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CALIFORNIA LEGISLATURE—2007—08 REGULAR SESSION

ASSEMBLY BILL

No. 1470

Introduced by Assembly Member Huffman
(Principal coauthor: Assembly Member Leno)
(Coauthors: Assembly Members Beall, Carter, DeSaulnier,
Krekorian, Laird, Wolk, and Saldana)
(Coauthors: Senators Corbett, Florez, Kuehl, Romero, Scott, and
Wiggins)

February 23, 2007

An act to add the heading of Article 1 (commencing with Section 2851) to, and to add and repeal Article 2 (commencing with Section 2860) of, Chapter 9 of Part 2 of Division 1 of, the Public Utilities Code, relating to solar energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 1470, as amended, Huffman. Solar energy: Solar Water Heating and Efficiency Act of 2007.

(1) Under existing law, the Public Utilities Commission has regulatory authority over public utilities, including gas corporations. The commission is required to implement elements of the California Solar Initiative, which modifies the self-generation incentive program for distributed generation resources and provides incentives to customer-side photovoltaics and solar thermal electric projects under one megawatt. The commission is required to award monetary incentives for up to the first megawatt of alternating current generated by solar energy systems that meet the eligibility criteria established by the State Energy Resources Conservation and Development Commission (Energy Commission). The commission is required to adopt a performance-based incentive program for solar energy photovoltaic systems and is authorized to award monetary incentives for solar thermal and solar water heating devices in a total amount up to \$100,800,000.

This bill would establish the Solar Water Heating and Efficiency Act of 2007. The bill would make findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. The bill would define several terms for purposes of the act. The bill would require the commission to evaluate the data available from a specified pilot program, and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

The bill would require the commission, in consultation with the Energy Commission and interested members of the public, to establish eligibility criteria for the solar water heating systems receiving gas customer funded incentives. The commission would be required to establish conditions on those incentives. The bill would specify that, except for the Solar Water Heating Pilot Program in San Diego, only solar water heating technologies that displace electricity are eligible for a portion of California Solar Initiative funds, as determined by the commission. ~~The~~

~~The~~ commission would be required to allocate not less than 10% of the overall funds for installation of solar water heating systems for specified low-income *residential* housing ~~and affordable housing projects and~~. ~~The bill would extend eligibility for funding pursuant to this program to include residential housing occupied by specified ratepayers. The bill would specify that no moneys be diverted from any existing programs for low-income ratepayers. The bill would specify~~

that the consumer rebates decline over time and be structured to reduce the cost of solar water heating technologies. The Energy Commission, in coordination with the commission, would be required to consider, when appropriate, coupling rebates for solar water heating systems with complementary energy efficient technologies. The commission would be required to report to the Legislature, not later than July 1, 2010, on the effectiveness of the program. The bill would repeal these provisions on August 1, 2018.

(2) Existing law establishes a surcharge on all natural gas consumed in the state to fund certain low-income assistance programs, cost-effective energy efficiency and conservation activities, and public interest research and development. Existing law requires a public utility gas corporation, as defined, to collect the surcharge from natural gas consumers, as specified. The moneys from the surcharge are deposited in the Gas Consumption Surcharge Fund and are continuously appropriated to specified entities, including to the commission, or to an entity designated by the commission, to fund low-income assistance programs, cost-effective energy efficiency and conservation activities, and public interest research and development not adequately provided by the competitive and regulated markets.

This bill would require the commission to fund the program of the Solar Water Heating and Efficiency Act of 2007, for the service territories of the gas corporations, through a surcharge applied to gas customers in those service territories based on the amount of natural gas consumed, not to exceed \$250,000,000 over the course of the 10-year program. The bill would require the commission to annually establish a surcharge rate for each class of gas customers. The bill would exempt from that surcharge those gas customers participating in the California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) programs. The bill would require that the program be administered by the gas corporations or 3rd party administrators, as determined by the commission, and subject to the supervision of the commission.

(3) The bill would require the governing body of each publicly owned utility providing gas service to retail end-use gas customers, to adopt, implement, and finance a solar water heating system incentive program meeting certain requirements, thereby imposing a state-mandated local program.

(4) 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 a specified reason.

