be included in the framework in the future or suggests that this resource could be procured pursuant to “other general procurement efforts,” such vague directions do not comply with AB 2514 and ignore that there is no other “procurement effort” that would adequately consider this resource.

CEERT, therefore, strongly recommends that the Commission cure the Proposed Decision’s erroneous implementation of Assembly Bill (AB) 2514 by *including* large-scale pumped storage in the Storage Framework. CEERT offers specific modifications to correct that error. Alternatively, the Proposed Decision should be modified to identify a proceeding and a schedule in which large-scale pumped storage resources and procurement can be evaluated and authorized in a timely manner.

**II.**  
**THE PROPOSED DECISION CORRECTLY REVISES THE ACR ON**  
**ISSUES RELATED TO THE LOADING ORDER, RAM, AND TIMING.**

**A. The Loading Order**

The ACR originally stated that it is not necessary to formally revise the California Loading Order to include energy storage, because the “proposal prioritizes energy storage that optimizes grid operations and acts to reduce greenhouse gas emissions, and in providing such

services, energy storage fits within the spirit of the Loading Order.”<sup>1</sup> CEERT questioned this conclusion, which effectively placed energy storage in the Loading Order by an individual Commissioner’s ruling. From CEERT’s perspective, such action failed to recognize that “the Loading Order was developed *jointly* by California energy agencies, including this Commission and the California Energy Commission, and is not subject to change by ruling of one Commissioner.”<sup>2</sup> CEERT also noted the distinctions between “energy storage” and other Loading Order Resources as to type and treatment, especially the seemingly less rigorous scrutiny that would be accorded to energy storage by the ACR’s Storage Proposal.<sup>3</sup>

The Proposed Decision appropriately considers these arguments and the Commission’s previous determination in Decision (D.) 13-02-015 that it did “not intend to unilaterally reconsider the multi-agency Energy Action Plan.”<sup>4</sup> To that end, the Proposed Decision correctly concludes: “Consistent with D.13-[02]-015, we agree that the Loading Order should not be revised.”<sup>5</sup>

## **B. Reverse Auction Mechanism**

The ACR and Storage Proposal also chose to rely on a RAM, the merits of which, especially with respect to energy storage, were disputed by numerous parties, including CEERT. In response, the Proposed Decision fully considers these arguments and, again, correctly determines that the RAM “is not the appropriate mechanism for the procurement of energy storage.”<sup>6</sup> Instead, the Proposed Decision adopts a procurement based on Requests for Offers (RFOs), concluding that “competitive solicitations involving RFOs are the best mechanism to

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<sup>1</sup> ACR, at p. 21.

<sup>2</sup> CEERT Opening Comments on ACR, at p. 2.

<sup>3</sup> *Id.*, at pp. 3-4.

<sup>4</sup> Proposed Decision, n. 15, at p. 11 (citing D.13-02-015, at p. 17.)

<sup>5</sup> *Id.*, at p. 11.

<sup>6</sup> *Id.*, at p. 51.

meet the varying definitions and use cases of storage in a changing technology environment.”<sup>7</sup>

While CEERT generally agrees with this conclusion, for the reasons recited in Section III below, bilateral negotiations may be an appropriate means of facilitating the inclusion of large-scale pumped storage, as required by statute, in the final Storage Framework.

### **C. Procurement Targets and Coordination with Other Proceedings**

In its comments on the Storage Proposal, CEERT recommended that “no procurement targets should be set until energy storage technology eligibility and cost-effectiveness have been determined.”<sup>8</sup> In addition, CEERT urged harmonization between energy storage and other programs and that energy storage should provide maximum value to the ratepayer and utility.<sup>9</sup>

While the Proposed Decision concludes that the procurement targets set forth in the ACR’s Storage Proposal are appropriate, it delays the initial solicitation from June 1, 2014 to December 1, 2014.<sup>10</sup> By doing so, the Proposed Decision allows time to consider factors or refinements to these targets, including definition of the “use-case buckets based on the level of grid interconnection and not on potential functions of storage resources.”<sup>11</sup> The Proposed Decision also expressly finds that “[t]he procurement targets may be changed to reflect determinations in other Commission proceedings.”<sup>12</sup> CEERT believes that the additional 6 months provides an important opportunity to refine these targets based on the most current information.

