AMENDED IN ASSEMBLY MAY 28, 2010 AMENDED IN ASSEMBLY APRIL 28, 2010 AMENDED IN ASSEMBLY APRIL 14, 2010 AMENDED IN ASSEMBLY APRIL 7, 2010

CALIFORNIA LEGISLATURE—2009–10 REGULAR SESSION

ASSEMBLY BILL

No. 2514

Introduced by Assembly Member Skinner

February 19, 2010

An act to amend Sections 9615 and 9620 of, and to add Chapter 7.7 (commencing with Section 2835) to Part 2 of Division 1 of, the Public Utilities Code, relating to energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 2514, as amended, Skinner. Energy storage systems.

Under existing law, the Public Utilities Commission (CPUC) has regulatory authority over public utilities, including electrical corporations, as defined. The existing Public Utilities Act requires the CPUC to review and adopt a procurement plan for each electrical corporation in accordance with specified elements, incentive mechanisms, and objectives. The existing California Renewables Portfolio Standard Program (RPS program) requires the CPUC to implement annual procurement targets for the procurement of eligible renewable energy resources, as defined, for all retail sellers, including electrical corporations, community choice aggregators, and electric service providers, but not including local publicly owned electric utilities, to achieve the targets and goals of the program.

AB 2514 — 2 —

The existing Warren-Alquist State Energy Resources Conservation and Development Act establishes the State Energy Resources Conservation and Development Commission (Energy Commission) and requires it to undertake a continuing assessment of trends in the consumption of electricity and other forms of energy and to analyze the social, economic, and environmental consequences of those trends and to collect from electric utilities, gas utilities, and fuel producers and wholesalers and other sources, forecasts of future supplies and consumption of all forms of energy.

Existing law requires the CPUC, in consultation with the Independent System Operator (ISO), to establish resource adequacy requirements for all load-serving entities, as defined, in accordance with specified objectives. The definition of a "load-serving entity" excludes a local publicly owned electric utility. That law further requires each load-serving entity to maintain physical generating capacity adequate to meet its load requirements, including peak demand and planning and operating reserves, deliverable to locations and at times as may be necessary to provide reliable electric service. Other existing law requires that each local publicly owned electric utility serving end-use customers to prudently plan for and procure resources that are adequate to meet its planning reserve margin and peak demand and operating reserves, sufficient to provide reliable electric service to its customers. That law additionally requires the utility, upon request, to provide the Energy Commission with any information the Energy Commission determines is necessary to evaluate the progress made by the local publicly owned electric utility in meeting those planning requirements, and requires the Energy Commission to report the progress made by each utility to the Legislature, to be included in the integrated energy policy reports. Under existing law the governing body of a local publicly owned electric utility is responsible for implementing and enforcing a renewables portfolio standard for the utility that recognizes the intent of the Legislature to encourage renewable resources, while taking into consideration the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement.

This bill would require the CPUC, by-April 1, 2011 March 1, 2012, to open a proceeding to establish procurement targets for each-electrical eorporation load-serving entity for viable and cost-effective energy storage systems and, by-January 1, 2013 October 1, 2013, to adopt an appropriate energy storage system procurement target to be achieved by each-electrical eorporation by January 1 load-serving entity by

-3- AB 2514

December 31, 2015, and a 2nd target to be achieved by January 1 December 31, 2020. The bill would require the governing board of a local publicly owned electric utility, by April 1, 2011 March 1, 2012, to open a proceeding to establish procurement targets for the utility for viable and cost-effective energy storage systems and, by January 1, 2013 October 1, 2014, to adopt an appropriate energy storage system procurement target to be achieved by the utility by January 1, 2015 December 31, 2016, and a 2nd target to be achieved by January 1, 2020 December 31, 2021. The bill would additionally require each local publicly owned electric utility, commencing January 1, 2012, to develop and submit to the Energy Commission a plan to implement a 5-year program to employ distributed thermal, mechanical, or electrochemical energy storage systems to maximize shifting of electricity use for air-conditioning and refrigeration from peak demand periods to offpeak periods. The bill would require each electrical corporation load-serving entity and local publicly owned electric utility to report certain information to the CPUC, for an electrical corporation a load-serving entity, or to the Energy Commission, for a local publicly owned electric utility. The bill would make other technical, nonsubstantive revisions to existing law.

Under existing law, a violation of the Public Utilities Act or any order, decision, rule, direction, demand, or requirement of the CPUC is a crime.