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 heading of Article 1 (commencing with
2 Section 2851) is added to Chapter 9 of Part 2 of Division 1 of the
3 Public Utilities Code, to read:

4
5 Article 1. Solar Energy Systems
6

7 SEC. 2. Article 2 (commencing with Section 2860) is added
8 to Chapter 9 of Part 2 of Division 1 of the Public Utilities Code,
9 to read:

10
11 Article 2. Solar Water Heating Systems
12

13 2860. This article shall be known, and may be cited, as the
14 Solar Water Heating and Efficiency Act of 2007.

15 2861. As used in this article, the following terms have the
16 following meanings:

17 (a) “Energy Commission” means the State Energy Resources
18 Conservation and Development Commission.

19 (b) “Gas customer” includes both “core” and “noncore”
20 customers, as those terms are used in Chapter 2.2 (commencing
21 with Section 328) of Part 1, that receive retail end-use gas service
22 within the service territory of a gas corporation.

23 (c) “kW_{th}” means the kilowatt thermal capacity of a solar water
24 heating system, measured consistent with the standard established
25 by the SRCC.

26 (d) “kWh_{th}” means kilowatthours thermal as measured by the
27 number of kilowatts thermal generated, or displaced, in an hour.

28 (e) “*Low-income residential housing*” means either of the
29 following:

1 (1) Residential housing financed with low-income housing tax
2 credits, tax-exempt mortgage revenue bonds, general obligation
3 bonds, or local, state, or federal loans or grants, and for which
4 the rents of the occupants who are lower income households, as
5 defined in Section 50079.5 of the Health and Safety Code, do not
6 exceed those prescribed by deed restrictions or regulatory
7 agreements pursuant to the terms of the financing or financial
8 assistance.

9 (2) A residential complex in which at least 20 percent of the
10 total units are sold or rented to lower income households, as
11 defined in Section 50079.5 of the Health and Safety Code, and the
12 housing units targeted for lower income households are subject
13 to a deed restriction or affordability covenant with a public entity
14 that ensures that the units will be available at an affordable
15 housing cost meeting the requirements of Section 50052.5 of the
16 Health and Safety Code, or at an affordable rent meeting the
17 requirements of Section 50053 of the Health and Safety Code, for
18 a period of not less than 30 years.

19 ~~(e)~~

20 (f) “New Solar Homes Partnership” means the 10-year program,
21 administered by the Energy Commission, encouraging solar energy
22 systems in new home construction.

23 ~~(f)~~

24 (g) “Solar heating collector” means a device that is used to
25 collect or capture heat from the sun and that is generally, but need
26 not be, located on a roof.

27 ~~(g)~~

28 (h) “Solar water heating system” means a solar energy device
29 that has the primary purpose of reducing demand for natural gas
30 through water heating, space heating, or other methods of capturing
31 energy from the sun to reduce natural gas consumption in a home,
32 business, or any building receiving natural gas that is subject to
33 the surcharge established pursuant to Section 2860, or exempt
34 from the surcharge pursuant to subdivision (c) of Section 2863,
35 and that meets or exceeds the eligibility criteria established
36 pursuant to Section 2864. “Solar water heating systems” do not
37 include solar pool heating systems.

38 ~~(h)~~

39 (i) “SRCC” means the Solar Rating and Certification
40 Corporation.

- 1 2862. The Legislature finds and declares all of the following:
2 (a) California is heavily dependent on natural gas, importing
3 more than 80 percent of the natural gas it consumes.
4 (b) Rising worldwide demand for natural gas and a shrinking
5 supply create rising and unstable prices that can harm California
6 consumers and the economy.
7 (c) Natural gas is a fossil fuel and a major source of global
8 warming pollution and the pollutants that cause air pollution,
9 including smog.
10 (d) California’s growing population and economy will put a
11 strain on energy supplies and threaten the ability of the state to
12 meet its global warming goals unless specific steps are taken to
13 reduce demand and generate energy cleanly and efficiently.
14 (e) Water heating for domestic and industrial use relies almost
15 entirely on natural gas and accounts for a significant percentage
16 of the state’s natural gas consumption.
17 (f) Solar water heating systems represent the largest untapped
18 natural gas saving potential remaining in California.
19 (g) In addition to financial and energy savings, solar water
20 heating systems can help protect against future gas and electricity
21 shortages and reduce our dependence on foreign sources of energy.
22 (h) Solar water heating systems can also help preserve the
23 environment and protect public health by reducing air pollution,
24 including carbon dioxide, a leading global warming gas, and
25 nitrogen oxide, a precursor to smog.
26 (i) Growing demand for these technologies will create jobs in
27 California as well as promote greater energy independence, protect
28 consumers from rising energy costs and result in cleaner air.
29 (j) It is in the interest of the State of California to promote solar
30 water heating systems and other technologies that directly reduce
31 demand for natural gas in homes and businesses.
32 (k) It is the intent of the Legislature to build a mainstream
33 market for solar water heating systems that directly reduces demand
34 for natural gas in homes, businesses, and government buildings.
35 Toward that end, it is the goal of this article to install at least
36 200,000 solar water heating systems on homes, businesses, and
37 government buildings throughout the state by 2017, thereby
38 lowering prices and creating a self-sufficient market that will
39 sustain itself beyond the life of this program.