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<sup>7</sup> Proposed Decision, at p. 51.

<sup>8</sup> CEERT Opening Comments on ACR, at p. 6.

<sup>9</sup> *Id.*, at p. 5.

<sup>10</sup> Proposed Decision, at p. 22.

<sup>11</sup> *Id.*, Conclusion of Law 3, at p. 66.

<sup>12</sup> *Id.*, Finding of Fact 8, at p. 65.

**III.**  
**THE PROPOSED DECISION ERRS IN EXCLUDING LARGE-SCALE  
PUMPED STORAGE AND MUST BE MODIFIED ACCORDINGLY.**

**A. In Excluding Large-Scale Pumped Storage from the Energy Storage Procurement Framework, the Proposed Decision Does Not Proceed in the Manner Required by Law.**

By statute, judicial review extends, among other things, to Commission decisions where the Commission “has not proceeded in the manner required by law.”<sup>13</sup> In this regard, the Commission’s regulatory jurisdiction extends to investor-owned public utilities *as defined by the Legislature in California’s PU Code.*<sup>14</sup> Only the Legislature “has plenary power” to “confer additional authority and jurisdiction upon the [C]ommission.”<sup>15</sup> Given this circumstance, applicable statute is the *primary authority* governing Commission action and, in turn, determining whether the Commission has “followed the law.”

For purposes of statutory construction, the courts have adopted and applied well-established principles, which, in turn, have been routinely followed by the Commission in its own decisions.<sup>16</sup> Those principles include (1) ascertaining the intent of the legislature so as to effectuate the purpose of the law,<sup>17</sup> (2) giving words used in a statute a plain and common sense meaning consistent with the statute’s “legislative purpose,”<sup>18</sup> (3) construing “a statute in context, keeping in mind the nature and purpose of the legislation,”<sup>19</sup> and (4) “reject[ing] an interpretation that would render particular terms mere surplusage, and instead seek to give

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<sup>13</sup> Public Utilities (PU) Code §1757; 1757.1.

<sup>14</sup> See, Cal. Const., Art. XII, Sections 3 and 5.

<sup>15</sup> Cal. Const., Art. XII, Section 5.

<sup>16</sup> See, e.g., Decision (D.) 01-11-031, at p.6.

<sup>17</sup> *California Teachers Assn. v. Governing Bd. of Rialto United School Dist.* (1997) 14 Cal.4th 627, 632; *Dyna-Med, Inc. v. Fair Employment Housing Com.* (1987) 43 Cal.3d 1379, 1386.

<sup>18</sup> *California Teachers Assn., supra*, 14 Cal.4th at 633; *People v. Valladoli* (1996) 13 Cal.4th 590, 597, 599, 602.

<sup>19</sup> *Dyna Med, Inc., supra*, 43 Cal. 3d at 1387, *People V. Valladoli, supra*, 13 Cal. 4th at 602; *Squaw Valley Ski Corp. v. Superior Court*, (1992) 2 Cal. App. 4th 1499, 1511.



significance to every word.”<sup>20</sup> These principles stem from a clear understanding of the “judicial role” in a democratic society, which is “to interpret laws, not to write them,” a power reserved to the legislative branch, and, in turn, to interpret statutes in accordance with the “expressed” intention of the Legislature.<sup>21</sup> Similarly, administrative regulations that either seek to alter a statute or “enlarge” its scope or are impermissibly vague are void.<sup>22</sup>

These legal requirements have particular importance where, as in the case of the Proposed Decision, its purpose is to “establis[h] the policies and mechanisms for procurement of electric energy storage pursuant to Assembly Bill 2514 (Pub.Util. Code §2836 *et seq.*).”<sup>23</sup> While the Proposed Decision identifies “guiding principles” in undertaking this task, *none of them* relate to the Commission’s legal responsibilities in construing and implementing a statute, the task at hand here, which requires the statute to be interpreted according to its plain meaning and purpose.<sup>24</sup>

