

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, Laird, Leno,  
Lieber, Maze, Pavley, and Wolk)

December 6, 2004

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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, 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 the Million Solar Roofs Initiative, the photovoltaic portion of the emerging renewable technologies program be discontinued and the funding *for 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 adopt, implement, and finance a comprehensive solar energy program to invest in and encourage the increased installation of residential and commercial solar energy systems, with the goal of~~

~~adequately funding~~ *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 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 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, ~~to establish a solar roofs initiative consistent with the above requirements for funding the Million Solar Roofs Initiative program, within a reasonable time after the PUC establishes any program for electrical corporations. All local publicly owned electric utilities would be required to report, on an annual basis, to its customers and to the Energy Commission, information relative to the utility's solar roofs initiative and would authorize the Energy Commission to establish guidelines for the information to be included in the utility's annual report.~~ *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, 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.

(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. For purposes of this section,  
17 a solar energy system means a photovoltaic solar collector or  
18 other photovoltaic solar energy device that has a primary purpose  
19 of providing for the collection and distribution of solar energy for  
20 the generation of electricity.

21 SEC. 3. Section 25744 of the Public Resources Code is  
22 amended to read:

23 25744. (a) Seventeen and one-half percent of the money  
24 collected pursuant to the renewable energy public goods charge  
25 shall be used for a multiyear, consumer-based program to foster  
26 the development of emerging renewable technologies in  
27 distributed generation applications.

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

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

38 (2) The program shall provide monetary rebates, buydowns, or  
39 equivalent incentives, subject to subparagraph (C), to purchasers,  
40 lessees, lessors, or sellers of eligible electricity generating

1 systems. Incentives shall benefit the end-use consumer of  
2 renewable generation by directly and exclusively reducing the  
3 purchase or lease cost of the eligible system, or the cost of  
4 electricity produced by the eligible system. Incentives shall be  
5 issued on the basis of the rated electrical generating capacity of  
6 the system measured in watts, or the amount of electricity  
7 production of the system, measured in kilowatthours. Incentives  
8 shall be limited to a maximum percentage of the system price, as  
9 determined by the commission.

10 (3) Eligible distributed emerging technologies are  
11 photovoltaic, solar thermal electric, fuel cell technologies that  
12 utilize renewable fuels, and wind turbines of not more than 50  
13 kilowatts rated electrical generating capacity per customer site,  
14 and other distributed renewable emerging technologies that meet  
15 the emerging technology eligibility criteria established by the  
16 commission. Eligible electricity generating systems are intended  
17 primarily to offset part or all of the consumer's own electricity  
18 demand, and shall not be owned by local publicly owned electric  
19 utilities, nor be located at a customer site that is not receiving  
20 distribution service from an electrical corporation that is subject  
21 to the renewable energy public goods charge and contributing  
22 funds to support programs under this chapter. All eligible  
23 electricity generating system components shall be new and  
24 unused, shall not have been previously placed in service in any  
25 other location or for any other application, and shall have a  
26 warranty of not less than five years to protect against defects and  
27 undue degradation of electrical generation output. Systems and  
28 their fuel resources shall be located on the same premises of the  
29 end-use consumer where the consumer's own electricity demand  
30 is located, and all eligible electricity generating systems shall be  
31 connected to the utility grid in California. The commission may  
32 require eligible electricity generating systems to have meters in  
33 place to monitor and measure a system's performance and  
34 generation. Only systems that will be operated in compliance  
35 with applicable law and the rules of the Public Utilities  
36 Commission shall be eligible for funding.

37 (4) The commission shall limit the amount of funds available  
38 for any system or project of multiple systems and reduce the  
39 level of funding for any system or project of multiple systems



1 that has received, or may be eligible to receive, any government  
2 or utility funds, incentives, or credit.

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

7 (6) In awarding funding, the commission shall develop and  
8 implement eligibility criteria and a system that provides  
9 preference to systems based upon system performance, taking  
10 into account factors, including, but not limited to, shading,  
11 insulation levels, and installation orientation.

12 (7) At least once annually, the commission shall publish and  
13 make available to the public the balance of funds available for  
14 emerging renewable energy resources for rebates, buydowns, and  
15 other incentives for the purchase of these resources.

