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**SENATE BILL**

**No. 1**

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**Introduced by Senators Murray and Campbell**

(Principal coauthor: Assembly Member Levine)

**(Coauthors: Senators Alquist, Chesbro, Ducheny, and Kehoe)**

(Coauthors: Assembly Members Bermudez, Chan, Cohn, *Garcia*, Huff, Koretz, Laird, Leno, Lieber, Maze, Nation, Pavley, Saldana, and ~~Wolk~~ *Wolk*, and *Yee*)

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, 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 or designated by the Energy Commission, 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 adopt by January 1, 2010, a performance-based incentive program, for at least 50% of the moneys expended, that is based on the actual electrical output of the solar energy system and that promotes the installation of solar energy systems that maximize electrical output to coincide with peak loads. 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 ~~performed~~ *performed* 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 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 remaining funds from that program be deposited into the Million Solar Roofs Initiative Trust Fund, 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, with the charge imposed not to exceed an unspecified amount per kilowatthour for each customer class, with the total amount collected not to exceed a specified aggregate dollar limit within the service territories of participating electrical corporations. 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 disbursement by the Energy Commission of funds from the Million Solar Roofs Initiative Trust Fund consistent with the Million Solar Roofs Initiative program, the photovoltaic portion of the self-generation incentive program be discontinued and the PUC order the remaining funds from that program be deposited into the Million Solar Roofs Initiative Trust Fund. 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 customer 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, 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. The commission may designate a solar energy  
17 device that is not a photovoltaic solar collector or other

1 photovoltaic solar energy device to be a “solar energy system” if  
2 the solar energy device has the primary purpose of providing for  
3 the collection and distribution of solar energy for the generation  
4 of electricity, and it meets or exceeds the eligibility criteria  
5 established pursuant to subdivision (c) of Section 25782.

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

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

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

15 (c) The State Energy Resources Conservation and  
16 Development Commission shall develop an offset program that  
17 allows a developer or seller of production homes to forego the  
18 offer requirement of this section on one project, by installing  
19 solar energy systems generating specified amounts of electricity  
20 on other projects. The amount of electricity required to be  
21 generated from solar energy systems used as an offset pursuant to  
22 this subdivision, shall be equal to the amount of electricity  
23 generated by solar energy systems installed on a similarly sized  
24 project within that climate zone, assuming 20 percent of the  
25 prospective buyers would have installed solar energy systems.

26 SEC. 2. Section 25405.6 is added to the Public Resources  
27 Code, to read:

28 25405.6. Not later than July 1, 2006, the commission shall  
29 initiate a public proceeding and make findings if, and under what  
30 conditions, solar energy systems shall be required on new  
31 residential and new nonresidential buildings, including the  
32 establishment of numerical targets. A solar energy system shall  
33 not be required for a residential building unless the commission  
34 determines, based upon consideration of all costs associated with  
35 the system, that the system is cost effective when amortized over  
36 the economic life of the structure. When determining the cost  
37 effectiveness of the solar energy system, the commission shall  
38 consider the availability of governmental rebates, tax deductions,  
39 net-metering, and other quantifiable factors, provided that the  
40 commission can determine the availability of these financial

1 incentives if a solar energy system is made mandatory and not  
2 elective. The commission shall periodically update the standards  
3 and adopt any revision that the commission determines is  
4 necessary, including revisions that reflect changes in the financial  
5 incentives originally considered by the commission when  
6 determining cost effectiveness of the solar energy system. For  
7 purposes of this section, “solar energy system” means a  
8 photovoltaic solar collector or other photovoltaic solar energy  
9 device that has a primary purpose of providing for the collection  
10 and distribution of solar energy for the generation of electricity.

11 SEC. 3. Section 25744 of the Public Resources Code is  
12 amended to read:

13 25744. (a) Seventeen and one-half percent of the money  
14 collected pursuant to the renewable energy public goods charge  
15 shall be used for a multiyear, consumer-based program to foster  
16 the development of emerging renewable technologies in  
17 distributed generation applications.

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

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

28 (2) The program shall provide monetary rebates, buydowns, or  
29 equivalent incentives, subject to subparagraph (C), to purchasers,  
30 lessees, lessors, or sellers of eligible electricity generating  
31 systems. Incentives shall benefit the end-use consumer of  
32 renewable generation by directly and exclusively reducing the  
33 purchase or lease cost of the eligible system, or the cost of  
34 electricity produced by the eligible system. Incentives shall be  
35 issued on the basis of the rated electrical generating capacity of  
36 the system measured in watts, or the amount of electricity  
37 production of the system, measured in kilowatthours. Incentives  
38 shall be limited to a maximum percentage of the system price, as  
39 determined by the commission.

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

28 (4) The commission may limit the distribution of funds  
29 available pursuant to the program based upon the receipt of  
30 funding or financial incentives from other federal or local  
31 government or public utility programs to promote solar energy.

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

36 (6) In awarding funding, the commission shall develop and  
37 implement eligibility criteria and a system that provides  
38 preference to systems based upon system performance, taking  
39 into account factors, including, but not limited to, shading,  
40 insulation levels, and installation orientation.

1 (7) The commission shall, ~~on a quarterly basis~~ *at least once*  
2 *annually*, publish and make available to the public the balance of  
3 funds available for emerging renewable energy resources for  
4 rebates, buydowns, and other incentives for the purchase of these  
5 resources.

