Decision **ALTERNATE PROPOSED DECISION OF COMMISSIONER PICKER**
(Mailed 6/11/14)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company (U39E) for Approval of Demand Response Programs, Pilots and Budgets for 2012-2014.	Application 11-03-001 (Filed March 1, 2011)
And Related Matters.	Application 11-03-002 Application 11-03-003

DECISION ON CALIFORNIA ENERGY STORAGE ALLIANCE'S PETITION FOR MODIFICATION OF DECISION 12-04-045

1. Summary

This decision grants in part the California Energy Storage Alliance's (CESA's) request to modify Decision 12-04-045 to find that small thermal energy storage systems should not be categorized as "mature" technology and should, until such time as the Commission develops a record on and specific criteria for "emerging" technology, be treated as "emerging" technology and thus not eligible for the Permanent Load Shifting Program. CESA's petition for modification did comply with Rule 16.4(b) of the Commission Rules of Practice and Procedure (Rules) in that it provides evidence of new or changed facts, and Rule 16.4(d) in that it adequately explained why it was not presented within one year of the effective date Decision 12-04-045. This proceeding is closed.

2. Procedural Background

On August 12, 2013, the California Energy Storage Alliance (CESA) filed a petition for modification of Decision (D.) 12-04-045 (Petition).[1] CESA claims that the Petition complies with Commission Rule 16.4(d)[2] because the Permanent Load Shifting (PLS) program[3] was not implemented until May 2013 and the Petition relies on statements contained in Resolution E-4586, which approved the PLS program.[4]

In its Petition, CESA requests that the California Public Utilities Commission (Commission) modify D.12-04-045 by revising the categorization of small thermal energy storage systems integrated with direct expansion refrigerant based air conditioning units sized at 20 tons or less to offset on-peak energy consumption (small TES) from mature technology to emerging technology. Furthermore, CESA requests the Commission to modify D.12-04-045

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[1] D.12-04-045 approved budgets and activities for the four investor-owned utilities' demand response programs.

[2] Rule 16.4(d) states, "Except as provided in this subsection, a petition for modification must be filed and served within one year of the effective date of the decision proposed to be modified. If more than one year has elapsed, the petition must also explain why the petition could not have been presented within one year of the effective date of the decision. If the Commission determines that the late submission has not been justified, it may on that ground issue a summary denial of the petition."

[3] PLS involves storing electricity produced during off peak hours and using the stored energy during peak hours to support loads. (*See* D.12-04-045 at 146.) The PLS program, approved initially by the Commission in April 2012, provides incentives for customers to invest in PLS technology.

[4] Resolution E-4586, approved by the Commission on May 9, 2013, implements a standardized statewide PLS Program for the territories of the Utilities. (*See* the Utilities Response at Attachment C.)

in order to confirm that small TES are not eligible for incentives under the Commission's PLS program.

CESA makes the following assertions in its Petition to prove that small TES are emerging technologies rather than mature technologies:[5]

- Small TES have only become commercially available since 2005 and remain commercially available only for commercial and industrial applications.
- Small TES are only commercially available factory-direct.
- Potential customers of small TES have no readily available mechanism to finance project costs, such as an on-bill repay programs.
- The return on investment in small TES typically exceeds 20 years, which cannot support commercially meaningful small TES market expansion in California.

CESA notes that, simultaneous to the deliberations regarding the PLS program, the Commission approved D.11-09-015, modifying the Self Generation Incentive Program (SGIP) and granting eligibility to stand-alone advanced energy storage technologies on an interim basis.[6] CESA points out that in D.11-09-015, the Commission concluded that market transformation is promoted by incentivizing adoption of relatively new technologies that have the potential to achieve sufficient market adoption to realize substantial cost reductions through economies of scale.[7]

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[5] The assertions are provided in the Petition in the Declaration of Janice Lin at 2-3.

[6] D.11-09-015 also clarified that "if a future Commission decision in another proceeding provides comparable funding for incentives to customer-sited advanced energy storage, or a particular subcategory of TES, the incentives provided to TES (or subcategory thereof) under the SGIP should be removed as to prevent multiple incentives encouraging the same resource."(*See* Utilities Response at 4 citing D.11-09-015 at 19-20.)