16 (c) Notwithstanding Section 399.6 of the Public Utilities Code,  
17 the commission may expend, until December 31, 2008, up to  
18 sixty million dollars (\$60,000,000) of the funding allocated to the  
19 Renewable Resources Trust Fund for the program established in  
20 this section, subject to the repayment requirements of subdivision  
21 (f) of Section 25751.

22 (d) Notwithstanding Section 399.6 of the Public Utilities Code  
23 and subdivision (b), the Million Solar Roofs Initiative program  
24 shall supplant that portion of the program to foster the  
25 development of emerging renewable technologies that  
26 encourages installation of residential and commercial  
27 photovoltaic solar energy systems. Upon implementation of the  
28 Million Solar Roofs Initiative program pursuant to Chapter 8.8  
29 (commencing with Section 25780), the photovoltaic portion of  
30 the emerging renewable technologies program shall be  
31 discontinued and the funding deposited into the Million Solar  
32 Roofs Initiative Trust Fund, at the same level as *was collected* in  
33 the 2004-05 fiscal year. The commission shall not establish any  
34 other program to encourage the increased installation of  
35 residential and commercial photovoltaic solar energy systems.

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

CHAPTER 8.8. MILLION SOLAR ROOFS INITIATIVE

1  
2  
3 25780. The Legislature finds and declares all of the  
4 following:  
5 (a) California has a pressing need to procure a steady supply  
6 of affordable and reliable peak electricity.  
7 (b) Solar generated electricity is uniquely suited to  
8 California’s needs because it produces electricity when  
9 California needs it most, during the peak demand hours in  
10 summer afternoons when the sun is brightest and air conditioners  
11 are running at capacity.  
12 (c) Procuring solar electric generation capacity to meet peak  
13 electricity demand increases system reliability and decreases  
14 California’s dependence on unstable fossil fuel supplies.  
15 (d) Solar generated electricity diversifies California’s energy  
16 portfolio. California currently relies on natural gas for the bulk of  
17 its electricity generation needs. Increasing energy demands place  
18 increasing pressure on limited natural gas supplies and threaten  
19 to raise costs.  
20 (e) More than 150,000 homes will be built annually in  
21 California in the coming years, challenging energy reliability and  
22 affordability.  
23 (f) Investing in residential and commercial solar electricity  
24 generation installations today will lower the cost of solar  
25 generated electricity for all Californians in the future. In 10  
26 years, solar peak electric generation can be procured without the  
27 need for rebates.  
28 (g) Increasing California’s solar electricity generation market  
29 will also bring additional manufacturing, installation, and sales  
30 jobs to the state at a higher rate than most conventional energy  
31 production sources.  
32 (h) Funding a Million Solar Roofs Initiative is a cost-effective  
33 investment by ratepayers in peak electricity generation capacity  
34 and ratepayers will recoup the cost of their investment through  
35 lower rates as a result of avoiding purchases of electricity at peak  
36 rates, with additional system reliability and pollution reduction  
37 benefits.  
38 (i) Solar energy systems provide substantial energy reliability  
39 and pollution reduction benefits. Solar energy systems also

1 diversify our energy supply and thereby reduce our dependence  
2 on imported fossil fuels.

3 25781. As used in this chapter, the following terms have the  
4 following meanings:

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

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

11 (d) “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 electrical energy for the generation of electricity, and that  
15 produces at least 1 kW alternating current rated peak electricity.

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

18 25782. (a) (1) The commission shall develop and implement  
19 a multiyear Million Solar Roofs Initiative to provide funding and  
20 support to foster the installation of solar energy systems on new  
21 and existing residential and commercial customer sites in  
22 California. The goals of this program are the placement of solar  
23 energy systems on 1,000,000 residential and commercial sites, or  
24 its generation capacity equivalent of 3,000 MW, the  
25 establishment of a self-sufficient solar industry in which solar  
26 energy systems are a viable mainstream option for both homes  
27 and businesses in 10 years, and the placement of solar energy  
28 systems on 50 percent of new homes in 13 years.

29 (2) The Million Solar Roofs Initiative program shall supplant  
30 that portion of the program to foster the development of  
31 emerging renewable technologies funded pursuant to Section  
32 25744, that encourages installation of residential and commercial  
33 photovoltaic solar energy systems. Upon implementation of the  
34 Million Solar Roofs Initiative program, the photovoltaic portion  
35 of the emerging renewable technologies program shall be  
36 discontinued and the funding deposited into the Million Solar  
37 Roofs Initiative Trust Fund, at the same level as *was collected* in  
38 the 2004-05 fiscal year.

