

AMENDED IN ASSEMBLY JUNE 23, 2005
AMENDED IN SENATE MAY 31, 2005
AMENDED IN SENATE MAY 16, 2005
AMENDED IN SENATE APRIL 25, 2005
AMENDED IN SENATE FEBRUARY 28, 2005

SENATE BILL

No. 1

Introduced by Senators Murray and Campbell
(Coauthors: Senators Alquist, Chesbro, Ducheny, and Kehoe)
(Coauthors: Assembly Members Bermudez, Chan, Huff, Cohn, Huff,
Koretz, Laird, Leno, Lieber, Maze, Pavley, Nation, Pavley,
Saldana, and Wolk)

December 6, 2004

An act to amend Section 25744 of, to add Sections 25405.5 and 25405.6 to, and to add Chapter 8.8 (commencing with Section 25780) to Division 15 of, the Public Resources Code, and to amend Section 379.6 of, *and* to add Sections 379.8 and 387.5 to, the Public Utilities Code, relating to solar energy.

LEGISLATIVE COUNSEL'S DIGEST

SB 1, as amended, Murray. Energy: renewable energy resources: Million Solar Roofs Initiative.

(1) Existing law requires the State Energy Resources Conservation and Development Commission (Energy Commission) to expand and accelerate development of alternative sources of energy, including solar resources. Existing law requires the Energy Commission, until January 1, 2006, and to the extent that funds are appropriated for that purpose in the annual Budget Act, to implement a grant program to

accomplish specified goals, including making solar energy systems cost competitive with alternate forms of energy.

Under existing law, the Public Utilities Commission (PUC) has regulatory authority over public utilities, including electrical corporations. The existing Public Utilities Act requires the PUC to require Pacific Gas and Electric Company, San Diego Gas and Electric, and Southern California Edison to identify a separate electrical rate component to fund programs that enhance system reliability and provide in-state benefits. This rate component is a nonbypassable element of local distribution and collected on the basis of usage. The funds are collected to support cost-effective energy efficiency and conservation activities, public interest research and development not adequately provided by competitive and regulated markets, and renewable energy resources. Existing law requires that 17.5% of the money collected under the renewable energy public goods charge be used for a multiyear, consumer-based program to foster the development of emerging renewable technologies in distributed generation applications. Existing law requires that the funds be expended in accordance with a specified report of the Energy Commission to the Legislature, subject to certain requirements.

Existing law requires the PUC, on or before March 7, 2001, and in consultation with the Independent System Operator, to take certain actions, including, in consultation with the Energy Commission, adopting energy conservation demand-side management and other initiatives in order to reduce demand for electricity and reduce load during peak demand periods, including differential incentives for renewable or superclean distributed generation resources. Pursuant to this requirement, the PUC has developed a self-generation incentive program to encourage customers of electrical corporations to install distributed generation that operates on renewable fuel or contributes to system reliability. Existing law requires the PUC, in consultation with the Energy Commission, to administer, until January 1, 2008, a self-generation incentive program for distributed generation resources in the same form that exists on January 1, 2004, subject to certain air emissions and efficiency standards.

This bill would establish the Million Solar Roofs Initiative, administered by the Energy Commission, with the goals of placing 1,000,000 solar energy systems, as defined, on new and existing residential and commercial customer sites, or its generation capacity equivalent of 3,000 megawatts, establishing a self-sufficient solar

industry in 10 years, and placing solar energy systems on 50% of new home developments in 13 years. The bill would establish the Million Solar Roofs Initiative Trust Fund and would provide that, upon appropriation by the Legislature, moneys deposited into the fund may be expended by the Energy Commission for purposes of carrying out the Million Solar Roofs Initiative. The bill would provide that up to 2% of the money in the fund may be expended for the state's costs of administration. The program would require the Energy Commission to award incentives, pursuant to a declining schedule to be adopted by the Energy Commission, and would authorize certain other incentive programs, to support the installation of eligible solar energy systems. The bill would require the Energy Commission to establish and revise eligibility criteria for solar energy systems and to establish conditions for incentives. The bill would require that electrical work to install the solar energy system be preformed under contract by a contractor meeting certain licensure requirements. The bill would require the Energy Commission to adopt guidelines governing the program at a publicly noticed meeting. The bill would provide that the Million Solar Roofs Initiative program supplants that portion of the program to foster the development of emerging renewable technologies that encourages installation of residential and commercial photovoltaic solar energy systems. The bill would require that, upon ~~implementation of~~ *disbursement of funds from the Million Solar Roofs Initiative Trust Fund consistent with* the Million Solar Roofs Initiative, the photovoltaic portion of the emerging renewable technologies program be discontinued and the ~~funding for~~ *remaining funds from* that program be deposited into the Million Solar Roofs Initiative Trust Fund, ~~at the same level as was collected in the 2004-05 fiscal year,~~ and would prohibit the Energy Commission from establishing any other program in addition to the Million Solar Roofs Initiative program, to encourage the increased installation of residential and commercial photovoltaic solar energy systems. The bill would require the Energy Commission to conduct random audits of solar energy systems to evaluate their operational performance. The bill would require the Energy Commission, on or before January 1, 2009, and every 3rd year thereafter, to submit an assessment of the success of the Million Solar Roofs Initiative program to the Legislature.