Because certain of the provisions of this bill require action by the CPUC to implement, a violation of these provisions would impose a state-mandated local program by creating a new crime. Because certain of the bill's requirements are applicable to local publicly owned electric utilities, the bill would impose a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for specified reasons.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: yes.

The people of the State of California do enact as follows:

1 SECTION 1. The Legislature finds and declares all of the 2 following:

AB 2514 —4—

(a) Expanding the use of energy storage systems can assist electrical corporations, *electric service providers*, *community choice aggregators*, and local publicly owned electric utilities in integrating increased amounts of renewable energy resources into the electrical transmission and distribution grid in a manner that minimizes emissions of greenhouse gases.

- (b) Additional energy storage systems can optimize the use of the significant additional amounts of variable, intermittent, and offpeak electrical generation from wind and solar energy that will be entering the California power mix on an accelerated basis.
- (c) Expanded use of energy storage systems can reduce costs to ratepayers by avoiding or deferring the need for new fossil fuel-powered peaking powerplants and avoiding or deferring distribution and transmission system upgrades and expansion of the grid.
- (d) Expanded use of energy storage systems will reduce the use of electricity generated from fossil fuels to meet peak load requirements on days with high electricity demand and can avoid or reduce the use of electricity generated by high carbon-emitting electrical generating facilities during those high electricity demand periods. This will have substantial cobenefits from reduced emissions of criteria pollutants.
- (e) Use of energy storage systems to provide the ancillary services otherwise provided by fossil-fueled generating facilities will reduce emissions of carbon dioxide and criteria pollutants.
- (f) There are significant barriers to obtaining the benefits of energy storage systems, including inadequate evaluation of the use of energy storage to integrate renewable energy resources into the transmission and distribution grid through long-term electricity resource planning, lack of recognition of technological and marketplace advancements, and inadequate statutory and regulatory support.
- SEC. 2. Chapter 7.7 (commencing with Section 2835) is added to Part 2 of Division 1 of the Public Utilities Code, to read:

Chapter 7.7. Energy Storage Systems

2835. For purposes of this chapter, the following terms have the following meanings:

5 AB 2514

(a) (1) "Energy storage system" means commercially available technology that is capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy. An "energy storage system" may have any of the characteristics in paragraph (2), shall accomplish one of the purposes in paragraph (3), and shall meet at least one of the characteristics in paragraph (4).

- (2) An "energy storage system" may have any of the following characteristics:
 - (A) Be either centralized or distributed.
- (B) Be either owned by an electrical corporation a load-serving entity or local publicly owned electric utility, a customer of an electrical corporation a load-serving entity or local publicly owned electric utility, or a third party, or is jointly owned by two or more of the above.
- (3) An "energy storage system" shall be cost effective and either reduce emissions of greenhouse gases, reduce demand for peak electrical generation, *defer upgrades to the electrical transmission or distribution grid*, or improve the reliable operation of the electrical transmission or distribution grid.
- (4) An "energy storage system" shall do one or more of the following:
- (A) Use mechanical, chemical, or thermal processes to store energy that was generated at offpeak times for use at a later time without substantial reliance on fossil fuels.
- (B) Store thermal energy for direct use for heating or cooling at a later time in a manner that avoids the need to use electricity at that later time.
- (C) Use mechanical, chemical, or thermal processes to store energy generated from renewable resources for use at a later time without substantial reliance on fossil fuels.
- (D) Use mechanical, chemical, or thermal processes to store energy generated from mechanical processes that would otherwise be wasted for delivery at a later time without substantial reliance on fossil fuels.
- (b) "Load-serving entity" has the same meaning as defined in Section 380.
- (c) "New" means, in reference to an energy storage system, a system that is installed and first becomes operational after January 1, 2010.

40 (e)

AB 2514 -6-

1 (d) "Offpeak" means, in reference to electrical demand, a period that is not within a peak demand period.

(d)

(e) "Peak demand period" means a period of high daily, weekly, or seasonal demand for electricity. For purposes of this chapter, the peak demand period for an electrical corporation a load-serving entity shall be determined, or approved, by the commission and shall be determined, or approved, for a local publicly owned electric utility, by its governing body.