39 (3) The commission shall not establish any other program in  
40 addition to the program established pursuant to this chapter, to

1 encourage the increased installation of residential and  
2 commercial photovoltaic solar energy systems.

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

5 (1) The commission shall award monetary incentives for  
6 eligible solar energy systems not to exceed the existing level of  
7 incentive in effect on January 1, 2006. The incentive level shall  
8 decline each year thereafter at a rate of no less than 7 percent per  
9 year and shall be zero as of December 31, 2016. The commission  
10 shall adopt and publish a schedule of declining incentive levels  
11 no less than 60 days in advance of the first decline in incentive  
12 levels. The commission may develop incentives based upon the  
13 output of electricity from the system, provided those incentives  
14 are consistent with the declining incentive levels of this  
15 paragraph.

16 (2) On or before January 1, 2007, the commission shall adopt  
17 revisions to the eligibility criteria for solar energy systems,  
18 including design, installation, and electricity output standards or  
19 incentives.

20 (3) Notwithstanding paragraph (1), the commission may  
21 increase the incentive level by not more than 50 percent above  
22 the maximum incentive level established pursuant to paragraph  
23 (1) for solar energy systems that are installed on “zero energy  
24 homes” or “zero energy commercial structures.” Prior to an  
25 increase in the incentive level, the commission shall adopt  
26 definitions for “zero energy homes” and “zero energy  
27 commercial structures” through a public process, including at  
28 least one public hearing with not less than 30 days’ notice.

29 (4) Notwithstanding paragraph (1), the commission may  
30 increase the incentive level by not more than 25 percent above  
31 the maximum incentive level established pursuant to paragraph  
32 (1) for solar energy systems that are installed on homes or  
33 commercial structures that exceed the commission’s established  
34 building standards by a specified percentage as determined by the  
35 commission.

36 (5) Awards shall be made for the installation of eligible solar  
37 energy systems on new or existing residential and commercial  
38 customer sites that are or will be receiving electrical distribution  
39 service from an electrical corporation that is contributing funds to

1 support the Million Solar Roofs Initiative pursuant to Section  
2 379.8 of the Public Utilities Code.

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

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

8 (1) The solar energy system is intended primarily to offset part  
9 or all of the consumer's own electricity demand.

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

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

16 (4) The solar energy system is located on the same premises of  
17 the end-use consumer where the consumer's own electricity  
18 demand is located.

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

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

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

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

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

33 (1) Appropriate siting and high quality installation of the solar  
34 energy system by developing installation guidelines that  
35 maximize the performance of the system and prevent qualified  
36 systems from being inefficiently or inappropriately installed. The  
37 goal of this paragraph is to achieve efficient installation of solar  
38 energy systems to promote the greatest energy production per  
39 ratepayer dollar.

- 1 (2) Optimal solar energy system performance during periods  
2 of peak electricity demand, including the use of advanced  
3 metering systems, onsite performance meters, dispatchable  
4 battery backup systems, and performance based incentives.
- 5 (3) Appropriate energy efficiency improvements in the new or  
6 existing home or commercial structure where the solar energy  
7 system is installed.
- 8 (4) Rate equipment, components, and systems to assure  
9 reasonable performance and to develop standards that provide for  
10 compliance with the minimum ratings.
- 11 (e) The commission may limit the amount of funds available  
12 for any system or project of multiple systems and reduce the  
13 level of funding for any system or project of multiple systems  
14 that has received, or may be eligible to receive, any other  
15 government or utility funding, incentive, or credit, except for any  
16 income or property tax credit or exemption.
- 17 (f) Notwithstanding subdivision (e), the commission shall  
18 provide proportional program support, not to exceed 10 percent  
19 of the overall funds for the Million Solar Roofs Initiative, for  
20 installation of solar energy systems on affordable housing  
21 projects undertaken pursuant to Section 50052.5, 50053, or  
22 50199.14 of the Health and Safety Code. If deemed appropriate  
23 in consultation with the California Tax Credit Allocation  
24 Committee, the commission may establish a revolving loan or  
25 loan guarantee program for affordable housing projects  
26 consistent with the requirements of Chapter 5.3 (commencing  
27 with Section 25425).
- 28 (g) Pursuant to this chapter, the commission may provide  
29 incentives in the form of a monetary incentive or its equivalent to  
30 purchasers, lessees, lessors, or sellers of an eligible solar energy  
31 system. The incentive shall benefit the end-use consumer by  
32 directly and exclusively reducing the purchase or lease cost of  
33 the eligible solar energy system, or the cost of electricity  
34 produced by the eligible solar energy system. Incentives shall be  
35 issued on the basis of the rated electrical capacity of the system  
36 measured in watts, or in the electricity production of the system,  
37 measured in kWh, as determined by the commission.
- 38 25783. In administering the Million Solar Roofs Initiative,  
39 the commission shall do all the following:

1 (a) Examine and implement, to the extent appropriate,  
2 financing options that could lower solar energy system financing  
3 costs to residential and commercial customers. The commission  
4 shall examine wholesale and retail mortgage markets, and other  
5 issues that it deems appropriate.

6 (b) Acquire, if the commission determines it necessary,  
7 appropriate technical and administrative services or expertise to  
8 support the Million Solar Roofs Initiative. The commission may  
9 award contracts to develop or administer all or a portion of the  
10 Million Solar Roofs Initiative.

11 (c) Publish educational materials designed to demonstrate how  
12 builders may incorporate solar energy systems during  
13 construction as well as energy efficiency measures that best  
14 complement solar energy systems.

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

20 (e) Provide assistance to builders and contractors in support of  
21 the Million Solar Roofs Initiative. The assistance may include  
22 technical workshops, training, educational materials, and related  
23 research.

24 (f) Publish, and make available to the public, at least once  
25 annually, the balance of funds available in the Million Solar  
26 Roofs Initiative Trust Fund, the cost of the program, the  
27 photovoltaic generating capacity installed, and the percentage of  
28 new and existing residential and commercial customer sites that  
29 are equipped with solar energy systems funded by the Million  
30 Solar Roofs Initiative. This information shall be including in the  
31 report to the Legislature made pursuant to subdivision (i).

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

34 (h) The commission, in consultation with the Public Utilities  
35 Commission, shall evaluate the costs and benefits of having an  
36 increased number of operational solar energy systems as a part of  
37 the electrical system with respect to their impact upon the  
38 distribution, transmission, and supply of electricity, using the best  
39 available load profiling and distribution operations data from the  
40 Public Utilities Commission, local publicly owned electric

1 utilities, and electrical corporations, and performance audits of  
2 installed solar energy systems.

3 (i) On or before January 1, 2009, and every third year  
4 thereafter, the commission shall submit to the Legislature an  
5 assessment of the success of the Million Solar Roofs Initiative  
6 program. That assessment shall include the number of residential  
7 and commercial sites that have installed solar energy systems, the  
8 electrical generating capacity of the installed solar energy  
9 systems, the cost of the program, total electrical system benefits,  
10 including the effect on electrical service rates, environmental  
11 benefits, how the program affects the operation and reliability of  
12 the electrical grid, how the program has affected peak demand  
13 for electricity, the progress made toward reaching the goals of the  
14 program, whether the program is on schedule to meet the  
15 program goals, and recommendations for improving the program  
16 to meet its goals.

17 25784. (a) The commission shall adopt guidelines governing  
18 the Million Solar Roofs Initiative authorized under this chapter,  
19 at a publicly noticed meeting offering all interested parties an  
20 opportunity to comment. Not less than 30 days' public notice  
21 shall be given of the meeting required by this section, before the  
22 commission initially adopts guidelines. Substantive changes to  
23 the guidelines shall not be adopted without at least 10 days'  
24 written notice to the public. Notwithstanding any other provision  
25 of law, any guidelines adopted pursuant to this chapter shall be  
26 exempt from the requirements of Chapter 3.5 (commencing with  
27 Section 11340) of Part 1 of Division 3 of Title 2 of the  
28 Government Code.

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

31 25785. (a) The Million Solar Roofs Initiative Trust Fund is  
32 hereby created in the State Treasury.

33 (b) The money in the fund may be expended to implement and  
34 support the Million Solar Roofs Initiative pursuant to this chapter  
35 upon appropriation by the Legislature in the annual Budget Act.  
36 *Up to 2 percent of the money in the fund may be expended for the*  
37 *costs of the state's administration of this chapter, upon*  
38 *appropriation by the Legislature.*

39 (c) Revenues collected by electrical corporations pursuant to  
40 Section 379.8 of the Public Utilities Code shall be transmitted to



1 the commission at least quarterly for deposit in the Million Solar  
2 Roofs Initiative Trust Fund. The Treasurer shall immediately  
3 deposit money received pursuant to this section into the Million  
4 Solar Roofs Initiative Trust Fund for the current calendar year.