[7] Petition at 3 citing D.11-09-015 at Conclusion of Law 3.

Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (jointly, the Utilities), and the Office of Ratepayer Advocates (ORA)[8] filed protests on (respectively) September 10, 2013 and September 11, 2013.

In its response, the Utilities contend that the CESA Petition is untimely in that it was filed after the 12-month period permitted by Rule 16.4. However, if the Commission finds that the Petition is timely, the Utilities claim the Petition should be denied because the record in Application (A.) 11-03-001 et al. is contrary to the assertions of the Petition and the Lin testimony. Furthermore, the Utilities contend that the Lin testimony does not support the relief requested by CESA. Lastly, the Utilities claim that Advice Letters (ALs), filed by the Utilities as directed by Resolution E-4586, include examples of small TES listed as types of mature TES systems eligible for PLS.[9] The Utilities assert that the "inclusion of these technologies in the PLS program, including small [TES] integrated with air conditioning systems, reflect the fact that they are mature technologies which are commercially available."[10]

ORA does not oppose the request to classify small TES as an emerging technology. However, ORA recommends that the Commission consider the impact of the classification on the PLS program and the SGIP. Furthermore ORA

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[8] At the initiation of this Petition, the Division of Ratepayer Advocates (DRA) filed the protest. In September 2013, the California Governor signed legislation renaming DRA the Office of Ratepayer Advocates (ORA). All pleadings filed under the name of DRA will be considered as filed by ORA.

[9] Utilities Response at 10.

[10] *Ibid*.

cautions the Commission to assess the combined ramifications of this Petition and the AL 40[11] for the SGIP.

Pursuant to Rule 16.4 (g), after receiving permission from the assigned Administrative Law Judge (ALJ), CESA filed a reply to the protests on September 23, 2013. Any relevant additional information provided by CESA in this reply is referenced in the discussion below.

3. Discussion

Before addressing the merits of any petition for modification, the Commission must determine: 1) whether the Petition is timely and, if the Petition is timely; and 2) whether the Petition provides ample support of allegations of new or changed facts.[12] As discussed below, we find that the small TES systems integrated with direct expansion refrigerant based on air conditions units of 20 tons or less should be deemed as "emerging" technologies for the interim until the Commission can develop a fuller record and more specific criteria for what constitutes an "emerging" [AES] technologies.

The Utilities contend that because the issue of mature versus emerging PLS technology was directly addressed in D.12-04-045 and Resolution E-4586,

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[11] On August 14, 2013, the California Center for Sustainable Energy (CCSE) filed an AL proposing to modify the eligibility and metering requirements and the incentive calculation methodology in the SGIP Handbook for Advanced Energy Storage technologies. CCSE also proposes to modify the eligibility requirements for emerging small TES projects so that if they meet the California Energy Commission Title 24 Building Energy Efficiency Compliance Option eligibility requirements, TES systems may qualify as a building energy savings measure and thereby meet the SGIP minimum operating efficiency and related greenhouse gas emission reduction criteria. (*See* ORA Response at 2.)

[12] Here, the Commission intends that "new" facts are those facts that would not have been available at the time the Commission deliberated D.12-04-045.

CESA has no justification for delaying its petition and the Commission should issue a summary denial.[13]

In its reply to the Utilities' response, CESA states that it had initially filed a Petition for Modification of D.11-09-015 but the Commission's Docket Office rejected it because it should have been properly filed in the successor proceeding. CESA explains that, upon guidance by Commission Staff, CESA refiled the Petition in A.11-03-001 et al., noting that the policy question of the program eligibility of emerging versus mature was dealt with in both proceedings.[14] Furthermore, CESA contends that since the PLS program was not implemented until May 2013 and because the Petition relies on statements from the resolution approving the PLS program, E-4586, the late submission of the Petition is justified. We find that the Petition complies with Commission Rule 16.4(d) in that the Petition provides an adequate explanation of why the petition could not have been presented within one year. We now discuss whether CESA adequately supports its allegations of new or changed facts.