1 (l) It is the intent of the Legislature that the solar water heating
2 system incentives created by the act should be a cost-effective
3 investment by gas customers. Gas customers will recoup the cost
4 of their investment through lower prices as a result of avoiding
5 purchases of natural gas, and benefit from additional system
6 stability and pollution reduction benefits.

7 2863. (a) The commission shall evaluate the data available
8 from the Solar Water Heating Pilot Project conducted by the
9 California Center for Sustainable Energy. If, after a public hearing,
10 the commission determines that a solar water heating program is
11 cost effective for ratepayers and in the public interest, the
12 commission shall do all of the following:

13 (1) Design and implement a program applicable to the service
14 territories of a gas corporation, to achieve the goal of the
15 Legislature to promote the installation of 200,000 solar water
16 heating systems in homes and businesses throughout the state by
17 2017.

18 (2) The program shall be administered by gas corporations or
19 third-party administrators, as determined by the commission, and
20 subject to the supervision of the commission.

21 (3) The commission shall coordinate the program with the
22 Energy Commission's New Solar Homes Partnership to achieve
23 the goal of building zero-energy homes.

24 (b) (1) The commission shall fund the program through the use
25 of a surcharge applied to gas customers based upon the amount of
26 natural gas consumed. The surcharge shall be in addition to any
27 other charges for natural gas sold or transported for consumption
28 in this state.

29 (2) The commission shall impose the surcharge at a level that
30 is necessary to meet the goal of installing 200,000 solar water
31 heating systems, or the equivalent output of 200,000 solar water
32 heating systems, on homes and businesses in California by 2017.
33 Funding for the program established by this article shall not, for
34 the collective service territories of all gas corporations, exceed
35 two hundred fifty million dollars (\$250,000,000) over the course
36 of the 10-year program.

37 (3) The commission shall annually establish a surcharge rate
38 for each class of gas customers. Any gas customer participating
39 in the California Alternate Rates for Energy (CARE) or Family
40 Electric Rate Assistance (FERA) programs shall be exempt from

1 paying any surcharge imposed to fund the program designed and
2 implemented pursuant to this article.

3 (4) Any surcharge imposed to fund the program designed and
4 implemented pursuant to this article shall not be imposed upon the
5 portion of any gas customer’s procurement of natural gas that is
6 used or employed for a purpose that Section 896 excludes from
7 being categorized as the consumption of natural gas.

8 (5) The gas corporation or other person or entity providing
9 revenue cycle services, as defined in Section 328.1, shall be
10 responsible for collecting the surcharge.

11 (c) Funds shall be allocated for the benefit of gas customers to
12 promote utilization of solar water heating systems.

13 (d) In designing and implementing the program required by this
14 article, no moneys shall be diverted from any existing programs
15 for low-income ratepayers or cost-effective energy efficiency
16 programs.

17 2864. (a) The commission, in consultation with the Energy
18 Commission and interested members of the public, shall establish
19 eligibility criteria for solar water heating systems receiving gas
20 customer funded incentives pursuant to this article. The criteria
21 should specify and include all of the following:

22 (1) Design, installation, and energy output or displacement
23 standards. To be eligible for rebate funding, a residential solar
24 water heating system shall, at a minimum, have a SRCC OG-300
25 Solar Water Heating System Certification. Solar collectors used
26 in systems for multifamily residential, commercial, or industrial
27 water heating shall, at a minimum, have a SRCC OG-100 Solar
28 Water Heating System Certification.