5 (d) Upon appropriation by the Legislature and notification by  
6 the commission, the Controller shall pay all awards of the money  
7 in the fund for purposes enumerated in this chapter. The  
8 eligibility of an award shall be determined solely by the  
9 commission based on the procedures it adopts under this chapter.  
10 Based on the eligibility of an award, the commission shall also  
11 establish the need for a multiyear commitment to any particular  
12 award and so advise the Department of Finance. An eligible  
13 award submitted by the commission to the Controller shall be  
14 accompanied by a summary description of how payment of the  
15 award furthers the purposes enumerated in this chapter, and an  
16 accounting of future costs associated with any award or group of  
17 awards known to the commission to represent a portion of a  
18 multiyear funding commitment.

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

21 379.6. (a) The commission, in consultation with the State  
22 Energy Resources Conservation and Development Commission,  
23 shall administer, until January 1, 2008, the self-generation  
24 incentive program for distributed generation resources originally  
25 established pursuant to Chapter 329 of the Statutes of 2000.  
26 Except as provided in subdivisions (b) and (c), the program shall  
27 be administered in the same form as it existed on January 1,  
28 2004.

29 (b) Eligibility for the self-generation incentive program's level  
30 3 incentive category shall be subject to the following conditions:

31 (1) Commencing January 1, 2005, all combustion-operated  
32 distributed generation projects using fossil fuel shall meet an  
33 oxides of nitrogen (NO<sub>x</sub>) emissions rate standard of 0.14 pounds  
34 per megawatthour.

35 (2) Commencing January 1, 2007, all combustion-operated  
36 distributed generation projects using fossil fuel shall meet a NO<sub>x</sub>  
37 emissions rate standard of 0.07 pounds per megawatthour and a  
38 minimum efficiency of 60 percent. A minimum efficiency of 60  
39 percent shall be measured as useful energy output divided by fuel

1 input. The efficiency determination shall be based on 100 percent  
2 load.

3 (3) Combined heat and power units that meet the 60 percent  
4 efficiency standard may take a credit to meet the applicable NO<sub>x</sub>  
5 emissions standard of 0.14 pounds per megawatthour or 0.07  
6 pounds per megawatthour. Credit shall be at the rate of one  
7 megawatthour for each 3.4 million British thermal units (Btus) of  
8 heat recovered.

9 (4) Notwithstanding paragraphs (1) and (2), a project that does  
10 not meet the applicable NO<sub>x</sub> emission standard is eligible if it  
11 meets both of the following requirements:

12 (A) The project operates solely on waste gas. The commission  
13 shall require a customer that applies for an incentive pursuant to  
14 this paragraph to provide an affidavit or other form of proof, that  
15 specifies that the project shall be operated solely on waste gas.  
16 Incentives awarded pursuant to this paragraph shall be subject to  
17 refund and shall be refunded by the recipient to the extent the  
18 project does not operate on waste gas. As used in this paragraph,  
19 “waste gas” means natural gas that is generated as a byproduct of  
20 petroleum production operations and is not eligible for delivery  
21 to the utility pipeline system.

22 (B) The air quality management district or air pollution control  
23 district, in issuing a permit to operate the project, determines that  
24 operation of the project will produce an onsite net air emissions  
25 benefit, compared to permitted onsite emissions if the project  
26 does not operate. The commission shall require the customer to  
27 secure the permit prior to receiving incentives.

28 (c) In administering the self-generation incentive program, the  
29 commission may adjust the amount of rebates, include other  
30 ultraclean and low-emission distributed generation technologies,  
31 as defined in Section 353.2, and evaluate other public policy  
32 interests, including, but not limited to, ratepayers, and energy  
33 efficiency and environmental interests. The Million Solar Roofs  
34 Initiative program shall supplant that portion of the  
35 self-generation incentive program that encourages installation of  
36 residential and commercial photovoltaic solar energy systems.  
37 Upon implementation of the Million Solar Roofs Initiative  
38 program by the State Energy Resources Conservation and  
39 Development Commission pursuant to Chapter 8.8 (commencing  
40 with Section 25780) of Division 15 of the Public Resources

1 Code, the photovoltaic portion of the self-generation incentive  
2 program shall be discontinued and the commission shall order the  
3 funding be deposited into the Million Solar Roofs Initiative Trust  
4 Fund, at the same level as *was collected* in the 2004-05 fiscal  
5 year, as *a part of the proceeding to adopt, implement, and finance*  
6 *a comprehensive solar energy program pursuant to Section 379.8.*  
7 The commission shall not establish any other program to  
8 encourage the increased installation of residential and  
9 commercial solar energy systems.

