

AMENDED IN ASSEMBLY APRIL 12, 2007

CALIFORNIA LEGISLATURE—2007—08 REGULAR SESSION

ASSEMBLY BILL

No. 1470

Introduced by Assembly Member Huffman
(Principal coauthor: Assembly Member Smyth)
(Coauthors: Assembly Members Carter, Laird, Maze, and Wolk)
(Coauthors: Senators Kuehl and Romero)

February 23, 2007

An act to add the heading of Article 1 (commencing with Section 2851) to, and to add and repeal ~~Section 902 of, and~~ Article 2 (commencing with Section 2860) of, Chapter 9 of Part 2 of Division 1 of, the Public Utilities Code, relating to solar energy, and making an appropriation therefor. *energy.*

LEGISLATIVE COUNSEL'S DIGEST

AB 1470, as amended, Huffman. Solar energy: Solar Hot Water 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 Heating and Efficiency Act of 2007. The bill would make findings and declarations of the Legislature relating to the promotion of solar hot water 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 create and administer, not later than July 1, 2008, a program to incentivize the installation of ~~500,000~~ 200,000 solar ~~thermal~~ hot water 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 ~~heating~~ hot water systems receiving ratepayer funded incentives not later than July 1, 2008. The commission would be required to establish conditions on those incentives. The bill would specify that, *except for the Solar Hot Water Pilot Program in San Diego*, only solar heating technologies that displace electricity are eligible for a portion of California Solar Initiative funds, as determined by the commission. The commission would be required to allocate not less than 10% of the overall funds for installation of solar ~~heating~~ hot water systems for specified affordable housing projects and 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 ~~heating~~ hot water technologies. The Energy Commission, in coordinating efforts with the commission, would be required to consider *when appropriate* coupling rebates for solar ~~heating~~ hot water systems with ~~complimentary~~ 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 ~~money~~ moneys from the surcharge ~~is are~~ deposited in the Gas Consumption Surcharge Fund and ~~is 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 Hot Water and Efficiency Act of 2007 through a surcharge *based upon the amount of natural gas consumed* applied to ~~persons consuming natural gas in the state that has been transported by an interstate pipeline~~ *ratepayers of a gas corporation based on the amount of natural gas consumed*, except those participating in certain existing programs for low-income ratepayers, not to exceed ~~\$100,000,000 in its entirety \$250,000,000 over the course of the 10-year program.~~ *Because this bill would increase the amount of money deposited in the Gas Consumption Surcharge Fund and make the money available to the commission for the purposes of the act, it would make an appropriation. The bill would repeal these provisions on August 1, 2018. The bill would require the commission to annually establish a surcharge rate for each class of customer for each gas corporation. 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.*

Vote: $\frac{2}{3}$ -majority. Appropriation: ~~yes-no~~. Fiscal committee: yes. State-mandated local program: no.

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

- 1 ~~SECTION 1.— Section 902 is added to the Public Utilities Code,~~
- 2 ~~to read:~~
- 3 ~~902.—(a) The commission shall fund the program established~~
- 4 ~~in the Solar Hot Water and Efficiency Act of 2007, pursuant to~~
- 5 ~~Article 2 (commencing with Section 2860) of Chapter 9 of Part 2,~~
- 6 ~~through the use of a surcharge applied to persons consuming natural~~
- 7 ~~gas in this state that has been transported by an interstate pipeline.~~
- 8 ~~This fund shall not exceed one hundred million dollars~~
- 9 ~~(\$100,000,000).~~
- 10 ~~(b) Funds shall be allocated for the benefit of persons paying~~
- 11 ~~the surcharge and the promotion of solar hot water systems and~~
- 12 ~~other technologies that reduce natural gas consumption and global~~
- 13 ~~warming pollution.~~

1 (e) ~~This section shall remain in effect until August 1, 2018, and~~
2 ~~as of that date is repealed unless a later enacted statute extends or~~
3 ~~repeals that date.~~

4 ~~SEC. 2.~~

5 *SECTION 1.* The heading of Article 1 (commencing with
6 Section 2851) is added to Chapter 9 of Part 2 of Division 1 of the
7 Public Utilities Code, to read:

8
9 Article 1. Solar Photovoltaic Systems

10
11 ~~SEC. 3.~~

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

15
16 Article 2. ~~Solar Thermal~~ *Hot Water* Systems

17
18 2860. (a) This article shall be known, and may be cited, as the
19 Solar Hot Water and Efficiency Act of 2007.

