



**DOCKETED**

<b>Docket Number:</b>	20-MISC-01
<b>Project Title:</b>	2020 Miscellaneous Proceedings.
<b>TN #:</b>	233001
<b>Document Title:</b>	AB 2514 - Redding Electric Utility 2017 Letter for Approval of Energy Storage Compliance Plan
<b>Description:</b>	N/A
<b>Filer:</b>	Courtney Wagner
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	5/15/2020 4:08:36 PM
<b>Docketed Date:</b>	5/15/2020



# CITY OF REDDING

## REPORT TO REDDING CITY COUNCIL

<b>MEETING DATE:</b> September 19, 2017 <b>ITEM NO.</b> 4.5(e) [E-120-022]	<b>FROM:</b> Daniel Beans, Interim Director of Electric Utility
<b>SUBJECT:</b> 4.5(e)--Approve the Updated Energy Storage Compliance Plan-02	
<b>***APPROVED BY***</b>	
 Daniel Beans, Interim Director of Electric Utility 9/5/2017	 Barry Tippin, City Manager 9/10/2017

### ***Recommendation***

Approve the updated Energy Storage Compliance Plan-02 (ESCP-02) in accordance with Assembly Bill 2514 (AB 2514) Energy Storage Systems (2010) and amended by the passage of Assembly Bill 2227 (AB 2227) in 2012.

### ***Background***

As the Redding City Council (Council) may be aware, Redding Electric Utility (REU) has been actively investing in energy storage systems for nearly twelve (12) years and has been installing Thermal Energy Storage (TES) systems in increasing quantities since 2005. TES systems were designed for warm climates and perform well in areas like Redding, shifting electrical demand (MW) from premium peak hours to the off-peak hours, thus creating system efficiencies. These efficiencies benefit REU customers by reducing the need for more expensive on-peak resources in the future, increasing efficient utilization of existing power and distribution of assets/supplies while meeting the requirements of AB 2514 and AB 2227. AB 2227 added to the requirements of AB 2514 by mandating local, publicly owned electric utilities, such as REU, to submit a report before January 1, 2017, and January 1, 2021, to the California Energy Commission (CEC). This report would demonstrate compliance with the procurement targets of the energy storage system and policies adopted by the Council. On December 29, 2016, REU submitted the required AB 2227 related report to the CEC showing REU was on track with the Council approved procurement targets of October 1, 2014.

AB 2514 requires consideration to the development of energy storage programs for all load-serving entities – investor-owned utilities and publicly owned utilities – in California. To accomplish this mandate, legislation established the following date-specific action items:

- On or before March 1, 2012 – Under AB 2514, REU was required to initiate proceedings for the Council to determine appropriate energy storage procurement targets, if any, to be achieved by December 31, 2016, and December 31, 2020. The procurement targets, if determined to be appropriate, had to be adopted by October 1, 2014.

- February 2012 – In response to the previously mentioned deadline of March 1, 2012, the Council initiated compliance proceedings by adopting an ongoing analysis of TES market potential in Redding as part of the City’s requirement for the 2016 and 2020 procurement targets. This process satisfied the first of the two AB 2514 milestones mentioned above.
- May 2012 – To comply with the development of procurement targets before to the second milestone, REU contracted with Redding’s primary supplier of TES systems, Ice Energy, Inc., to evaluate the level of TES capacity that could reasonably be installed within REU’s service area. A citywide market survey was completed by the company revealing up to 14 megawatts (MWs) of permanent load shifting (PLS) that could be achieved in Redding with the expansion of REU’s existing TES Program.
- June 2012 – While not legislatively mandated to do so, the Council approved the expansion of REU’s TES Program. This Program provided the framework for Redding’s Energy Storage Compliance Plan (ESCP) and is the mechanism for meeting the requirements outlined in AB 2514. The TES Program expansion provided for approximately 2 MW of incremental PLS, in addition to REU’s existing TES/PLS already procured and installed from 2005 through May 2012 (a total of 1.3 MW). Furthermore, the Program expansion included contract provisions for 2016-2017, allowing the City to procure additional TES/PLS systems, up to 1.2 MW, should conditions warrant additional TES/PLS capability.
- August 2017 – REU completed the five-year TES Program expansion on June 30, 2017. From initiation of this effort in the summer of 2012, REU and several other utilities in California have experienced a noticeable decline, or lack of growth, in electricity sales. This reduction includes summer peak demand, and REU is no exception. The most recent load forecast incorporates this shift in customer energy demand on a forward looking basis. As a result, an option to extend the contract beyond June 30, 2017, was not pursued with Ice Energy, Inc. With the load forecast virtually flat for the foreseeable future, along with REU having an adequate energy supply, additional investment in energy storage is not warranted at this time.

REU’s energy storage targets for 2016 and 2020 were 3.2 MW and 4.4 MW, respectively. Provisions within AB 2514 and AB 2227 require a review of these target levels in three-year intervals. Therefore, the initial target value for 2020 (set as of October 1, 2014) was reviewed before October 1, 2017, and will be reviewed again prior to October 1, 2020. Redding achieved an energy storage capacity of 3.6 MW as of June 30, 2017. It is recommended the October 1, 2020, storage target be adjusted to the same value, 3.6 MW, from the original 4.4 MW set October 1, 2014; this would align the storage target with the most recent load forecast as discussed above. Between October 1, 2017 and October 1, 2020, REU will, as part of its ongoing integrated resource planning efforts, analyze the need for additional energy storage resources. This effort would be the primary input in establishing the next energy storage target for October 1, 2023.

### *Issue*

Should the Redding City Council approve REU’s attached ESCP-02 in accordance with the requirements outlined in AB 2514 and AB 2227?

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***Alternatives; Implication of Alternatives***

The Council has the following alternatives:

1. Approve REU's ESCP-02 in accordance with the requirements set forth in AB 2514 and AB 2227.
2. Recommend modifications and direct staff to return with an updated ESCP-02.

***Fiscal Impact***

There are no fiscal impacts associated with adopting the ESCP-02.

***Conclusion***

Consistent with the goals of AB 2514 and AB 2227, REU staff respectfully requests the Council adopt the updated ESCP-02, allowing REU to remain in compliance with AB 2514 and AB 2227.

***Attachments:***

Energy Storage Compliance Plan-02