This bill would require that the PUC, on or before February 1, 2006, and in consultation with the Energy Commission, issue an order

opening a proceeding, or expanding the scope of an existing proceeding, to finance a comprehensive solar energy program to adequately fund the Million Solar Roofs Initiative. The bill would require funding of the Million Solar Roofs Initiative to be an element of the program adopted by the PUC. The bill would require that the reasonable cost of the program be included in the distribution revenue requirements of electrical corporations. The bill would require that the program adopted by the PUC be a cost-effective investment by ratepayers in peak electricity generation capacity that enables ratepayers to recoup the cost of their investment through lower rates as a result of avoiding purchases of electricity at peak rates generated by traditional generation resources. The bill would require the PUC to adopt the program no later than January 1, 2007. The bill would provide that the Million Solar Roofs Initiative program supplants that portion of the self-generation incentive program that encourages installation of residential and commercial photovoltaic solar energy systems and would require that, upon implementation of *disbursement by the Energy Commission of funds from the Million Solar Roofs Initiative Trust Fund consistent with the Million Solar Roofs Initiative program by the Energy Commission*, the photovoltaic portion of the self-generation incentive program be discontinued and the PUC order the ~~funding to remaining funds from that program~~ be deposited into the Million Solar Roofs Initiative Trust Fund, ~~at the same level as was collected in the 2004-05 fiscal year~~. The bill would prohibit the PUC from establishing any other program to encourage the increased installation of residential and commercial solar energy systems.

This bill would require all local publicly owned electric utilities, as defined, that sell electricity at retail, on or before January 1, 2007, to adopt, implement, and finance a solar roofs initiative program, funded by a surcharge, as prescribed, for the purpose of investing in, and encouraging the increased installation of, residential and commercial solar energy systems. The bill would require a local publicly owned electric utility to make certain program information available to its customers and to the Energy Commission on an annual basis beginning June 1, 2007. By imposing additional duties upon local publicly owned electric utilities, the bill would thereby impose a state-mandated local program.

(2) Existing law requires all electric service providers, as defined, to develop a standard contract or tariff providing for net energy metering, and to make this contract available to eligible customer

generators, upon request. Existing law requires all electric service providers, upon request, to make available to eligible customer generators contracts for net energy metering on a first-come-first-served basis until the time that the total rated generating capacity used by eligible customer generators exceeds 0.5% of the electric service provider's aggregate customer peak demand.

This bill would, notwithstanding these requirements, require the PUC to order electric service providers to expand the availability of net energy metering so that it is offered on a first-come-first-served basis until the time that the total rated generating capacity used by all eligible customer-generators exceeds 5% of the electric service provider's aggregate custom peak demand.

(3) Existing law requires the Energy Commission to expand and accelerate development of alternative sources of energy, including solar resources.

This bill would require that beginning January 1, 2010, a seller of production homes, as defined, offer the option of a solar energy system, as defined, to all customers negotiating to purchase a new production home constructed on land meeting certain criteria and to disclose certain information. The bill would require the Energy Commission to develop an offset program that allows a developer or seller of production homes to forego the offer requirement on one project, by installing solar energy systems generating specified amounts of electricity on other projects. The bill would require that not later than July 1, ~~2009~~ 2006, the Energy Commission initiate a public proceeding and make findings if and under what conditions solar energy systems are to be required on new residential and nonresidential buildings. *The bill would prohibit the Energy Commission from requiring that a solar energy system be installed on a residential building unless the Energy Commission determines, based upon consideration of all costs associated with the system, including the availability of certain financial incentives, that the system is cost-effective when amortized over the economic life of the structure.*

(4) Under existing law, a violation of the Public Utilities Act or an order or direction of the PUC is a crime.

Various provisions of this bill are within the act and require action by the PUC to implement the bill's requirements. Because a violation of those provisions or of PUC actions to implement those provisions

would be a crime, this bill would impose a state-mandated local program by creating new crimes.

(5) 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. Section 25405.5 is added to the Public
2 Resources Code, to read:

3 25405.5. (a) As used in this section, the following terms have
4 the following meanings:

5 (1) “kW” means kilowatts or 1,000 watts, as measured from
6 the alternating current side of the solar energy system inverter
7 consistent with Section 223 of Title 15 of the United States Code.

8 (2) “Production home” means a single family residence
9 constructed as part of a development of at least 50 homes per
10 project that is intended or offered for sale.

11 (3) “Solar energy system” means a photovoltaic solar collector
12 or other photovoltaic solar energy device that has a primary
13 purpose of providing for the collection and distribution of solar
14 energy for the generation of electricity, and that produces at least
15 1 kW, but not more than 1 megawatt, alternating current rated
16 peak electricity.

17 (b) A seller of production homes shall offer a solar energy
18 system option to all customers that enter into negotiations to
19 purchase a new production home constructed on land for which
20 an application for a tentative subdivision map has been deemed
21 complete on or after January 1, 2010, and disclose the following:

22 (1) The total installed cost of the solar energy system option.

23 (2) The estimated cost savings associated with the solar energy
24 system option, as determined by the commission pursuant to
25 Chapter 8.8 (commencing with Section 25780) of Division 15.

26 (c) The State Energy Resources Conservation and
27 Development Commission shall develop an offset program that

1 allows a developer or seller of production homes to forego the
2 offer requirement of this section on one project, by installing
3 solar energy systems generating specified amounts of electricity
4 on other projects. The amount of electricity required to be
5 generated from solar energy systems used as an offset pursuant to
6 this subdivision, shall be equal to the amount of electricity
7 generated by solar energy systems installed on a similarly sized
8 project within that climate zone, assuming 20 percent of the
9 prospective buyers would have installed solar energy systems.