10 SEC. 6. Section 379.8 is added to the Public Utilities Code, to  
11 read:

12 379.8. (a) As used in this section, the following terms have  
13 the following meanings:

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

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

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

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

25 (b) Notwithstanding any other law, on or before February 1,  
26 2006, the commission, in consultation with the State Energy  
27 Resources Conservation and Development Commission, shall  
28 initiate a new proceeding or expand the scope of an existing  
29 proceeding ~~to adopt, implement, and finance a comprehensive~~  
30 ~~solar energy program to invest in and encourage the increased~~  
31 ~~installation of residential and commercial solar energy systems in~~  
32 ~~the state. The goal of the program is to adequately fund the~~  
33 ~~Million Solar Roofs Initiative established pursuant to Chapter 8.8~~  
34 ~~(commencing with Section 25780) of Division 15 of the Public~~  
35 ~~Resources Code: pursuant to Chapter 8.8 (commencing with~~  
36 ~~Section 25780) of Division 15 of the Public Resources Code, to~~  
37 ~~adequately fund the Million Solar Roofs Initiative.~~

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

39 (1) Order that funding for the photovoltaic portion of the  
40 self-generation incentive program for distributed generation be

1 deposited into the Million Solar Roofs Initiative Trust Fund, at  
2 the same level as *was collected* in the 2004-05 fiscal year.

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

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

10 (d) The commission shall include the reasonable cost of the  
11 program in the distribution revenue requirements of electrical  
12 corporations.

13 (e) Notwithstanding any other provision of law, any charge  
14 imposed to fund the program adopted and implemented pursuant  
15 to this section shall be imposed upon all customers not  
16 participating in the California Alternate Rates for Energy or  
17 CARE program as provided on paragraph (2), including those  
18 residential customers subject to the rate cap required by Section  
19 80110 of the Water Code for existing baseline quantities or usage  
20 up to 130 percent of existing baseline quantities of electricity.

21 The costs of the program adopted and implemented pursuant to  
22 this section may not be recovered from customers participating in  
23 the California Alternate Rates for Energy or CARE program  
24 established pursuant to Section 739.1, except to the extent that  
25 program costs are recovered out of the nonbypassable system  
26 benefits charge authorized pursuant to Section 399.8.

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

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

31 (1) Be a cost-effective investment by ratepayers in peak  
32 electricity generation capacity that enables ratepayers to recoup  
33 the cost of their investment through lower rates as a result of  
34 avoiding purchases of electricity at peak rates generated by  
35 traditional powerplants and peaker generation units, with  
36 additional system reliability and pollution reduction benefits.

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

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

1 (4) Make time-variant pricing available for all ratepayers with  
2 a solar energy system, upon adoption of time-variant pricing  
3 tariffs pursuant to Section 760. The commission shall structure  
4 any time-variant pricing so that ratepayers receive due value for  
5 their contribution to the purchase of solar energy systems and  
6 customers with solar energy systems continue to have an  
7 incentive to use electricity efficiently.

8 (5) Require San Diego Gas and Electric Company, Southern  
9 California Edison Company, and Pacific Gas and Electric  
10 Company to each designate at least one employee to be  
11 accountable for solar energy system installations and operations.

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

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

20 (8) Notwithstanding Section 2827, require an electric service  
21 provider to expand the availability of net energy metering so that  
22 it is offered on a first-come-first-served basis until the time that  
23 the total rated generating capacity used by all eligible  
24 customer-generators exceeds 5 percent of the electric service  
25 provider's aggregate customer peak demand. However, the net  
26 metering cap shall not exceed 2 percent until the commission has  
27 established an appropriate net metering time-variant rate design  
28 that considers the costs to all net metering participants and  
29 ratepayers as a whole and that considers the recovery of the fixed  
30 costs of providing distribution service to customers. The  
31 commission shall monitor the level of net energy metering for  
32 each electrical corporation to ensure that the cap is increased in a  
33 timely manner as needed to further the objectives of this section.