In this case, *contrary* to the plain terms of AB 2514, the Proposed Decision continues to exclude large-scale (50 MW or more) pumped storage under the Energy Storage Procurement Framework.<sup>25</sup> While the Proposed Decision states that it is “sympathetic to parties’ arguments that pumped storage complies with storage definitions under AB 2514, ...the sheer size of pumped storage would dwarf other smaller, emerging technologies; and as such, inhibit the fulfillment of market transformation goals.”<sup>26</sup> On that ground alone, the Proposed Decision

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<sup>20</sup> *Bay Guardian Co. v. New Times Media LLC* (2010) 187 Cal. App. 4th 438, 453-454; see also, *City of San Jose v. Superior Court* (1993) 5 Cal.4th 47, 55. See also, *People vs. Cruz* (1996) 13 Cal. 4th 764, 782.

<sup>21</sup> *California Teachers Ass’n, supra*, 14 Cal.4th at 633. See, e.g., D.11-12-052, at p. 6.

<sup>22</sup> *Dyna Med, Inc., supra*, 43 Cal.3d at 1389; see also, *People v. Superior Court* (1988) 46 Cal.3d 381, 389-390.

<sup>23</sup> Proposed Decision, at p. 2.

<sup>24</sup> See, e.g., D.12-05-035, at pp. 13-15 (where “the primary task” of the decision is to implement statutory provisions, the Commission gives “primary weight to the rules of statutory construction.”)

<sup>25</sup> Proposed Decision, at p. 33.

<sup>26</sup> *Id.*

“find[s] it is appropriate to exclude large-scale pumped storage projects from the procurement mechanism outlined in this decision.”<sup>27</sup>

However, *nothing* in AB 2514 supports this outcome. It is not just a case of pumped storage “complying” with the “storage definitions under AB 2514,” which it does, but additionally that AB 2514 creates *no basis* to exclude that resource, regardless of size, from the procurement it authorizes. By its “plain terms,” the Commission’s authority to establish “energy storage system procurement targets and policies” pursuant to PU Code §2836 are expressly defined by the *first section* of AB 2514 – PU Code §2835.

Yet, Section 2835 is given short shrift in the Proposed Decision and even specifically *changed* as to its terms and meaning to conclude *without statutory support* that “all third-party owned energy storage resources as defined under Section 2835(a), except for large-scale pumped storage, would be eligible to bid into the RFO.”<sup>28</sup> To begin with, the *plain language* of Section 2835 does *not permit* this interpretation, and nothing in the Commission’s implementation of Section 2836 gives the Commission any authority to alter the terms of Section 2835. In fact, the plain language and meaning of Section 2835 requires the opposite result – that is, its definitions *control* the energy storage system procurement targets to be adopted by the Commission pursuant to Section 2836.

What does Section 2835 require for *eligible* “energy storage systems”? Namely, these systems are to be a “commercially available technology that is capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy.”<sup>29</sup> In addition the system (1) “may have” the characteristics of either being centralized or distributed and owned by solely or jointly by utilities, customers, or third parties; (2) “shall be” cost effective and either reduce

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<sup>27</sup> Proposed Decision, at pp. 33-34.

<sup>28</sup> *Id.*, at pp. 52-53.

<sup>29</sup> PU Code §2835(a)(1).

emissions of greenhouse gases, reduce demand for peak electrical generation, defer or substitute for an investment in generation, transmission, or distribution assets, or improve the reliable operation of the electrical transmission or distribution grid; and (3) “shall” use identified process for storing energy generated at one time for use at a later time or avoids the need to use electricity at that later time.<sup>30</sup> Further, “procurement” can be through direct ownership or by a “contractual right to use the energy.”<sup>31</sup> No size restriction is imposed on systems that meet these eligibility criteria and, more importantly, *no basis or authority* is provided permitting the Commission to impose such a restriction.

Consistent with this language, in fact, the Commission, in D.12-08-016, has already interpreted the “energy storage” definition under PU Code Section 2835(a) to be “technology-neutral” and focused on the “attributes” (not the size) of “energy storage and potential applications throughout the electric system.”<sup>32</sup> In D.12-08-016, the Commission further concluded: “[T]he proposed framework should not prevent progress in policies for individual end-uses or applications, as analyses and results become available, while the larger evaluation continues.”<sup>33</sup> By D.12-08-016, the Commission also did not find any basis for excluding large-scale pumped storage, where it meets all of the requirements of the Commission’s interpretation of PU Code Section 2835(a), from a final adopted framework.