In its Petition, CESA argues that D.12-04-045 and Resolution E-4586 do not adequately define whether a specific TES technology is mature or emerging, and thus eligible for PLS. Specifically, D.12-04-045 states that the PLS program is intended to provide incentives to "mature" thermal energy storage technologies, but provides no specific definition for what constitutes a "mature" thermal energy storage technology.[15] The Commission considered this same question in

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[13] Utilities Response at 2.

[14] CESA reply at 3.

[15] D.12-04-045, Section 7.7.3.3 at 151-52.

Resolution E-4586 and determined that there was insufficient factual record to determine whether any specific technology is not mature.[16]

We agree with CESA that D.12-04-045 and Resolution E-4586 do not provide adequate definition of what specific eligibility criteria should be applied to TES technologies to determine whether they should be categorized as emerging or mature. In the absence of a clear definition of what constitutes an 'emerging' technology in either D.12-04-045 or Resolution E-4586, and until such time as the Commission develops a record and provides a clear criteria for "emerging" technologies, the Self Generation Incentive Program's guidance on this matter serves as a reasonable interim substitute. In D.11-09-015, the Commission states that new technologies may become eligible for SGIP emerging technology program component if, among other criteria, they have been commercially available for ten years or fewer at the time they seek to enter the SGIP program.[17] With this in mind, we find that the fact that Small TES systems have been available for sale for less than ten years[18] meets the SGIP's "emerging technology" criteria. It is therefore reasonable to grant the Petition for

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[16] Resolution E-4586 at 5-6.

[17] D.11-09-015, 4.2.3 Other Advanced or Emerging Technologies at 19, *"new technologies may become eligible for inclusion in SGIP as an emerging technology if their first commercial installation is less than ten years prior to SGIP funding"*

[18] CESA Petition for Modification of D.12-04-045, Declaration of Janice Lin at 5. *"Small thermal energy storage systems integrated to offset peak energy consumption of direct expansion refrigerant based air conditioning units less than or equal to 20 tons ("Small TES") are not a mature technology because they were first tested in California with Anaheim Public Utilities in late August2004 and first became commercially available in January 2005. The first Small TES utility rebate was approved by the Anaheim City Council for offer by Anaheim Public Utilities in July 2006."*

Modification of D.12-04-045, thus making Small TES ineligible for the PLS program due to the fact that they are not deemed "mature" technologies.

Both the Utilities and ORA argue that CESA is only seeking a change because it is dissatisfied with the PLS incentives provided for small TES through Resolution E-4586.[19] While neither party provides evidence of this motive, we reiterate that the definition of "emerging" technology would benefit from a fuller record and more specific criteria. The PLS program was designed to support the deployment of 'mature' technologies through incentives levels that are explicitly set based on cost-effectiveness tests. In fact, the PLS incentives proposed by the Utilities were designed with Total Reserve Cost, Program Administrative Cost (PAC) and Rate Impact Measure cost effectiveness in mind, with each of the Utilities proposed incentive level achieving a PAC of above 1.0.[20] Furthermore, in considering the merits of including added incentives for emerging storage technologies, the Commission Decision that implemented the PLS program (D.12-04-045) found that the SGIP program already funded emerging storage technologies and thus doing so as part of the PLS program would be duplicative.[21] By comparison, the SGIP does not utilize cost-effectiveness metrics as the basis for determining incentive eligibility and instead uses greenhouse gas reductions as the primary eligibility criteria,[22] while market transformation potential is a secondary criteria.[23] The relatively short period in which small TES

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[19] ORA Responses at 1 2 and Utilities Response at 2 4.

[20] D.12-04-045, section 7.7.3.3, p. 149

[21] D.12-04-045, section 7.7.3.3, p.151

[22] D.11-09-015, Findings of Fact 3, p.67

[23] D.11-09-015, 4.1 at p.9

systems have been commercially available, coupled with its potential for market transformation through increased adoption, suggest that the PLS program was not the right place for small TES systems to seek incentives, and that small TES systems warrant a classification "emerging."