34 (h) The program adopted by the commission pursuant to this  
35 section shall also include elements for the purpose of funding a  
36 Million Solar Roofs Initiative by the State Energy Resources  
37 Conservation and Development Commission pursuant to Chapter  
38 8.8 (commencing with Section 25780) of Division 15 of the  
39 Public Resources Code. These program elements shall exclude  
40 customers participating in the State Energy Resources

1 Conservation and Development Commission’s Million Solar  
2 Roofs Initiative from the rate cap for residential customers for  
3 existing baseline quantities or usage by those customers of up to  
4 130 percent of existing baseline quantities, as required by Section  
5 80110 of the Water Code.

6 (i) Upon implementation of the Million Solar Roofs Initiative  
7 program by the State Energy Resources Conservation and  
8 Development Commission pursuant to Chapter 8.8 (commencing  
9 with Section 25780) of Division 15 of the Public Resources  
10 Code, the photovoltaic portion of the self-generation incentive  
11 program shall be discontinued. The commission shall not  
12 establish any other program to encourage the increased  
13 installation of residential and commercial photovoltaic solar  
14 energy systems.

15 SEC. 7. Section 387.5 is added to the Public Utilities Code, to  
16 read:

17 387.5. (a) ~~The governing body of a local publicly owned~~  
18 ~~electric utility, as defined in Section 9604, shall establish a~~  
19 ~~comprehensive solar roofs initiative consistent with Section~~  
20 ~~379.8.~~

21 ~~(b) The level of expenditure for program elements shall be~~  
22 ~~consistent with those established for the three largest electrical~~  
23 ~~corporations in California, and shall be at a rate similar to the~~  
24 ~~size of the ratepayer base served by the local publicly owned~~  
25 ~~electric utility.~~

26 ~~(c) A local publicly owned electric utility shall establish the~~  
27 ~~program within a reasonable period of time, but not to exceed six~~  
28 ~~months, after the commission adopts and implements its~~  
29 ~~programs pursuant to Section 379.8.~~

30 ~~(d) A local publicly owned electric utility shall, on an annual~~  
31 ~~basis beginning June 1, 2007, report to its customers and to the~~  
32 ~~State Energy Resources Conservation and Development~~  
33 ~~Commission, information relative to the utility’s solar roofs~~  
34 ~~initiative. The State Energy Resources Conservation and~~  
35 ~~Development Commission may establish guidelines for the~~  
36 ~~information to be included in the utility’s annual report. Any~~  
37 ~~guidelines established pursuant to this subdivision shall be~~  
38 ~~adopted in the manner specified in Section 25784 of the Public~~  
39 ~~Resources Code. Notwithstanding any other provision of law,~~  
40 ~~any guidelines adopted by the State Energy Resources~~

1 ~~Conservation and Development Commission pursuant to this~~  
2 ~~subdivision shall be exempt from the requirements of Chapter 3.5~~  
3 ~~(commencing with Section 11340) of Part 1 of Division 3 of Title~~  
4 ~~2 of the Government Code.~~ *electric utility, as defined in*  
5 *subdivision (d) of Section 9604, that sells electricity at retail,*  
6 *shall adopt, implement, and finance a solar roofs initiative*  
7 *program, funded by a surcharge in accordance with subdivision*  
8 *(b), for the purpose of investing in, and encouraging the*  
9 *increased installation of, residential and commercial solar*  
10 *energy systems. This program shall be consistent with the intent*  
11 *and goals of the Legislature to encourage the installation of*  
12 *3,000 megawatts of photovoltaic solar energy in California in*  
13 *accordance with the Million Solar Roofs Initiative program*  
14 *(Chapter 8.8 (commencing with Section 25780) of Division 15 of*  
15 *the Public Resources Code).*

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

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

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

36 SEC. 8. No reimbursement is required by this act pursuant to  
37 Section 6 of Article XIII B of the California Constitution because  
38 the only costs that may be incurred by a local agency or school  
39 district will be incurred because this act creates a new crime or  
40 infraction, eliminates a crime or infraction, or changes the

1 penalty for a crime or infraction, within the meaning of Section  
2 17556 of the Government Code, or changes the definition of a  
3 crime within the meaning of Section 6 of Article XIII B of the  
4 California Constitution.

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

O