Thus, there is no question, as EDF Renewable Energy stated in its comments on the ACR that “[p]umped storage hydro systems ... fit squarely within the definition of eligible technologies set out in [PU Code] § 2835(a).”<sup>34</sup> As the Comments filed by EDF Renewable

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<sup>30</sup> PU Code §2835(a)(2), (3), and (4).

<sup>31</sup> PU Code §2835(f).

<sup>32</sup> D12-08-016, at p. 28.

<sup>33</sup> *Id.*, at p. 29.

<sup>34</sup> EDF Renewable Energy Opening Comments on ACR, at p. 3.

Energy also demonstrated, in addition to being a statutorily eligible technology, large-scale pumped storage “provides numerous benefits outlined in the legislation,” such as the following:

- Integrating intermittent generation from eligible renewable energy into the reliable operation of the transmission and distribution grid.
- Allowing intermittent generation from eligible renewable energy resources to operate at or near full capacity.
- Reducing the need for new fossil-fuel powered peaking generation facilities by using stored electricity to meet peak demand.
- Reducing purchases of electricity generation sources with higher emissions of greenhouse gases.
- Eliminating or reduce transmission and distribution losses, including increased losses during periods of congestion on the grid.
- Reducing the demand for electricity during peak periods and achieve permanent load-shifting by using thermal storage to meet air-conditioning needs.
- Avoiding or delaying investments in transmission and distribution system upgrades.
- Providing the ancillary services otherwise provided by fossil-fueled generating facilities.<sup>35</sup>

In fact, as pointed out by many parties “pumped storage hydro is one of only a few technologies that are likely to be able to satisfy the statute’s dual requirement that utility procured storage systems be both viable and cost effective.”<sup>36</sup> The Proposed Decision, in fact, summarizes the broad support for inclusion of pumped storage, especially as consistent with applicable law, and, not surprisingly, is left to concede that “[o]nly a few parties endorse the exclusion of pumped storage from the roster of acceptable end use applications.”<sup>37</sup>

Despite these circumstances and in a manner “inconsistent” with the plain language and meaning of Section 2835, the Proposed Decision nevertheless proceeds to exclude large-scale

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<sup>35</sup> EDF Renewable Energy Opening Comments on ACR, at pp. 4-5.

<sup>36</sup> EDF Renewable Energy Reply Comments on ACR, at p. 3; citing PG&E Opening Comments, at p. 14; SCE Opening Comments, at pp. 4-5; Pilot Power Group Opening Comments, at p. 8; CalWEA Opening Comments, at pp. 10-11; Alton Energy Opening Comments, at p. 6. See also, CESA Opening Comment at p. 5 (“pumped hydroelectric energy storage provides valuable grid services in a cost-effective manner.”)

<sup>37</sup> Proposed Decision, at p. 30.

pumped storage from the Storage Framework.<sup>38</sup> Put simply, this authority does not exist in the law and, if the Proposed Decision is upheld on this point, the Commission will have acted contrary to statute.

In addition, not only does this exclusion mean that the Proposed Decision has failed to “follow the law,” but such an action is adverse to other State energy policies and needs. Thus, excluding large-scale pumped storage from the Energy Storage Framework is inconsistent with AB 2514, the goals of the Energy Storage Framework, the Long-Term Procurement Plans (LTPP), and the general policy goal of making California less-reliant on fossil fuels, particularly given the retirement of the San Onofre Nuclear Generating Station (SONGS). It would be harmful to California to exclude a technology that can actually meet the requirements of the Energy Storage Framework. Furthermore, ratepayers deserve to reap the benefits of such a viable and well-established technology.

**B. To Comply with the Law and Meet Current Energy Needs and Policies, the Proposed Decision Must be Modified to Include Large-Scale Pumped Storage in the Energy Storage System Procurement Targets Adopted Pursuant to PU Code Section 2836.**

The law and record in this case make clear that exclusion of large-scale, pumped storage from the Storage Framework adopted pursuant to PU Code § 2836 is not justified. In addition to meeting the eligibility requirements of AB 2514, pumped storage is the definition of the “viable and cost-effective energy storage system” that the Storage Framework was specifically required to include and target for procurement.<sup>39</sup>

The Proposed Decision claims that its “exclusion is not to discourage pumped storage projects,” which it admits “offer the same or better potential benefits as all of the emerging

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<sup>38</sup> Proposed Decision, at p. 30.