10 (e)

- (f) "Procure" and "procurement" means, in reference to the procurement of an energy storage system, to acquire by ownership or by a contractual right to use the energy from, or the capacity of, including ancillary services, an energy storage system owned by a customer or third party an electrical corporation, customer, or third party. Nothing in this chapter, and no action by the commission, shall discourage or disadvantage development and ownership of an energy storage system by an electrical corporation.
- 2836. (a) (1) On or before April 1, 2011, the commission shall open a proceeding to establish procurement targets for each electrical corporation for viable and cost-effective energy storage systems.
- (2) On or before January 1, 2013, the commission shall adopt appropriate energy storage system procurement targets to be achieved by each electrical corporation by January 1, 2015, and a second target to be achieved by January 1, 2020. March 1, 2012, the commission shall open a proceeding to establish appropriate procurement targets for each load serving entity for viable and cost-effective energy storage systems to be achieved by December 31, 2015, and December 31, 2020. As part of this proceeding, the commission may consider a variety of possible policies to encourage the cost-effective deployment of energy storage systems, including incentives and refinement of existing procurement methods to properly value energy storage systems. The commission may consider applying different policies to different load serving entities.
- 38 (2) The commission shall adopt the procurement targets 39 pursuant to paragraph (1) by October 1, 2013.

7 AB 2514

(3) The commission shall reevaluate the determinations made pursuant to this subdivision not less than once every three years.

- (b) (1) On or before April 1, 2011 March 1, 2012, the governing board of each local publicly owned electric utility shall initiate a process to establish appropriate procurement targets for the utility for viable and cost-effective energy storage systems to be achieved by December 31, 2016, and December 31, 2021. As part of this proceeding, the governing board may consider a variety of possible policies to encourage the cost-effective deployment of energy storage systems, including incentives and refinement of existing procurement methods to properly value energy storage systems.
- (2) On or before January 1, 2013, the governing board shall adopt appropriate energy storage system procurement targets to be achieved by the utility by January 1, 2015, and a second target to be achieved by January 1, 2020.
- (2) The governing board shall adopt the procurement targets pursuant to paragraph (1) by October 1, 2014.
- (3) The governing board shall reevaluate the determinations made pursuant to this subdivision not less than once every three years.
- (4) A local publicly owned electric utility shall report to the Energy Commission regarding the energy storage system procurement targets *and policies* adopted by the governing board pursuant to paragraph (2), and report any modifications made to those targets as a result of a reevaluation undertaken pursuant to paragraph (3).
- 2836.2. In adopting and reevaluating appropriate energy storage system procurement targets *and policies* pursuant to subdivision (a) of Section 2836, the commission shall do all of the following:
- (a) Consider existing results of testing and trial pilot projects from existing energy storage facilities.
- (b) Consider available information from the California Independent System Operator derived from California Independent System Operator testing and evaluation procedures.
- (c) Consider the integration of energy storage technologies with other programs, including energy efficiency or other means of reducing electrical demand that will result in the most efficient use of generation resources and cost-effective energy efficient grid integration and management.

AB 2514 —8—

(d) Ensure that the energy storage system procurement targets *and policies* that are established are technologically viable and cost effective.

- 2836.4. (a) An energy storage system shall be used to meet the resource adequacy requirements established for an electrical eorporation a load-serving entity pursuant to Section 380 if it meets applicable standards.
- (b) An energy storage system shall be used to meet the resource adequacy requirements established by a local publicly owned electric utility pursuant to Section 9620 if it meets applicable standards.
- 2836.6. All procurement of energy storage systems by—an electrical corporation a load-serving entity or local publicly owned electric utility shall be cost effective.
- 2837. Each electrical corporation's renewable energy procurement plan, prepared and approved pursuant to Article 16 (commencing with Section 399.11) of Chapter 2.3 of Part 1, shall do all of the following:
- (a) Require the utility to procure new energy storage systems that are sufficient appropriate to allow the electrical corporation to meet comply with the energy storage system procurement targets and policies adopted pursuant to Section 2836. The plan shall address the acquisition and use of energy storage systems in order to achieve the following purposes:
- (1) Integrate intermittent generation from eligible renewable energy resources into the reliable operation of the transmission and distribution grid.
- (2) Allow intermittent generation from eligible renewable energy resources to operate at or near full capacity.
- (3) Eliminate—Reduce the need for new fossil-fuel powered peaking generation facilities by using stored electricity to meet peak demand.
- (4) Reduce purchases of electricity generation sources with higher emissions of greenhouse gases.
- (5) Eliminate or reduce transmission and distribution losses, including increased losses during periods of congestion on the grid.
- (6) Reduce the demand for electricity during peak periods and achieve permanent load-shifting by using thermal storage to meet air-conditioning needs.

