AMENDED IN SENATE JUNE 26, 2001

CALIFORNIA LEGISLATURE—2001–02 SECOND EXTRAORDINARY SESSION

SENATE BILL No. 52

Introduced by Senator Chesbro

May 17, 2001

An act to add Section 25227 to the Public Resources Code, relating to thermal energy storage.

LEGISLATIVE COUNSEL'S DIGEST

SB 52, as amended, Chesbro. Thermal energy storage: off-peak electricity.

The existing Warren-Alquist State Energy Resources Conservation and Development Act declares that it is the policy of the state to develop all practicable and cost-effective conservation and improvements in the efficiency of energy use and distribution that offer equivalent or better system reliability, and which are not being exploited by any other entity.

This bill would ~~establish the Thermal Energy Storage Account in the General Fund. The bill would require the State Energy Resources Conservation and Development Commission to administer a program that provides financial incentives to commercial, industrial, agricultural, and educational building owners and designers for retrofit and new construction applications to use thermal energy storage, as defined, to encourage energy efficiency and to reduce peak load.~~

~~The bill would~~ require the commission to establish a program to significantly increase the use of thermal energy storage technologies in specified types of buildings. The bill would require the commission, on or before ~~September~~ *November* 1, 2001, to report to the Legislature regarding thermal energy storage technologies.

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

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

SECTION 1. (a) The Legislature finds and declares all of the following:

(1) California is experiencing a shortage of electricity supplies during peak demand periods due in *large* part to energy consumption related to air-conditioning *and industrial process cooling*.

(2) Thermal energy storage technologies reduce electrical demand during peak air-conditioning periods by shifting electrical usage to nighttime, off-peak periods.

(3) *Numerous* California businesses and public institutions have successfully used thermal energy storage systems in a variety of applications, including schools and universities, office buildings, wine making, and agricultural cooling applications.

(4) *Architectural, engineering, heating, ventilation, and air-conditioning companies are not aware of the benefits of thermal energy storage systems, and consequently do not provide for their use in the design of new buildings or industrial process cooling, or the refurbishment of existing air-conditioning systems.*

(5) Establishing public policy measures to increase the use of thermal energy storage technology will lead to a reduction in peak electricity demand*, a reduction in the need for adding additional peaking electrical generating capacity in the state,* and will decrease the likelihood of electricity shortages in the future.

(b) It is the intent of the Legislature to increase the use of thermal energy storage technologies in commercial, educational, agricultural, and industrial facilities by ~~providing incentives for shifting~~ *establishing state policies to shift* air-conditioning loads from peak to off-peak periods.

SEC. 2. Section 25227 is added to the Public Resources Code, to read:

~~25227. (a) The Thermal Energy Storage Account is hereby established in the General Fund. Moneys in the account may be expended by the commission, upon appropriation by the Legislature, for the purposes of this section.~~

~~(b) The commission shall administer a program that provides financial incentives of up to four hundred dollars ($400) per kilowatt of demand of energy consumption shifted from peak load periods to off-peak load periods to commercial, industrial, agricultural, and educational building owners and designers for retrofit and new construction applications to use thermal energy storage to encourage energy efficiency and to reduce peak load.~~

~~(c)~~

25227. (a) The commission shall establish a program to significantly increase the use of thermal energy storage technologies in state-owned buildings, public and private schools, new commercial and industrial buildings, *agricultural applications,* and other commercial facilities where thermal energy storage technologies can help reduce consumption of electricity during peak load periods. The commission shall consider both retrofit and new construction applications. On or before ~~September~~ *November* 1, 2001, the commission shall report to the Legislature a plan to ensure that thermal energy storage technologies become a mainstream means of reducing peak electricity demand by shifting air-conditioning *and process cooling* electrical demand to off-peak load periods, including, but not limited to, consideration of the following:

(1) Changes in the nonresidential building energy efficiency standards of Title 20 *and Title 24* of the California Code of Regulations to provide offsets or credits, or both, for energy budgets that incorporate thermal energy storage.

(2) Incentives to equip commercial buildings and electric utilities with the capacity to automatically reduce loads on air-conditioning equipment and shift these loads to thermal energy storage equipment during periods of peak electricity demand through dispatch signals from utilities or power suppliers.

~~(d)~~

(b) As used in this section, the following terms have the following meanings:

(1) ''Off-peak'' means electrical generating capacity between ~~the hours of 12 a.m. and 6 p.m.~~ *the hours of 10 p.m. and 6 a.m.*

(2) ''Thermal energy storage'' means a form of technology that uses off-peak energy to produce and store cool energy in the form

of ice or chilled water for use the next day in air-conditioning or process cooling.

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