<sup>39</sup> Id., Finding of Fact 1, at p. 64; emphasis added.

storage technologies targeted by this program.”<sup>40</sup> Yet, the Proposed Decision’s “exclusion,” which, in turn, fails to provide for a procurement mechanism designed to recognize and target those benefits for procurement, not only “discourages” pumped storage projects, but also creates unnecessary uncertainty for their future. The Proposed Decision suggests that “other general procurement efforts underway in the context of the LTPP proceeding or elsewhere” offers sufficient encouragement to utilities “to explore opportunities to partner with developers to install such large pumped storage projects.”<sup>41</sup> However, the Proposed Decision does not explain how the LTPP or any other “general procurement effort” in fact is tailored to the procurement or “encouragement” of pumped storage projects in any way.

In fact, the LTPP decisions and the current Track 4 (SONGS) of R.12-03-014 (LTPP) only reflect an intent to rely on storage – *to the extent it materializes* – instead of fossil resources to meet local resource needs, including those arising from the retirement of SONGS and Once-Through-Cooling (OTC) projects. In this regard, the Commission in D.13-02-015 (LTPP Track 1 (Local Capacity Requirements (LCR)) sought “to promote the inclusion of energy storage technologies in SCE’s upcoming procurement process”<sup>42</sup> and determined that this resource, among others, result in “far lower levels of new generation procurement” being “needed to satisfy needs in the LA basin local area than recommended by the ISO.”<sup>43</sup> Yet, the 50 MWs of mandated amount of energy storage procurement resulting from that decision and the still uncertain future of procurement “pilots” aimed at preferred resources generally are not sufficient to either “encourage,” much less, provide a procurement authorization or “target” sufficient to

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<sup>40</sup> Proposed Decision, at p. 34.

<sup>41</sup> *Id.*, at p. 34.

<sup>42</sup> D.13-02-015, at p. 61.

<sup>43</sup> *Id.*, at pp. 66, 81.

even “encourage” utility procurement of large-scale pumped storage.<sup>44</sup> Further, while the Proposed Decision states that “[i]n the longer term, we *expect* that any procurement of energy storage will be increasingly tied to need determinations within the LTPP proceeding,”<sup>45</sup> the Commission is clearly not there yet and must recognize that its AB 2514 Storage Framework offers the best and only means today to effectively encourage procurement of storage resources, *including* large-scale pumped storage.

The need to look toward resources *other than fossil generation* to address SONGS closure and OTC retirements is immediate, and large-scale pumped storage, a well-established technology with proven benefits, clearly offers one of the best means to meet that need, *consistent* with the directives of AB 2514. In fact, the exclusion and vague treatment of pumped storage is also wholly at odds with the Proposed Decision’s stated goal for its procurement targets to “strike a balance between both achieving realistic targets in fulfillment of approved principles and minimizing costs with proper planning and safeguards.”<sup>46</sup> Given this goal, coupled with cost-effectiveness requirements of AB 2514, exclusion of large-scale pumped storage is simply not warranted as a matter of law, policy, or fact.

In addition, there are still many barriers to the development of large-scale pumped hydro that makes its eligibility for the Energy Storage Framework just as necessary as it is for other storage technologies. These include a long development lead time, Resource Adequacy (RA) rules that do not target resources like pumped storage that are developed seven years into the future, RPS program rules that may not adequately factor in pumped storage, and a California Independent System Operator (CAISO) interconnection process that does not provide a defined

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<sup>44</sup> D.13-02-015, at pp. 2, 130, 133; SCE Track 4 Testimony, at pp. 51, 55-56.

<sup>45</sup> Proposed Decision, at p. 33.

<sup>46</sup> *Id.*, at p. 25.

process for bulk energy storage projects.<sup>47</sup> Inclusion of large-scale pumped storage in the Energy Storage Framework would help resolve these existing barriers.