4. Comments on Alternate Proposed Decision

The alternate proposed decision of Commissioner Picker in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. California Clean Distributive Generation Coalition, California Energy Storage Alliance, Ice Energy, Inc., Pacific Gas and Electric Company, and Southern California Gas Company filed comments on July 1, 2014. California Energy Storage Alliance and Ice Energy, Inc. filed reply comments on July 7, 2014.

5. Assignment of Proceeding

Michael R. Peevey is the assigned Commissioner and Kelly A. Hymes is the assigned ALJ in this proceeding.

Findings of Fact

1. The CESA claims that, since the Permanent Load Shifting program was not implemented until May 2013, and because the Petition relies on statements from the resolution approving the PLS program, E-4586, the late submission of the Petition is justified.

2. Commission Decision 12-04-045 and Resolution E-4586 provide that only "mature" thermal energy storage technologies should be eligible for the PLS program.

3. Commission D. 12-04-045 and Resolution E-4586 do not provide specific guidance regarding how to categorize Small TES technologies as either

"emerging" or "mature," and Resolution E-4586 acknowledges that there is an insufficient factual record to determine whether any particular TES is not mature, or emerging.

4. The SGIP deems ten years or less of commercial availability as one of its standards to determine eligibility under its "Advanced or Emerging Technologies"' program component.

5. Small Thermal Energy Storage Systems integrated to offset peak energy consumption of direct expansion refrigerant based air conditioning units less than or equal to 20 tons have been commercially available for less than ten years, and thus meet the SGIP's criteria for "emerging" technology.

6. 'Emerging' technologies are not eligible for the Permanent Load Shifting (PLS) Program, thus Small TES Systems integrated to offset peak energy consumption of direct expansion refrigerant based air conditioning units less than or equal to 20 tons are not eligible for the PLS Program.

Conclusions of Law

1. The Petition complies with Commission Rule 16.4(d) in that CESA provides an adequate explanation of why the petition could not have been presented within one year.

2. The Petition complies with Commission Rule 16.4 (b) in that CESA submitted a declaration with their petition for modification of D.12-04-045 adequately explaining that a petition for modification had not been filed within a year of that date because the PLS Program was not implemented, and the program details were not finalized, until May 2013 when the Commission approved Resolution E-4586.

3. It is reasonable to approve CESA's petition for modification of D.12-04-045 insofar as Small TES Systems should be deemed as an emerging

technology on an interim basis until the Commission develops a record on and approves specific criteria for emerging technologies, and thus are not eligible for the Permanent Load Shifting (PLS) Program.

O R D E R

IT IS ORDERED that:

1. The Petition for Modification of Decision 12-04-045 by the California Energy Storage Alliance is approved insofar as Small Thermal Energy Storage Systems should be deemed as an emerging technology on an interim basis until the Commission develops a record on and approves specific criteria for emerging technologies.
2. Decision 12-04-045 is modified as provided in Appendix A of this Decision.
3. Application (A.) 11-03-001, A.11-03-002, and A.11-03-003 are closed.

This order is effective today.

Dated _____, at San Francisco, California.

APPENDIX A

Modifications to D.12-04-045

MODIFICATIONS TO D.12-04-045, AS SET FORTH IN THE CALIFORNIA ENERGY STORAGE ALLIANCE'S PETITION FOR MODIFICATION:

A. The Discussion Section of D.12-04-045 is be modified as follows:
"We note that the DR PLS incentives approved in this decision apply to mature thermal energy storage technology, **except refrigerant based air conditioning units less than or equal to 20 tons,** and are therefore not eligible for incentives under the Self-Generation Incentive Program pursuant to the guidelines adopted in D.11-09-015." (p. 152)

B. Ordering Paragraph 61 of D.12-04-045 is modified as follows:
"The request for proposals and funding for the Permanent Load Shifting emerging technology programs, **including refrigerant based air conditioning units less than or equal to 20 tons**, are denied **because the PLS Program is limited to mature techno**