-9- AB 2514

(7) Avoid or defer investments in transmission and distribution system upgrades.

- (8) Use energy storage systems to provide the ancillary services otherwise provided by fossil-fueled generating facilities.
- (b) Consider and incorporate, where feasible, the Energy Commission's evaluation of energy storage systems, including locations where the interconnection costs for energy storage systems located on the *electrical corporation's electrical* transmission and distribution grid would be minimized, as identified in the Integrated Energy Policy Report prepared pursuant to Section 25302 of the Public Resources Code.
- 2838. (a) (1) By January 1, 2015, each electrical corporation 2016, each load-serving entity shall submit a report to the commission demonstrating that it has complied with the energy storage system procurement targets and policies adopted by the commission pursuant to subdivision (a) of Section 2836.
- (2) By January 1, 2020, each electrical corporation 2021, each load-serving entity shall submit a report to the commission demonstrating that it has complied with the energy storage system procurement targets and policies adopted by the commission pursuant to subdivision (a) of Section 2836.
- (b) (1) The commission may waive the requirements of this subdivision for a specific load-serving entity or group of similarly situated load-serving entities.

(b)

- (2) The commission shall ensure that a copy of each report required by subdivision (a), with any confidential information reducted, is available on the commission's Internet Web site.
- 2839. (a) (1) By January 1, 2015 2017, a local publicly owned electric utility shall submit a report to the Energy Commission demonstrating that it has complied with the energy storage system procurement targets *and policies* adopted by the governing board pursuant to subdivision (b) of Section 2836.
- (2) By January 1, 2020 2022, a local publicly owned electric utility shall submit a report to the Energy Commission demonstrating that it has complied with the energy storage system procurement targets *and policies* adopted by the governing board pursuant to subdivision (b) of Section 2836.
- (b) (1) Within 60 days of receipt of a report required by subdivision (a), the Energy Commission shall notify a local

AB 2514 — 10 —

publicly owned electric utility if the report fails to demonstrate compliance with the energy storage system procurement target requirements.

- (2) Within 60 days of receiving a notice of deficiency pursuant to paragraph (1), a local publicly owned electric utility shall submit an energy storage system procurement compliance plan to the Energy Commission setting forth a program for compliance with the energy storage system procurement targets *and policies* within six months of the required date for submittal of the compliance plan.
- (3) The local publicly owned electric utility that submitted an energy storage system procurement compliance plan shall comply with the applicable energy storage system procurement targets *and policies* within six months from the required date for submittal of the compliance plan and shall submit proof of compliance to the Energy Commission within 30 days of the expiration of the six-month period.
- (c) The Energy Commission shall ensure that a copy of each report or plan required by subdivisions (a) and (b), with any confidential information redacted, is available on the Energy Commission's Internet Web site, or on an Internet Web site maintained by the local publicly owned electric utility that can be accessed from the Energy Commission's Internet Web site.
- (d) On or before July 1, 2011, the Energy Commission shall adopt regulations specifying procedures to enable local publicly owned electric utilities to comply with this chapter.
- (e) The commission does not have authority or jurisdiction to enforce any of the requirements of this chapter against a local publicly owned electric utility.
- SEC. 3. Section 9615 of the Public Utilities Code is amended to read:
- 9615. (a) Each local publicly owned electric utility, in procuring energy to serve the load of its retail end-use customers, shall first acquire all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible.
- (b) On or before June 1, 2007, and by June 1 of every third year thereafter, each local publicly owned electric utility shall identify all potentially achievable cost-effective electricity efficiency savings and shall establish annual targets for energy efficiency savings and demand reduction for the next 10-year period. A local

—11— AB 2514

publicly owned electric utility's determination of potentially achievable cost-effective electricity efficiency savings shall be made without regard to previous minimum investments undertaken pursuant to Section 385. A local publicly owned electric utility shall treat investments made to achieve energy efficiency savings and demand reduction targets as procurement investments.