10 SEC. 2. Section 25405.6 is added to the Public Resources
11 Code, to read:

12 25405.6. Not later than July 1, 2006, the commission shall
13 initiate a public proceeding and make findings if, and under what
14 conditions, solar energy systems shall be required on new
15 residential and new nonresidential buildings, including the
16 establishment of numerical targets. *A solar energy system shall
17 not be required for a residential building unless the commission
18 determines, based upon consideration of all costs associated with
19 the system, that the system is cost-effective when amortized over
20 the economic life of the structure. When determining the
21 cost-effectiveness of the solar energy system, the commission
22 shall consider the availability of governmental rebates, tax
23 deductions, net-metering, and other quantifiable factors,
24 provided that the commission can determine the availability of
25 these financial incentives if a solar energy system is made
26 mandatory and not elective. The commission shall periodically
27 update the standards and adopt any revision that the commission
28 determines is necessary, including revisions that reflect changes
29 in the financial incentives originally considered by the
30 commission when determining cost-effectiveness of the solar
31 energy system.* For purposes of this section, ~~a solar energy
32 system~~ “solar energy system” means a photovoltaic solar
33 collector or other photovoltaic solar energy device that has a
34 primary purpose of providing for the collection and distribution
35 of solar energy for the generation of electricity.

36 SEC. 3. Section 25744 of the Public Resources Code is
37 amended to read:

38 25744. (a) Seventeen and one-half percent of the money
39 collected pursuant to the renewable energy public goods charge
40 shall be used for a multiyear, consumer-based program to foster

1 the development of emerging renewable technologies in
2 distributed generation applications.

3 (b) Any funds used for emerging technologies pursuant to this
4 section shall be expended, except as provided in subdivisions (c)
5 and (d), in accordance with the report, subject to all of the
6 following requirements:

7 (1) Funding for emerging technologies shall be provided
8 through a competitive, market-based process that shall be in
9 place for a period of not less than five years, and shall be
10 structured so as to allow eligible emerging technology
11 manufacturers and suppliers to anticipate and plan for increased
12 sale and installation volumes over the life of the program.

13 (2) The program shall provide monetary rebates, buydowns, or
14 equivalent incentives, subject to subparagraph (C), to purchasers,
15 lessees, lessors, or sellers of eligible electricity generating
16 systems. Incentives shall benefit the end-use consumer of
17 renewable generation by directly and exclusively reducing the
18 purchase or lease cost of the eligible system, or the cost of
19 electricity produced by the eligible system. Incentives shall be
20 issued on the basis of the rated electrical generating capacity of
21 the system measured in watts, or the amount of electricity
22 production of the system, measured in kilowatthours. Incentives
23 shall be limited to a maximum percentage of the system price, as
24 determined by the commission.

25 (3) Eligible distributed emerging technologies are
26 photovoltaic, solar thermal electric, fuel cell technologies that
27 utilize renewable fuels, and wind turbines of not more than 50
28 kilowatts rated electrical generating capacity per customer site,
29 and other distributed renewable emerging technologies that meet
30 the emerging technology eligibility criteria established by the
31 commission. Eligible electricity generating systems are intended
32 primarily to offset part or all of the consumer's own electricity
33 demand, and shall not be owned by local publicly owned electric
34 utilities, nor be located at a customer site that is not receiving
35 distribution service from an electrical corporation that is subject
36 to the renewable energy public goods charge and contributing
37 funds to support programs under this chapter. All eligible
38 electricity generating system components shall be new and
39 unused, shall not have been previously placed in service in any
40 other location or for any other application, and shall have a

1 warranty of not less than five years to protect against defects and
2 undue degradation of electrical generation output. Systems and
3 their fuel resources shall be located on the same premises of the
4 end-use consumer where the consumer's own electricity demand
5 is located, and all eligible electricity generating systems shall be
6 connected to the utility grid in California. The commission may
7 require eligible electricity generating systems to have meters in
8 place to monitor and measure a system's performance and
9 generation. Only systems that will be operated in compliance
10 with applicable law and the rules of the Public Utilities
11 Commission shall be eligible for funding.

12 (4) ~~The commission shall limit the amount~~ *may limit the*
13 *distribution of funds available for any system or project of*
14 *multiple systems and reduce the level of funding for any system*
15 *or project of multiple systems that has received, or may be*
16 *eligible to receive, any government or utility funds, incentives, or*
17 *credit pursuant to the program based upon the receipt of funding*
18 *or financial incentives from other federal or local government or*
19 *public utility programs to promote solar energy.*

20 (5) In awarding funding, the commission may provide
21 preference to systems that provide tangible demonstrable benefits
22 to communities with a plurality of minority or low-income
23 populations.

24 (6) In awarding funding, the commission shall develop and
25 implement eligibility criteria and a system that provides
26 preference to systems based upon system performance, taking
27 into account factors, including, but not limited to, shading,
28 insulation levels, and installation orientation.

29 ~~At least once annually, the commission shall~~ *The*
30 *commission shall, on a quarterly basis, publish and make*
31 *available to the public the balance of funds available for*
32 *emerging renewable energy resources for rebates, buydowns, and*
33 *other incentives for the purchase of these resources.*

34 (c) Notwithstanding Section 399.6 of the Public Utilities Code,
35 the commission may expend, until December 31, 2008, up to
36 sixty million dollars (\$60,000,000) of the funding allocated to the
37 Renewable Resources Trust Fund for the program established in
38 this section, subject to the repayment requirements of subdivision
39 (f) of Section 25751.

1 (d) Notwithstanding Section 399.6 of the Public Utilities Code
 2 and subdivision (b), the Million Solar Roofs Initiative program
 3 shall supplant that portion of the program to foster the
 4 development of emerging renewable technologies that
 5 ~~encourages~~ *encourage the* installation of residential and
 6 commercial photovoltaic solar energy systems. Upon
 7 ~~implementation of disbursement of funds from the Million Solar~~
 8 ~~Roofs Initiative Trust Fund consistent with the Million Solar~~
 9 ~~Roofs Initiative program established pursuant to Chapter 8.8~~
 10 ~~(commencing with Section 25780), the photovoltaic portion of~~
 11 ~~the emerging renewable technologies program shall be~~
 12 ~~discontinued and the funding remaining funds from that program~~
 13 ~~shall be deposited into the Million Solar Roofs Initiative Trust~~
 14 ~~Fund, at the same level as was collected in the 2004-05 fiscal~~
 15 ~~year.~~ The commission shall not establish any other program to
 16 encourage the increased installation of residential and
 17 commercial photovoltaic solar energy systems.