29 (2) Require that solar water heating system components are new
30 and unused, and have not previously been placed in service in any
31 other location or for any other application.

32 (3) Require that solar water heating collectors have a warranty
33 of not less than 10 years to protect against defects and undue
34 degradation.

35 (4) Require that solar water heating systems are in buildings
36 connected to a natural gas utility’s distribution system within the
37 state.

38 (5) Require that solar water heating systems have meters or
39 other kWh_{th} measuring devices in place to monitor and measure
40 the system’s performance and the quantity of energy generated or

1 displaced by the system. The criteria shall require meters for
2 systems with a capacity for displacing over 30 kW_{th}. The criteria
3 may require meters for systems with a capacity of 30 kW_{th} or
4 smaller.

5 (6) Require that solar water heating systems are installed in
6 conformity with the manufacturer's specifications and all
7 applicable codes and standards.

8 (b) No gas customer funded incentives shall be made for a solar
9 water heating system that does not meet the eligibility criteria.

10 2865. (a) The commission shall establish conditions on gas
11 customer funded incentives pursuant to this article. The conditions
12 shall require both of the following:

13 (1) Appropriate siting and high-quality installation of the solar
14 water heating system based on installation guidelines that maximize
15 the performance of the system and prevent qualified systems from
16 being inefficiently or inappropriately installed. The conditions
17 shall not impact housing designs or densities presently authorized
18 by a city, county, or city and county. The goal of this paragraph
19 is to achieve efficient installation of solar water heating systems
20 and promote the greatest energy production or displacement per
21 gas customer dollar.

22 (2) Appropriate energy efficiency improvements in the new or
23 existing home or commercial structure where the solar hot water
24 system is installed.

25 (b) The commission shall set rating standards for equipment,
26 components, and systems to ensure reasonable performance and
27 shall develop standards that provide for compliance with the
28 minimum ratings.

29 2866. (a) The commission shall provide not less than 10
30 percent of the overall funds for installation of solar water heating
31 ~~systems on low-income housing and affordable housing projects~~
32 ~~undertaken pursuant to Section 50052.5, 50053, 50079.5, or~~
33 ~~50199.14 of the Health and Safety Code. If deemed appropriate~~
34 ~~in consultation with the California Tax Credit Allocation~~
35 ~~Committee, the~~ *on low-income residential housing.*

36 (b) *The* commission may establish a grant program or a
37 revolving loan or loan guarantee program for ~~low-income housing~~
38 ~~and affordable housing projects~~ *low-income residential housing*
39 consistent with the requirements of Chapter 5.3 (commencing with
40 Section 25425) of Division 15 of the Public Resources Code. *All*

1 loans outstanding as of August 1, 2018, shall continue to be repaid
2 in a manner that is consistent with the terms and conditions of the
3 program adopted and implemented by the commission pursuant
4 to this subdivision, until repaid in full.

5 (c) The commission may extend eligibility for funding pursuant
6 to this section to include residential housing occupied by
7 ratepayers participating in a commission approved and supervised
8 gas corporation Low-Income Energy Efficiency (LIEE) program
9 and who either:

10 (1) Occupy a single-family home.

11 (2) Occupy at least 50 percent of all units in a multifamily
12 dwelling structure.

13 (d) The commission shall ensure that lower income households,
14 as defined in Section 50079.5 of the Health and Safety Code, and,
15 if the commission expands the program pursuant to subdivision
16 (c), ratepayers participating in a LIEE program, that receive gas
17 service at residential housing with a solar water heating system
18 receiving incentives pursuant to subdivision (a), benefit from the
19 installation of the solar water heating systems through reduced
20 or lowered energy costs.

21 (e) No later than January 1, 2010, the commission shall do all
22 of the following to implement the requirements of this section:

23 (1) Maximize incentives to properties that are committed to
24 continuously serving the needs of lower income households, as
25 defined in Section 50079.5 of the Health and Safety Code, and, if
26 the commission expands the program pursuant to subdivision (c),
27 ratepayers participating in a LIEE program.