20 (b) *The commission shall fund the program established by this*
21 *article through the use of a surcharge applied to ratepayers of a*
22 *gas corporation based upon the amount of natural gas consumed.*
23 *The commission shall annually establish a surcharge rate for each*
24 *class of customer for each gas corporation. The surcharge shall*
25 *be in addition to any other charges for natural gas sold or*
26 *transported for consumption in this state.*

27 (c) *Funding for the program established by this article shall*
28 *not exceed two hundred and fifty million dollars (\$250,000,000).*
29 *Funds shall be allocated for the benefit of ratepayers to promote*
30 *utilization of solar hot water systems.*

31 2861. As used in this article, the following terms have the
32 following meanings:

33 (a) “Energy Commission” means the State Energy Resources
34 Conservation and Development Commission.

35 (b) “kWth” means the kilowatt thermal capacity of a solar
36 ~~heating collector~~ *hot water system, measured* consistent with the
37 standard established by the ~~International Energy Agency’s Solar~~
38 ~~Heating and Cooling Program.~~ *SRCC.*

39 (c) ~~“kWhth”~~ “*kWh_{th}*” means kilowatthours thermal as measured
40 by the number of kilowatts thermal generated in an hour.

1 (d) “New Solar Homes Partnership” means the 10-year program,
2 *administered by the Energy Commission*, encouraging solar energy
3 systems in new home construction.

4 (e) “*Solar heating collector*” means the device that is used to
5 collect or capture heat from the sun and that is generally, but need
6 not be, located on a roof.

7 ~~(e) “Solar heating~~

8 (f) “*Solar hot water system*” means a solar energy device that
9 has the primary purpose of reducing demand for natural gas through
10 water heating, space heating, or other methods of ~~reducing~~
11 *capturing energy from the sun to reduce* natural gas consumption
12 in a home, businesses, or any building receiving natural gas that
13 is subject to the surcharge established pursuant to Section ~~902~~
14 2860, or exempt from the surcharge pursuant to subdivision (c) of
15 Section 2863, and that meets or exceeds the eligibility criteria
16 established pursuant to Section 2864. “*Solar hot water systems*”
17 *do not include solar pool heating systems.*

18 (g) “*SRCC*” means the *Solar Rate and Certification*
19 *Corporation.*

20 2862. The Legislature finds and declares all of the following:

21 (a) California is heavily dependent on natural gas, importing
22 more than 80 percent of the natural gas it consumes.

23 (b) Rising worldwide demand for natural gas and a shrinking
24 supply create rising and unstable prices that can harm California
25 consumers and the economy.

26 (c) Natural gas is a fossil fuel and a major source of global
27 warming pollution and the pollutants that cause air pollution,
28 including smog.

29 (d) California’s growing population and economy will put a
30 strain on energy supplies and threaten the ability of the state to
31 meet its global warming goals unless specific steps are taken to
32 reduce demand and generate energy cleanly and efficiently.

33 (e) Water heating for domestic and industrial use relies almost
34 entirely on natural gas and accounts for a significant percentage
35 of the state’s natural gas consumption.

36 (f) ~~Solar water heating~~ *hot water systems* represent the largest
37 untapped natural gas saving potential remaining in California.

38 (g) In addition to financial and energy savings, ~~solar heating~~
39 *hot water systems* can help protect against future gas and electricity
40 shortages and reduce our dependence on foreign sources of energy.

1 (h) Solar ~~heating~~ *hot water* systems can also help preserve the
2 environment and protect public health by reducing air pollution,
3 including carbon dioxide, a leading global warming gas, and
4 nitrogen oxide, a precursor to smog.