18 SEC. 4. Chapter 8.8 (commencing with Section 25780) is
 19 added to Division 15 of the Public Resources Code, to read:

20

21 CHAPTER 8.8. MILLION SOLAR ROOFS INITIATIVE

22

23 25780. The Legislature finds and declares all of the
 24 following:

25 (a) California has a pressing need to procure a steady supply
 26 of affordable and reliable peak electricity.

27 (b) Solar generated electricity is uniquely suited to
 28 California's needs because it produces electricity when
 29 California needs it most, during the peak demand hours in
 30 summer afternoons when the sun is brightest and air conditioners
 31 are running at capacity.

32 (c) Procuring solar electric generation capacity to meet peak
 33 electricity demand increases system reliability and decreases
 34 California's dependence on unstable fossil fuel supplies.

35 (d) Solar generated electricity diversifies California's energy
 36 portfolio. California currently relies on natural gas for the bulk of
 37 its electricity generation needs. Increasing energy demands place
 38 increasing pressure on limited natural gas supplies and threaten
 39 to raise costs.

1 (e) More than 150,000 homes will be built annually in
2 California in the coming years, challenging energy reliability and
3 affordability.

4 (f) Investing in residential and commercial solar electricity
5 generation installations today will lower the cost of solar
6 generated electricity for all Californians in the future. In 10
7 years, solar peak electric generation can be procured without the
8 need for rebates.

9 (g) Increasing California’s solar electricity generation market
10 will also bring additional manufacturing, installation, and sales
11 jobs to the state at a higher rate than most conventional energy
12 production sources.

13 (h) Funding a Million Solar Roofs Initiative is a cost-effective
14 investment by ratepayers in peak electricity generation capacity
15 and ratepayers will recoup the cost of their investment through
16 lower rates as a result of avoiding purchases of electricity at peak
17 rates, with additional system reliability and pollution reduction
18 benefits.

19 (i) Solar energy systems provide substantial energy reliability
20 and pollution reduction benefits. Solar energy systems also
21 diversify our energy supply and thereby reduce our dependence
22 on imported fossil fuels.

23 25781. As used in this chapter, the following terms have the
24 following meanings:

25 (a) “kW” means kilowatts or 1,000 watts, as measured from
26 the alternating current side of the solar energy system inverter
27 consistent with Section 223 of Title 15 of the United States Code.

28 (b) “kWh” means kilowatthours, as measured by the number
29 of kilowatts generated in an hour.

30 (c) “MW” means megawatts or 1,000,000 watts.

31 (d) “Solar energy system” means a photovoltaic solar collector
32 or other photovoltaic solar energy device that has a primary
33 purpose of providing for the collection and distribution of solar
34 electrical energy for the generation of electricity, and that
35 produces at least 1 kW alternating current rated peak electricity.

36 (e) “Million Solar Roofs Initiative” means the program
37 established by this chapter.

38 25782. (a) (1) The commission shall develop and implement
39 a multiyear Million Solar Roofs Initiative to provide funding and
40 support to foster the installation of solar energy systems on new

1 and existing residential and commercial customer sites in
2 California. The goals of this program are the placement of solar
3 energy systems on 1,000,000 residential and commercial sites, or
4 its generation capacity equivalent of 3,000 MW, the
5 establishment of a self-sufficient solar industry in which solar
6 energy systems are a viable mainstream option for both homes
7 and businesses in 10 years, and the placement of solar energy
8 systems on 50 percent of new homes in 13 years.

9 (2) The Million Solar Roofs Initiative program shall supplant
10 that portion of the program to foster the development of
11 emerging renewable technologies funded pursuant to Section
12 25744, that encourages installation of residential and commercial
13 photovoltaic solar energy systems. ~~Upon implementation of~~
14 *disbursement of funds from the Million Solar Roofs Initiative*
15 *Trust Fund consistent with the Million Solar Roofs Initiative*
16 program, the photovoltaic portion of the emerging renewable
17 technologies program shall be discontinued and the ~~funding~~
18 *remaining funds from that program shall be* deposited into the
19 Million Solar Roofs Initiative Trust Fund, ~~at the same level as~~
20 ~~was collected in the 2004-05 fiscal year.~~

21 (3) The commission shall not establish any other program in
22 addition to the program established pursuant to this chapter, to
23 encourage the increased installation of residential and
24 commercial photovoltaic solar energy systems.

25 (b) All funds used for the Million Solar Roofs Initiative shall
26 be expended in accordance with the following:

27 (1) The commission shall award monetary incentives for
28 eligible solar energy systems not to exceed the existing level of
29 incentive in effect on January 1, 2006. The incentive level shall
30 decline each year thereafter at a rate of no less than 7 percent per
31 year and shall be zero as of December 31, 2016. The commission
32 shall adopt and publish a schedule of declining incentive levels
33 no less than 60 days in advance of the first decline in incentive
34 levels. The commission may develop incentives based upon the
35 output of electricity from the system, provided those incentives
36 are consistent with the declining incentive levels of this
37 paragraph.

38 (2) On or before January 1, 2007, the commission shall adopt
39 revisions to the eligibility criteria for solar energy systems,

1 including design, installation, and electricity output standards or
2 incentives.

3 (3) Notwithstanding paragraph (1), the commission may
4 increase the incentive level by not more than 50 percent above
5 the maximum incentive level established pursuant to paragraph
6 (1) for solar energy systems that are installed on “zero energy
7 homes” or “zero energy commercial structures.” Prior to an
8 increase in the incentive level, the commission shall adopt
9 definitions for “zero energy homes” and “zero energy
10 commercial structures” through a public process, including at
11 least one public hearing with not less than 30 days’ notice.