28 (2) Establish conditions on the installation of solar water
29 heating systems that ensure properties on which solar water
30 heating systems are installed under subdivision (a) remain
31 low-income residential properties for at least 10 years from the
32 time of installation, including property ownership restrictions and
33 income rental protections, and appropriate enforcement of these
34 conditions.

35 (f) All moneys set aside for the purpose of funding the
36 installation of solar water heating systems on low-income
37 residential housing that are unexpended and unencumbered on
38 August 1, 2018, and all moneys thereafter repaid pursuant to
39 subdivision (b), except to the extent that those moneys are
40 encumbered pursuant to this section, shall be utilized to augment

1 *cost-effective energy efficiency measures in low-income residential*
2 *housing that benefit ratepayers.*

3 2867. (a) The rebates provided through this program shall
4 decline over time. They shall be structured so as to drive down the
5 cost of the solar water heating technologies, and be paid out on a
6 performance-based incentive basis so that incentives are earned
7 based on the actual energy savings, or on predicted energy savings
8 as established by the commission.

9 (b) The commission shall consider federal tax credits and other
10 incentives available for this technology when determining the
11 appropriate rebate amount.

12 (c) The commission shall consider the impact of rebates for
13 solar water heating systems pursuant to this article on existing
14 incentive programs for energy efficiency technology.

15 (d) In coordination with the commission, the Energy
16 Commission shall consider, when appropriate, coupling rebates
17 for solar water heating systems with complementary energy
18 efficiency technologies, including, but not limited to, efficient hot
19 water heating tanks and tankless or on demand hot water systems
20 that can be installed in addition to the solar water heating system.

21 2867.1. Not later than July 1, 2010, the commission shall report
22 to the Legislature as to the effectiveness of the program and make
23 recommendations as to any changes that should be made to the
24 program. This report shall include justification for the size of the
25 rebate program in terms of total available incentive moneys as
26 well as the anticipated benefits of the program in its entirety. To
27 facilitate the understanding of how solar water heating systems
28 compare with other clean energy and energy efficiency
29 technologies, all documents related to and rebates provided by this
30 program shall be measured in both kWh_{th} and therms of natural
31 gas saved.

32 2867.2. Except for the Solar Water Heating Pilot Program in
33 San Diego, solar water heating technologies shall not be eligible
34 for California Solar Initiative (CSI) funds, pursuant to Section
35 2851, unless they also displace electricity, in which case only the
36 electricity displacing portion of the technology may be eligible
37 under the CSI program, as determined by the commission.

38 2867.3. In order to further the state goal of encouraging the
39 installation of 200,000 solar water heaters by 2017, the governing
40 body of each publicly owned utility providing gas service to retail

1 end-use gas customers shall, after a public proceeding, adopt,
2 implement, and finance a solar water heating system incentive
3 program that does all the following:

4 (a) Ensures that any solar water heating system receiving
5 monetary incentives complies with eligibility criteria adopted by
6 the governing body. The eligibility criteria shall include those
7 elements contained in paragraphs (1) to (6), inclusive, of
8 subdivision (a) of Section 2864.

9 (b) Includes minimum ratings and standards for equipment,
10 components, and systems to ensure reasonable performance and
11 compliance with the minimum ratings and standards.

12 (c) Includes an element that addresses the installation of solar
13 water heating systems on ~~low-income housing and affordable~~
14 ~~housing projects undertaken pursuant to Section 50052.5, 50053,~~
15 ~~50079.5, or 50199.14 of the Health and Safety Code. If deemed~~
16 *residential housing. If deemed* appropriate in consultation with the
17 California Tax Credit Allocation Committee, the governing board
18 may establish a grant program or a revolving loan or loan guarantee
19 program for ~~low-income housing and affordable housing projects~~
20 *residential housing* consistent with the requirements of Chapter
21 5.3 (commencing with Section 25425) of Division 15 of the Public
22 Resources Code.

23 2867.4. This article shall remain in effect only until August 1,
24 2018, and as of that date is repealed, unless a later enacted statute,
25 that is enacted before August 1, 2018, deletes or extends that date.

26 SEC. 3. No reimbursement is required by this act pursuant to
27 Section 6 of Article XIII B of the California Constitution because
28 a local agency or school district has the authority to levy service
29 charges, fees, or assessments sufficient to pay for the program or
30 level of service mandated by this act, within the meaning of Section
31 17556 of the Government Code.