Given these policy and legal considerations, CEERT strongly recommends that the Commission modify the Proposed Decision to include large-scale pumped storage in any Storage Framework adopted pursuant to AB 2514. Given that “size” was the sole basis for its exclusion and “caps” on either the statewide or individual utility procurement targets are not statutorily limited, CEERT believes that the Commission should revise those program parameters in a manner that will continue to advance emerging technologies, while authorizing utility procurement from an established technology, like pumped storage, especially to ensure that the benefits of those technologies are realized by ratepayers today.

In this regard, the current total energy storage procurement targets for Pacific Gas & Electric (PG&E) and Southern California Edison (SCE) are 580 MWs each by 2020 and the target for San Diego Gas & Electric (SDG&E) is 165 MW by 2020; for a total of 1,325 MWs for all three utilities by 2020.<sup>48</sup> As part of this record, EDF Renewable Energy specifically proposed that the Commission could, at a minimum, require “each of the investor-owned utilities to enter into at least one bilateral contract for a pumped storage hydro project, . . . , with the requisite Commission review of the contracts to determine prudence for California’s electric ratepayers.”<sup>49</sup> This could be accomplished as either a separate requirement from the procurement targets or by expanding the IOUs’ individual procurement targets up to 400 MW each to permit such procurement with a negligible, if any, reduction in the megawatts allotted for the smaller, emerging technologies.

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<sup>47</sup> EDF Renewable Energy Opening Comments on ACR, at pp. 5-6. Large-scale pumped storage is de facto excluded from the RPS due to the fact that it does not fall at or below the 30 MW nameplate.

<sup>48</sup> Proposed Decision, at pp. 15, 22.

<sup>49</sup> EDF Renewable Energy Opening Comments, at p. 8.



Each IOU would not be mandated to enter such a contract, but rather would have the authority to do so if an opportunity arose that otherwise met the IOU's cost-effectiveness evaluation within the Storage Framework's timeframe of 2014 through 2020. While CEERT generally agrees that a competitive RFO is a preferred means of procurement for the emerging storage technologies, CEERT does not expect that these technologies should be made to compete with pumped storage, likely a tall, if not impossible, order. In those circumstances, bilateral negotiations for pumped storage would be preferable, as long as the final proposed contract is reviewed and approved by the Commission. The Advice Letter process (Tier 3) utilized for RPS contracts would afford an appropriate and meaningful opportunity for review (i.e., for cost-effectiveness) and approval by the Commission, staff, and stakeholders.

**C. Alternatively, the Proposed Decision Must Be Modified to Specifically Identify a Commission Proceeding and Schedule to Evaluate and Authorize Procurement of Large-Scale Pumped Storage in a Timely Manner.**

Clearly, on legal, policy, and factual grounds, the Commission should move to correct the Proposed Decision to include large-scale pumped storage in the Storage Framework, inclusive of modifications tailored to meet the goals of reaching both emerging and established storage technologies. These steps are required by the law and warranted especially to ensure that storage will play a greater role in meeting energy needs in a manner that reduces both GHG emissions and reliance on fossil resources.

If, however, the Commission elects to support the Proposed Decision's exclusion of large-scale pumped storage from the Energy Storage Framework, CEERT asks, in the alternative, that the Proposed Decision be modified to identify a specific Commission proceeding and schedule to evaluate and authorize procurement of large-scale pumped storage in a timely manner. Letting such a valuable technology continue to languish for want of a "procurement

mechanism” will effectively rob Californians of the numerous benefits provided by large-scale pumped storage.

In this regard, to date, there is no current Commission rulemaking that is addressing and evaluating the benefits of large-scale pumped storage and other proceedings (as noted above) are not presently sufficient or dedicated to that goal. In these circumstances, if the exclusion remains, the Proposed Decision should specifically designate a proceeding and schedule for the evaluation and procurement of large scale, pumped storage, with a final decision targeted no later than December 2014 in a timely manner. It is this kind of certainty that is required to actually “encourage” the development of these valuable projects.

#### **IV. CONCLUSION**

CEERT welcomes this opportunity to provide constructive comments on the Proposed Decision. CEERT urges the Commission to adopt the Proposed Decision with the inclusion of large-scale pumped storage as part of the Energy Storage Framework, consistent with CEERT’s Comments above and Appendix A (Proposed Findings of Fact, et al.) hereto.