12 (4) Notwithstanding paragraph (1), the commission may
13 increase the incentive level by not more than 25 percent above
14 the maximum incentive level established pursuant to paragraph
15 (1) for solar energy systems that are installed on homes or
16 commercial structures that exceed the commission’s established
17 building standards by a specified percentage as determined by the
18 commission.

19 (5) Awards shall be made for the installation of eligible solar
20 energy systems on new or existing residential and commercial
21 customer sites that are or will be receiving electrical distribution
22 service from an electrical corporation that is contributing funds to
23 support the Million Solar Roofs Initiative pursuant to Section
24 379.8 of the Public Utilities Code.

25 (6) Awards shall not be made for eligible solar energy systems
26 installed on the premises of individuals or entities that are not
27 contributing funds to support the Million Solar Roofs Initiative.

28 (c) The commission shall establish eligibility criteria for solar
29 energy systems, including the following:

30 (1) The solar energy system is intended primarily to offset part
31 or all of the consumer’s own electricity demand.

32 (2) All components in the solar energy system are new and
33 unused, and have not previously been placed in service in any
34 other location or for any other application.

35 (3) The solar energy system has a warranty of not less than 10
36 years to protect against defects and undue degradation of
37 electrical generation output.

38 (4) The solar energy system is located on the same premises of
39 the end-use consumer where the consumer’s own electricity
40 demand is located.

1 (5) The solar energy system is connected to the electrical
2 corporation's electrical distribution system within the state.

3 (6) The solar energy system has meters or other devices in
4 place to monitor and measure the system's performance and the
5 quantity of electricity generated by the system.

6 (7) The electrical work to install the solar energy system is
7 performed under contract by a California contractor with an
8 active C-10 license, in accordance with rules and regulations
9 adopted by the Contractors' State License Board.

10 (8) The solar energy system is installed in conformance with
11 the manufacturer's specifications and in compliance with all
12 applicable electrical and building code standards.

13 (d) The commission shall establish conditions on incentives
14 that require or encourage all of the following:

15 (1) Appropriate siting and high quality installation of the solar
16 energy system by developing installation guidelines that
17 maximize the performance of the system and prevent qualified
18 systems from being inefficiently or inappropriately installed. *The*
19 *conditions established by the commission shall not impact*
20 *housing designs or densities presently authorized by a city,*
21 *county, or city and county.* The goal of this paragraph is to
22 achieve efficient installation of solar energy systems to promote
23 the greatest energy production per ratepayer dollar.

24 (2) Optimal solar energy system performance during periods
25 of peak electricity demand, including the use of advanced
26 metering systems, onsite performance meters, dispatchable
27 battery backup systems, and performance based incentives.

28 (3) Appropriate energy efficiency improvements in the new or
29 existing home or commercial structure where the solar energy
30 system is installed.

31 (4) Rate equipment, components, and systems to assure
32 reasonable performance and to develop standards that provide for
33 compliance with the minimum ratings.

34 (e) The commission may limit the ~~amount~~ *distribution* of
35 funds available for any system or project of multiple systems and
36 ~~reduce the level of funding for any system or project of multiple~~
37 ~~systems that has received, or may be eligible to receive, any other~~
38 ~~government or utility funding, incentive, or credit, except for any~~
39 ~~income or property tax credit or exemption.~~ *to the program based*
40 *upon the receipt of funding or financial incentives from other*

1 *federal or local government or public utility programs to*
2 *promote solar energy.*

3 (f) Notwithstanding subdivision (e), the commission shall
4 provide proportional program support, not to exceed 10 percent
5 of the overall funds for the Million Solar Roofs Initiative, for
6 installation of solar energy systems on affordable housing
7 projects undertaken pursuant to Section 50052.5, 50053, or
8 50199.14 of the Health and Safety Code. If deemed appropriate
9 in consultation with the California Tax Credit Allocation
10 Committee, the commission may establish a revolving loan or
11 loan guarantee program for affordable housing projects
12 consistent with the requirements of Chapter 5.3 (commencing
13 with Section 25425).

14 (g) Pursuant to this chapter, the commission may provide
15 incentives in the form of a monetary incentive or its equivalent to
16 purchasers, lessees, lessors, or sellers of an eligible solar energy
17 system. The incentive shall benefit the end-use consumer by
18 directly and exclusively reducing the purchase or lease cost of
19 the eligible solar energy system, or the cost of electricity
20 produced by the eligible solar energy system. Incentives shall be
21 issued on the basis of the rated electrical capacity of the system
22 measured in watts, or in the electricity production of the system,
23 measured in kWh, as determined by the commission.

24 25783. In administering the Million Solar Roofs Initiative,
25 the commission shall do all the following:

26 (a) Examine and implement, to the extent appropriate,
27 financing options that could lower solar energy system financing
28 costs to residential and commercial customers. The commission
29 shall examine wholesale and retail mortgage markets, and other
30 issues that it deems appropriate.

31 (b) Acquire, if the commission determines it necessary,
32 appropriate technical and administrative services or expertise to
33 support the Million Solar Roofs Initiative. The commission may
34 award contracts to develop or administer all or a portion of the
35 Million Solar Roofs Initiative.

36 (c) Publish educational materials designed to demonstrate how
37 builders may incorporate solar energy systems during
38 construction as well as energy efficiency measures that best
39 complement solar energy systems.

1 (d) Develop and publish the estimated annual electrical
2 generation and savings for solar energy systems. The estimates
3 shall vary by climate zone, type of system, size, lifecycle costs,
4 electricity prices, and other factors the commission determines to
5 be relevant to a consumer when making a purchasing decision.

6 (e) Provide assistance to builders and contractors in support of
7 the Million Solar Roofs Initiative. The assistance may include
8 technical workshops, training, educational materials, and related
9 research.