5 (i) Growing demand for these technologies will create jobs in
6 California as well as promote greater energy independence, protect
7 consumers from rising energy costs and result in cleaner air.

8 (j) It is in the interest of the State of California to promote solar
9 hot water systems and other technologies that directly reduce
10 demand for natural gas in homes and businesses.

11 (k) It is the intent of the Legislature to build a mainstream
12 market for solar ~~heating~~ *hot water* systems that directly reduces
13 demand for natural gas in homes, businesses, and government
14 buildings. Toward that end, it is the goal of the Solar Hot Water
15 and Efficiency Act of 2007 to install at least ~~500,000 solar heating~~
16 *200,000 solar hot water* systems on homes, businesses, and
17 government buildings throughout the state by 2017, thereby
18 lowering prices and creating a self-sufficient market that will
19 sustain itself beyond the life of this program.

20 (l) It is the intent of the Legislature that the solar ~~heating~~ *hot*
21 *water system* incentives created by the act should be a cost-effective
22 investment by ~~consumers of natural gas. Consumers of natural gas~~
23 *natural gas ratepayers. Natural gas ratepayers* will recoup the
24 cost of their investment through lower prices as a result of avoiding
25 purchases of natural gas, and benefit from additional system
26 stability and pollution reduction benefits.

27 2863. (a) In order to achieve the goals of the Legislature, the
28 commission shall, not later than July 1, 2008, create a program to
29 promote the installation of ~~500,000 solar thermal~~ *200,000 solar*
30 *hot water* systems in homes and ~~business~~ *businesses* throughout
31 the state by 2017.

32 (b) The program shall be ~~supervised or administered by~~
33 *administered by the gas corporations or third-party administrators,*
34 *as determined by the commission, and subject to the supervision*
35 *of the commission.* The commission shall coordinate with the
36 Energy Commission's New Solar Homes Partnership to achieve
37 the goal of building zero-energy homes.

38 (c) Not later than July 1, 2008, the commission shall establish
39 a surcharge pursuant to Section ~~902, not to exceed one hundred~~
40 *2860, not to exceed two hundred fifty* million dollars

1 ~~(\$100,000,000) in its entirety~~ (\$250,000,000) over the course of
2 the 10-year program. In establishing the program required by this
3 section, no moneys shall be diverted from any existing programs
4 for low-income ratepayers or cost-effective energy efficiency
5 programs. Any surcharge imposed to fund the program adopted
6 and implemented pursuant to this section shall be imposed upon
7 all customers not participating in the California Alternate Rates
8 for Energy (CARE) or family electric rate assistance (FERA)
9 programs.

10 2864. (a) Not later than July 1, 2008, the commission, in
11 consultation with the Energy Commission, and interested members
12 of the public, shall establish eligibility criteria for solar-heating
13 hot water systems receiving ratepayer funded incentives. The
14 criteria should specify and include all of the following:

15 (1) Design, installation, and energy output or displacement
16 standards. *To be eligible for rebate funding, a solar hot water*
17 *system shall, at a minimum, have a SRCC OG-300 Solar Water*
18 *Heating System Certification.*

19 (2) Require that solar-heating hot water system components are
20 new and unused, and have not previously been placed in service
21 in any other location or for any other application.

22 (3) Require that solar-heating systems hot water collectors have
23 a warranty of not less than 10 years to protect against defects and
24 undue degradation.

25 (4) Require that solar-energy hot water systems are in buildings
26 connected to a natural gas utility's distribution system within the
27 state.

28 (5) Require that solar-heating hot water systems have meters or
29 other ~~kWh~~ *kWh_{th}* measuring devices in place to monitor and
30 measure the system's performance and the quantity of energy
31 generated or displaced by the system.

32 (6) Require that solar-energy hot water systems are installed in
33 conformity with the manufacturer's specifications and all
34 applicable codes and standards.

35 (b) ~~Upon establishment of eligibility criteria pursuant to this~~
36 ~~section, no~~ *NO* ratepayer funded incentives shall be made for a
37 solar-energy hot water system that does not meet the eligibility
38 criteria.