Respectfully submitted,

September 23, 2013

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## APPENDIX A

### PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDERING PARAGRAPHS

As supported by the preceding Comments, CEERT recommends that the following modifications be made to the Proposed Decision's Findings of Fact, Conclusions of Law, and Ordering Paragraphs.

Please note the following:

- A page citation to the Proposed Decision is provided in brackets for each Finding of Fact, Conclusion of Law, and Ordering Paragraph for which a modification is proposed.
- Any proposed additional or new Finding of Fact, Conclusion of Law, or Ordering Paragraph is not numbered, but is identified as a "NEW."
- Added language is indicated by **bold type**; removed language is indicated by **bold strike-through**.

#### **PROPOSED FINDINGS OF FACT:**

6. [65] The procurement targets set for PG&E, SCE and SDG&E are within three specific grid domains – transmission-connected, distribution-connected, and customer-side applications – **and include a separate target to permit procurement of large-scale, pumped storage without reducing the targets for emerging technologies.**

10. [65] The majority of pumped storage projects **may start at are 5400 MW or over.**

11. [65] **~~A single pumped storage project could account for the entire procurement target within a utility territory.~~**

[65] The ~~sheer~~ size of large-scale pumped storage project would **not** dwarf other smaller, emerging technologies and ~~could~~ **would not** inhibit the fulfillment of market transformation goals.

12. [65] The ~~potential sheer~~ size of a large-scale pumped storage project **warrants a separate target that can be met by bilaterally negotiated contracts to avoid diminishing targets for ~~would dwarf other~~** smaller, emerging technologies and ~~could avoid~~ **inhibiting the fulfillment of market transformation goals for those emerging technologies.**

15. [65] The definition of energy storage system embraces a mix of ownership models **and defines system eligibility, which includes large-scale pumped storage systems.**

16. [66] A reverse auction mechanism is more appropriate for procuring more standardized energy products and services in a commercially mature market.

17. [66] Energy storage has multiple attributes and functions that cross the spectrum of wholesale and retail markets and transmission & distribution services.

18. [66] An RFO enables the utility to tailor a solicitation **for emerging energy storage technologies that can ~~to~~** reflect specific resource needs and criteria.

19. [66] **While ~~B~~ bilateral contracts generally may ~~do~~ not provide the same level as transparency as the RFO process, the negotiation of such contracts for the procurement of large-scale, pumped storage as part of the Storage Framework is appropriate here to the extent that the proposed contract is reviewed and approved by the Commission pursuant to a Tier 3 advice letter process.**

#### **PROPOSED CONCLUSIONS OF LAW:**

5. [66] It is reasonable to set procurement targets to encourage the development and deployment of new energy storage technologies **and to include eligible large-scale pumped storage technologies.**

9. [67] It is **not reasonable and not consistent with AB 2514** to exclude pumped storage projects 50 MW and over from participating in the Energy Storage Procurement Framework and Design Program, **but it is reasonable to provide for a target and procurement mechanism specific to and separate from the RFO for emerging technologies.**

26. [67] Energy storage systems should be procured under a competitive solicitation for **offers for emerging technologies, with procurement of large-scale pumped storage**

permitted pursuant to bilateral negotiations to the extent that the resulting contract is reviewed and approved through a Tier 3 advice letter process.<sup>50</sup>

**PROPOSED ORDERING PARAGRAPHS:**

1. [69] The Energy Storage Procurement Framework and Design Program attached as Appendix A to this decision, is adopted, **including the changes authorized by this decision to include the procurement of large-scale, pumped storage in the manner defined here and in Appendix A.**

**NEW ORDERING PARAGRAPH: Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company shall be authorized to enter bilateral negotiations for the procurement of large-scale pumped storage in the targeted amount between 2014 and 2020. Any resulting contract shall not take effect until reviewed and approved by the Commission pursuant to a Tier 3 advice letter process.**

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<sup>50</sup> The order of numbering for the Conclusions of Law in the Proposed Decision was not continuous, with Conclusion of Law 10 being followed by Conclusion of Law 20. CEERT has used the numbering as it appears in the Proposed Decision and not correct this order.