10 (f) Publish, and make available to the public, at least once
11 ~~annually~~ *quarterly*, the balance of funds available in the Million
12 Solar Roofs Initiative Trust Fund, the cost of the program, the
13 photovoltaic generating capacity installed, and the percentage of
14 new and existing residential and commercial customer sites that
15 are equipped with solar energy systems funded by the Million
16 Solar Roofs Initiative. This information shall be including in the
17 report to the Legislature made pursuant to subdivision (i).

18 (g) The commission shall annually conduct random audits of
19 solar energy systems to evaluate their operational performance.

20 (h) The commission, in consultation with the Public Utilities
21 Commission, shall evaluate the costs and benefits of having an
22 increased number of operational solar energy systems as a part of
23 the electrical system with respect to their impact upon the
24 distribution, transmission, and supply of electricity, using the best
25 available load profiling and distribution operations data from the
26 Public Utilities Commission, local publicly owned electric
27 utilities, and electrical corporations, and performance audits of
28 installed solar energy systems.

29 (i) On or before January 1, 2009, and every third year
30 thereafter, the commission shall submit to the Legislature an
31 assessment of the success of the Million Solar Roofs Initiative
32 program. That assessment shall include the number of residential
33 and commercial sites that have installed solar energy systems, the
34 electrical generating capacity of the installed solar energy
35 systems, the cost of the program, total electrical system benefits,
36 including the effect on electrical service rates, environmental
37 benefits, how the program affects the operation and reliability of
38 the electrical grid, how the program has affected peak demand
39 for electricity, the progress made toward reaching the goals of the
40 program, whether the program is on schedule to meet the

1 program goals, and recommendations for improving the program
2 to meet its goals.

3 25784. (a) The commission shall adopt guidelines governing
4 the Million Solar Roofs Initiative authorized under this chapter,
5 at a publicly noticed meeting offering all interested parties an
6 opportunity to comment. Not less than 30 days' public notice
7 shall be given of the meeting required by this section, before the
8 commission initially adopts guidelines. Substantive changes to
9 the guidelines shall not be adopted without at least 10 days'
10 written notice to the public. Notwithstanding any other provision
11 of law, any guidelines adopted pursuant to this chapter shall be
12 exempt from the requirements of Chapter 3.5 (commencing with
13 Section 11340) of Part 1 of Division 3 of Title 2 of the
14 Government Code.

15 (b) Funds to further the purposes of this chapter may be
16 committed for multiple years.

17 25785. (a) The Million Solar Roofs Initiative Trust Fund is
18 hereby created in the State Treasury.

19 (b) The money in the fund may be expended to implement and
20 support the Million Solar Roofs Initiative pursuant to this chapter
21 upon appropriation by the Legislature in the annual Budget Act.
22 Up to 2 percent of the money in the fund may be expended for
23 the costs of the state's administration of this chapter, upon
24 appropriation by the Legislature.

25 (c) Revenues collected by electrical corporations pursuant to
26 Section 379.8 of the Public Utilities Code shall be transmitted to
27 the commission at least quarterly for deposit in the Million Solar
28 Roofs Initiative Trust Fund. The Treasurer shall immediately
29 deposit money received pursuant to this section into the Million
30 Solar Roofs Initiative Trust Fund for the current calendar year.

31 (d) Upon appropriation by the Legislature and notification by
32 the commission, the Controller shall pay all awards of the money
33 in the fund for purposes enumerated in this chapter. The
34 eligibility of an award shall be determined solely by the
35 commission based on the procedures it adopts under this chapter.
36 Based on the eligibility of an award, the commission shall also
37 establish the need for a multiyear commitment to any particular
38 award and so advise the Department of Finance. An eligible
39 award submitted by the commission to the Controller shall be
40 accompanied by a summary description of how payment of the

1 award furthers the purposes enumerated in this chapter, and an
2 accounting of future costs associated with any award or group of
3 awards known to the commission to represent a portion of a
4 multiyear funding commitment.

5 SEC. 5. Section 379.6 of the Public Utilities Code is amended
6 to read:

7 379.6. (a) The commission, in consultation with the State
8 Energy Resources Conservation and Development Commission,
9 shall administer, until January 1, 2008, the self-generation
10 incentive program for distributed generation resources originally
11 established pursuant to Chapter 329 of the Statutes of 2000.
12 Except as provided in subdivisions (b) and (c), the program shall
13 be administered in the same form as it existed on January 1,
14 2004.

15 (b) Eligibility for the self-generation incentive program's level
16 3 incentive category shall be subject to the following conditions:

17 (1) Commencing January 1, 2005, all combustion-operated
18 distributed generation projects using fossil fuel shall meet an
19 oxides of nitrogen (NO_x) emissions rate standard of 0.14 pounds
20 per megawatthour.

21 (2) Commencing January 1, 2007, all combustion-operated
22 distributed generation projects using fossil fuel shall meet a NO_x
23 emissions rate standard of 0.07 pounds per megawatthour and a
24 minimum efficiency of 60 percent. A minimum efficiency of 60
25 percent shall be measured as useful energy output divided by fuel
26 input. The efficiency determination shall be based on 100 percent
27 load.

28 (3) Combined heat and power units that meet the 60 percent
29 efficiency standard may take a credit to meet the applicable NO_x
30 emissions standard of 0.14 pounds per megawatthour or 0.07
31 pounds per megawatthour. Credit shall be at the rate of one
32 megawatthour for each 3.4 million British thermal units (Btus) of
33 heat recovered.

34 (4) Notwithstanding paragraphs (1) and (2), a project that does
35 not meet the applicable NO_x emission standard is eligible if it
36 meets both of the following requirements:

37 (A) The project operates solely on waste gas. The commission
38 shall require a customer that applies for an incentive pursuant to
39 this paragraph to provide an affidavit or other form of proof, that
40 specifies that the project shall be operated solely on waste gas.