- (c) Within 60 days of adopting annual targets pursuant to subdivision (b), each local publicly owned electric utility shall report those targets to the Energy Commission, and the basis for establishing those targets.
- (d) Each local publicly owned electric utility shall report annually to its customers and to the Energy Commission. The report shall contain, but is not limited to, both of the following:
- (1) Its investments in energy efficiency and demand reduction programs.
- (2) A description of programs, expenditures, cost-effectiveness, and expected and actual energy efficiency savings and demand reduction results.
- (e) Each local publicly owned electric utility shall also annually develop and submit to the Energy Commission a report containing all of the following:
- (1) The sources of funding for its investments in energy efficiency and demand reduction program investments.
- (2) The methodologies and input assumptions used to determine cost-effectiveness.
- (3) The results of an independent evaluation that measures and verifies the energy efficiency savings and reduction in energy demand achieved by its energy efficiency and demand reduction programs.
- (f) (1) Each local publicly owned electric utility, by January 1, 2011 2012, shall develop and submit to the Energy Commission a plan setting forth a program, to be implemented over the following five years, requiring the use of distributed thermal, mechanical, or electrochemical energy storage systems to maximize shifting of electricity use for air-conditioning and refrigeration from peak demand periods to offpeak times. The purposes of the program shall include reducing electricity demand during peak demand periods and reducing emissions of greenhouse gases, oxides of nitrogen, and particulate matter.

AB 2514 — 12 —

(2) In developing and implementing the plan required by this subdivision, each of the attributes that an energy storage system would provide, shall be considered and valued when determining if a proposed energy storage system is cost effective.

- (3) Each local publicly owned electric utility, within one year of its issuance, shall consider and, where feasible, incorporate into the utility's plan required by this subdivision, the Energy Commission's evaluation of energy storage locations, technologies, and benefits as identified in the most current Integrated Energy Policy Report prepared pursuant to Section 25302 of the Public Resources Code.
- (g) The Energy Commission shall include a summary of the information reported pursuant to subdivision (e) in the integrated energy policy report prepared pursuant to Chapter 4 (commencing with Section 25300) of Division 15 of the Public Resources Code. The Energy Commission shall also include, for each local publicly owned electric utility, a comparison of the local publicly owned electric utility's annual targets established in accordance with this section, and the local publicly owned electric utility's actual energy efficiency savings and demand reductions. If the Energy Commission determines that improvements can be made in either the level of a local publicly owned electric utility's annual targets to achieve all cost-effective, reliable, and feasible energy savings and demand reductions and to enable the local publicly owned electric utilities, in the aggregate, to achieve statewide targets established pursuant to Section 25310, or in meeting each local publicly owned electric utility's annual targets, the Energy Commission shall provide recommendations to the local publicly owned electric utility, the Legislature, and the Governor on those improvements.
- SEC. 4. Section 9620 of the Public Utilities Code is amended to read:
- 9620. (a) Each local publicly owned electric utility serving end-use customers, shall prudently plan for and procure resources that are adequate to meet its planning reserve margin and peak demand and operating reserves, sufficient to provide reliable electric service to its customers. Customer generation located on the customer's site or providing electric service through arrangements authorized by Section 218, shall not be subject to

-13- AB 2514

these requirements if the customer generation, or the load it serves, meets one of the following criteria:

- (1) It takes standby service from the local publicly owned electric utility on a rate schedule that provides for adequate backup planning and operating reserves for the standby customer class.
- (2) It is not physically interconnected to the electric transmission or distribution grid, so that, if the customer generation fails, backup power is not supplied from the electricity grid.
- (3) There is physical assurance that the load served by the customer generation will be curtailed concurrently and commensurately with an outage of the customer generation.
- (b) Each local publicly owned electric utility serving end-use customers shall, at a minimum, meet the most recent minimum planning reserve and reliability criteria approved by the Board of Trustees of the Western Systems Coordinating Council or the Western Electricity Coordinating Council.
- (c) Each local publicly owned electric utility shall prudently plan for and procure energy storage systems that are adequate to meet the requirements of Section 2836.
- (d) A local publicly owned electric utility serving end-use customers shall, upon request, provide the Energy Commission with any information the Energy Commission determines is necessary to evaluate the progress made by the local publicly owned electric utility in meeting the requirements of this section.
- (e) The Energy Commission shall report to the Legislature, to be included in each integrated energy policy report prepared pursuant to Section 25302 of the Public Resources Code, regarding the progress made by each local publicly owned electric utility serving end-use customers in meeting the requirements of this section.
- SEC. 5. No reimbursement is required by this act pursuant to Section 6 of Article XIIIB of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act or because costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or

AB 2514 — 14—

1	changes the definition of a crime within the meaning of Section 6
2	of Article XIIIB of the California Constitution.
3	
4	
5	CORRECTIONS:
6	Text—Page 5.
7	