39 (c) *In establishing the incentive structure and criteria, the*
40 *commission shall draw upon the experience in San Diego with the*

1 *Solar Hot Water Pilot Program as well as other well-established*
2 *solar hot water incentive programs.*

3 2865. (a) ~~The~~ *No later than July 1, 2008, the commission shall*
4 *establish conditions on ratepayer funded incentives. The conditions*
5 *shall require both of the following:*

6 (1) *Appropriate siting and high-quality installation of the solar*
7 ~~heating~~ *hot water system based on installation guidelines that*
8 *maximize the performance of the system and prevent qualified*
9 *systems from being inefficiently or inappropriately installed. The*
10 *conditions shall not impact housing designs or densities presently*
11 *authorized by a city, county, or city and county. The goal of this*
12 *paragraph is to achieve efficient installation of solar-~~heating~~ hot*
13 *water systems and promote the greatest energy production or*
14 *displacement per ratepayer dollar.*

15 (2) *Appropriate energy efficiency improvements in the new or*
16 *existing home or commercial structure where the solar-~~heating~~ hot*
17 *water system is installed.*

18 (b) *The commission shall set rating standards for equipment,*
19 *components, and systems to-~~assure~~ ensure reasonable performance*
20 *and shall develop standards that provide for compliance with the*
21 *minimum ratings.*

22 2866. *The commission shall provide not less than 10 percent*
23 *of the overall funds for installation of solar-~~heating systems on~~ hot*
24 *water systems on low-income and affordable housing projects*
25 *undertaken pursuant to Section 50052.5, 50053, or 50199.14 of*
26 *the Health and Safety Code. If deemed appropriate in consultation*
27 *with the California Tax Credit Allocation Committee, the*
28 *commission may establish a grant program or a revolving loan or*
29 *loan guarantee program for affordable housing projects consistent*
30 *with the requirements of Chapter 5.3 (commencing with Section*
31 *25425) of Division 15 of the Public Resources Code.*

32 2867. (a) *The rebates provided through this program shall*
33 *decline over time. They shall be structured so as to drive down the*
34 *cost of the solar-~~heating~~ hot water technologies, and be paid out*
35 *on a performance-based incentive basis so that incentives are*
36 *earned based on the actual energy savings.*

37 (b) *The commission shall consider federal tax credits and other*
38 *incentives available for this technology when determining the*
39 *appropriate rebate amount.*

1 (c) In coordinating with the commission, the Energy
2 Commission shall consider ~~coupling rebates for solar heating when~~
3 *appropriate, consider coupling rebates for solar hot water systems*
4 ~~with complimentary~~ *complementary* energy efficiency technologies,
5 including, but not limited to, efficient hot water heating tanks and
6 tankless or on demand hot water systems that can be installed in
7 addition to the solar ~~heating~~ *hot water* system.

8 2867.1. Not later than July 1, 2010, the commission shall report
9 to the Legislature as to the effectiveness of the program and make
10 recommendations as to any changes that should be made to the
11 program. *This report shall include justification for the size of the*
12 *rebate program in terms of total available incentive moneys as*
13 *well as the anticipated benefits of the program in its entirety.* To
14 facilitate the understanding of how solar ~~heating devices~~ *hot water*
15 *systems* compare with other clean energy and energy efficiency
16 technologies, all documents related to and rebates provided by this
17 program shall be measured in both ~~kWh~~ *kWh_{th}* and therms of
18 natural gas saved.

19 2867.2. ~~Solar heating~~ *Except for the Solar Hot Water Pilot*
20 *Program in San Diego, solar hot water technologies shall not be*
21 *eligible for California Solar Initiative (CSI) funds, pursuant to*
22 *Section 2851, unless they also displace electricity, in which case*
23 *only the electricity displacing portion of the technology may be*
24 *eligible under the CSI program, as determined by the commission.*

25 2867.3. ~~This part~~ *article* shall remain in effect only until August
26 1, 2018, and as of that date is repealed, unless a later enacted
27 statute, that is enacted before August 1, 2018, deletes or extends
28 that date.