1 Incentives awarded pursuant to this paragraph shall be subject to
2 refund and shall be refunded by the recipient to the extent the
3 project does not operate on waste gas. As used in this paragraph,
4 “waste gas” means natural gas that is generated as a byproduct of
5 petroleum production operations and is not eligible for delivery
6 to the utility pipeline system.

7 (B) The air quality management district or air pollution control
8 district, in issuing a permit to operate the project, determines that
9 operation of the project will produce an onsite net air emissions
10 benefit, compared to permitted onsite emissions if the project
11 does not operate. The commission shall require the customer to
12 secure the permit prior to receiving incentives.

13 (c) In administering the self-generation incentive program, the
14 commission may adjust the amount of rebates, include other
15 ultraclean and low-emission distributed generation technologies,
16 as defined in Section 353.2, and evaluate other public policy
17 interests, including, but not limited to, ratepayers, and energy
18 efficiency and environmental interests. The Million Solar Roofs
19 Initiative program shall supplant that portion of the
20 self-generation incentive program that encourages installation of
21 residential and commercial photovoltaic solar energy systems.
22 ~~Upon implementation of disbursement by the State Energy~~
23 ~~Resources Conservation and Development Commission of funds~~
24 ~~from the Million Solar Roofs Initiative Trust Fund consistent with~~
25 ~~the Million Solar Roofs Initiative program by the State Energy~~
26 ~~Resources Conservation and Development Commission~~
27 ~~established pursuant to Chapter 8.8 (commencing with Section~~
28 ~~25780) of Division 15 of the Public Resources Code, the~~
29 ~~photovoltaic portion of the self-generation incentive program~~
30 ~~shall be discontinued and the commission shall order the funding~~
31 ~~remaining funds from that program to be deposited into the~~
32 ~~Million Solar Roofs Initiative Trust Fund, at the same level as~~
33 ~~was collected in the 2004-05 fiscal year, as a part of the~~
34 ~~proceeding to adopt, implement, and finance a comprehensive~~
35 ~~solar energy program pursuant to Section 379.8. Fund. The~~
36 ~~commission shall not establish any other program to encourage~~
37 ~~the increased installation of residential and commercial solar~~
38 ~~energy systems.~~

39 SEC. 6. Section 379.8 is added to the Public Utilities Code, to
40 read:

1 379.8. (a) As used in this section, the following terms have
2 the following meanings:

3 (1) “kW” means kilowatts or 1,000 watts, as measured from
4 the alternating current side of the solar energy system inverter
5 consistent with Section 223 of Title 15 of the United States Code.

6 (2) “kWh” means kilowatthours, as measured by the number
7 of kilowatts generated in an hour.

8 (3) “MW” means megawatts or 1,000,000 watts.

9 (4) “Solar energy system” means a photovoltaic solar collector
10 or other photovoltaic solar energy device that has a primary
11 purpose of providing for the collection and distribution of solar
12 electrical energy for the generation of electricity, and that
13 produces at least 1 kW alternating current rated peak electricity.

14 (b) Notwithstanding any other law, on or before February 1,
15 2006, the commission, in consultation with the State Energy
16 Resources Conservation and Development Commission, shall
17 initiate a new proceeding or expand the scope of an existing
18 proceeding to finance a comprehensive solar energy program
19 pursuant to Chapter 8.8 (commencing with Section 25780) of
20 Division 15 of the Public Resources Code, to adequately fund the
21 Million Solar Roofs Initiative.

22 (c) The commission’s proceeding shall do all of the following:

23 (1) Order that funding for the photovoltaic portion of the
24 self-generation incentive program for distributed generation be
25 deposited into the Million Solar Roofs Initiative Trust Fund, at
26 the same level as was collected in the 2004-05 fiscal year.

27 (2) Determine the level of additional funding needed to
28 adequately support the goal of placing solar energy systems on
29 one million residential and commercial customer sites or its
30 equivalent of 3,000 MW solar generating capacity in the state by
31 December 31, 2018.

32 (3) Encourage participation by a broad and diverse range of
33 interests from all areas of the state, and interested state entities.

34 (d) The commission shall include the reasonable cost of the
35 program in the distribution revenue requirements of electrical
36 corporations.

37 (e) Notwithstanding any other provision of law, any charge
38 imposed to fund the program adopted and implemented pursuant
39 to this section shall be imposed upon all customers not
40 participating in the California Alternate Rates for Energy or

1 CARE program as provided ~~on~~ *in* paragraph (2), including those
2 residential customers subject to the rate cap required by Section
3 80110 of the Water Code for existing baseline quantities or usage
4 up to 130 percent of existing baseline quantities of electricity.

5 The costs of the program adopted and implemented pursuant to
6 this section may not be recovered from customers participating in
7 the California Alternate Rates for Energy or CARE program
8 established pursuant to Section 739.1, except to the extent that
9 program costs are recovered out of the nonbypassable system
10 benefits charge authorized pursuant to Section 399.8.

11 (f) The commission shall adopt the program no later than
12 January 1, 2007.

13 (g) The program adopted by the commission pursuant to this
14 section, shall do all of the following:

15 (1) Be a cost-effective investment by ratepayers in peak
16 electricity generation capacity that enables ratepayers to recoup
17 the cost of their investment through lower rates as a result of
18 avoiding purchases of electricity at peak rates generated by
19 traditional powerplants and peaker generation units, with
20 additional system reliability and pollution reduction benefits.

21 (2) Utilize the most cost-effective administrative mechanism
22 to adequately accomplish the goals of the program.

23 (3) Provide a predictable long-term funding mechanism
24 sufficient to encourage adequate investment by the solar industry.

25 (4) Make time-variant pricing available for all ratepayers with
26 a solar energy system, upon adoption of time-variant pricing
27 tariffs pursuant to Section 760. The commission shall structure
28 any time-variant pricing so that ratepayers receive due value for
29 their contribution to the purchase of solar energy systems and
30 customers with solar energy systems continue to have an
31 incentive to use electricity efficiently.

32 (5) Require San Diego Gas and Electric Company, Southern
33 California Edison Company, and Pacific Gas and Electric
34 Company to each designate at least one employee to be
35 accountable for solar energy system installations and operations.

36 (6) Require San Diego Gas and Electric Company, Southern
37 California Edison Company, and Pacific Gas and Electric
38 Company to each monitor and report key solar program
39 performance and progress data to the commission in a clearly
40 identified place on the utility's Internet Web site.

1 (7) Consider energy efficiency and demand side management
2 options, in addition to solar energy system procurement, for new
3 residential and commercial construction.

4 (8) Notwithstanding Section 2827, require an electric service
5 provider to expand the availability of net energy metering so that
6 it is offered on a first-come-first-served basis until the time that
7 the total rated generating capacity used by all eligible
8 customer-generators exceeds 5 percent of the electric service
9 provider's aggregate customer peak demand. However, the net
10 metering cap shall not exceed 2 percent until the commission has
11 established an appropriate net metering time-variant rate design
12 that considers the costs to all net metering participants and
13 ratepayers as a whole and that considers the recovery of the fixed
14 costs of providing distribution service to customers. The
15 commission shall monitor the level of net energy metering for
16 each electrical corporation to ensure that the cap is increased in a
17 timely manner as needed to further the objectives of this section.

18 (h) The program adopted by the commission pursuant to this
19 section shall also include elements for the purpose of funding a
20 Million Solar Roofs Initiative by the State Energy Resources
21 Conservation and Development Commission pursuant to Chapter
22 8.8 (commencing with Section 25780) of Division 15 of the
23 Public Resources Code. These program elements shall exclude
24 customers participating in the State Energy Resources
25 Conservation and Development Commission's Million Solar
26 Roofs Initiative from the rate cap for residential customers for
27 existing baseline quantities or usage by those customers of up to
28 130 percent of existing baseline quantities, as required by Section
29 80110 of the Water Code.

30 (i) ~~Upon implementation of disbursement by the State Energy~~
31 ~~Resources Conservation and Development Commission of funds~~
32 ~~from the Million Solar Roofs Trust Fund consistent with the~~
33 ~~Million Solar Roofs Initiative program by the State Energy~~
34 ~~Resources Conservation and Development Commission~~
35 ~~established pursuant to Chapter 8.8 (commencing with Section~~
36 ~~25780) of Division 15 of the Public Resources Code, the~~
37 ~~photovoltaic portion of the self-generation incentive program~~
38 ~~shall be discontinued and the commission shall order the~~
39 ~~remaining funds from that program to be deposited into the~~
40 ~~Million Solar Roofs Initiative Trust Fund.~~ The commission shall

1 not establish any other program to encourage the increased
2 installation of residential and commercial photovoltaic solar
3 energy systems.

4 SEC. 7. Section 387.5 is added to the Public Utilities Code, to
5 read:

6 387.5. (a) The governing body of a local publicly owned
7 electric utility, as defined in subdivision (d) of Section 9604, that
8 sells electricity at retail, shall adopt, implement, and finance a
9 solar roofs initiative program, funded by a surcharge in
10 accordance with subdivision (b), for the purpose of investing in,
11 and encouraging the increased installation of, residential and
12 commercial solar energy systems. This program shall be
13 consistent with the intent and goals of the Legislature to
14 encourage the installation of 3,000 megawatts of photovoltaic
15 solar energy in California in accordance with the Million Solar
16 Roofs Initiative program (Chapter 8.8 (commencing with Section
17 25780) of Division 15 of the Public Resources Code).

18 (b) On or before January 1, 2007, a local publicly owned
19 electric utility shall establish a new surcharge sufficient to offer
20 monetary incentives for the installation of solar energy systems
21 of at least two dollars and forty cents (\$2.40) per installed watt of
22 photovoltaic solar energy. The incentive level shall decline each
23 year thereafter at a rate of no less than 7 percent per year.

24 (c) A local publicly owned electric utility shall establish the
25 program on or before January 1, 2007. Before establishing the
26 program, the governing body of the local publicly owned utility
27 shall give notice of, and hold, a public hearing to seek comment
28 on the program from the community.

29 (d) A local publicly owned electric utility shall, on an annual
30 basis beginning June 1, 2007, make available to its customers
31 and to the State Energy Resources Conservation and
32 Development Commission, information relating to the utility's
33 solar roofs initiative program established pursuant to this section,
34 including, but not limited to, the number of photovoltaic solar
35 watts installed, the total number of photovoltaic systems
36 installed, the total number of applicants, the amount of incentives
37 awarded, and the contribution toward the program goals.

38 SEC. 8. No reimbursement is required by this act pursuant to
39 Section 6 of Article XIII B of the California Constitution because
40 the only costs that may be incurred by a local agency or school

1 district will be incurred because this act creates a new crime or
2 infraction, eliminates a crime or infraction, or changes the
3 penalty for a crime or infraction, within the meaning of Section
4 17556 of the Government Code, or changes the definition of a
5 crime within the meaning of Section 6 of Article XIII B of the
6 California Constitution.

7 SEC. 9. No reimbursement is required by this act pursuant to
8 Section 6 of Article XIII B of the California Constitution for
9 certain other costs that may be incurred by a local agency or
10 school district because a local agency or school district has the
11 authority to levy service charges, fees, or assessments sufficient
12 to pay for the program or level of service mandated by this act,
13 within the meaning of Section 17556 of the Government Code.

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