6 (c) Notwithstanding Section 399.6 of the Public Utilities Code,  
7 the commission may expend, until December 31, 2008, up to  
8 sixty million dollars (\$60,000,000) of the funding allocated to the  
9 Renewable Resources Trust Fund for the program established in  
10 this section, subject to the repayment requirements of subdivision  
11 (f) of Section 25751.

12 (d) Notwithstanding Section 399.6 of the Public Utilities Code  
13 and subdivision (b), the Million Solar Roofs Initiative program  
14 shall supplant that portion of the program to foster the  
15 development of emerging renewable technologies that encourage  
16 the installation of residential and commercial photovoltaic solar  
17 energy systems. Upon disbursement of funds from the Million  
18 Solar Roofs Initiative Trust Fund consistent with the Million  
19 Solar Roofs Initiative program established pursuant to Chapter  
20 8.8 (commencing with Section 25780), the photovoltaic portion  
21 of the emerging renewable technologies program shall be  
22 discontinued and the remaining funds from that program shall be  
23 deposited into the Million Solar Roofs Initiative Trust Fund. The  
24 commission shall not establish any other program to encourage  
25 the increased installation of residential and commercial  
26 photovoltaic solar energy systems.

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

29

30 CHAPTER 8.8. MILLION SOLAR ROOFS INITIATIVE

31

32 25780. The Legislature finds and declares all of the  
33 following:

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

36 (b) Solar generated electricity is uniquely suited to  
37 California's needs because it produces electricity when  
38 California needs it most, during the peak demand hours in  
39 summer afternoons when the sun is brightest and air conditioners  
40 are running at capacity.

1 (c) Procuring solar electric generation capacity to meet peak  
2 electricity demand increases system reliability and decreases  
3 California’s dependence on unstable fossil fuel supplies.

4 (d) Solar generated electricity diversifies California’s energy  
5 portfolio. California currently relies on natural gas for the bulk of  
6 its electricity generation needs. Increasing energy demands place  
7 increasing pressure on limited natural gas supplies and threaten  
8 to raise costs.

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

12 (f) Investing in residential and commercial solar electricity  
13 generation installations today will lower the cost of solar  
14 generated electricity for all Californians in the future. In 10  
15 years, solar peak electric generation can be procured without the  
16 need for rebates.

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

21 (h) Funding a Million Solar Roofs Initiative is a cost-effective  
22 investment by ratepayers in peak electricity generation capacity  
23 and ratepayers will recoup the cost of their investment through  
24 lower rates as a result of avoiding purchases of electricity at peak  
25 rates, with additional system reliability and pollution reduction  
26 benefits.

27 (i) Solar energy systems provide substantial energy reliability  
28 and pollution reduction benefits. Solar energy systems also  
29 diversify our energy supply and thereby reduce our dependence  
30 on imported fossil fuels.

31 25781. As used in this chapter, the following terms have the  
32 following meanings:

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

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

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

39 (d) “Solar energy system” means a photovoltaic solar collector  
40 or other photovoltaic solar energy device that has a primary

1 purpose of providing for the collection and distribution of solar  
2 electrical energy for the generation of electricity, and that  
3 produces at least 1 kW alternating current rated peak electricity.  
4 The commission may designate a solar energy device that is not  
5 a photovoltaic solar collector or other photovoltaic solar energy  
6 device to be a “solar energy system” if the solar energy device  
7 has the primary purpose of providing for the collection and  
8 distribution of solar energy for the generation of electricity, and  
9 it meets or exceeds the eligibility criteria established pursuant to  
10 subdivision (c) of Section 25782.

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

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

24 (2) The Million Solar Roofs Initiative program shall supplant  
25 that portion of the program to foster the development of  
26 emerging renewable technologies funded pursuant to Section  
27 25744, that encourages installation of residential and commercial  
28 photovoltaic solar energy systems. Upon disbursement of funds  
29 from the Million Solar Roofs Initiative Trust Fund consistent  
30 with the Million Solar Roofs Initiative program, the photovoltaic  
31 portion of the emerging renewable technologies program shall be  
32 discontinued and the remaining funds from that program shall be  
33 deposited into the Million Solar Roofs Initiative Trust Fund.

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

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

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

12 (2) By January 1, 2010, the commission shall adopt a  
13 performance-based incentive program in which at least 50  
14 percent of the moneys expended pursuant to the Million Solar  
15 Roofs Initiative is expended to provide incentives that are based  
16 on the actual electrical output of the solar energy system and that  
17 promote the installation of solar energy systems that maximize  
18 electrical output to coincide with peak loads. In developing the  
19 performance-based incentive program, the commission may:

20 (A) Apply performance-based incentives only to customer  
21 classes designated by the commission.

22 (B) Design the performance-based incentives so that  
23 customers may receive a higher level of incentives than under  
24 incentives based on installed electrical capacity.

25 (C) Develop financing options that help offset the installation  
26 costs of the solar energy system, provided that this financing is  
27 ultimately repaid in full by the consumer or through the  
28 application of the performance-based rebates.

29 (3) On or before January 1, 2007, the commission shall adopt  
30 revisions to the eligibility criteria for solar energy systems,  
31 including design, installation, and electricity output standards or  
32 incentives.

33 (4) Notwithstanding paragraph (1), the commission may  
34 increase the incentive level by not more than 50 percent above  
35 the maximum incentive level established pursuant to paragraph  
36 (1) for solar energy systems that are installed on “zero energy  
37 homes” or “zero energy commercial structures.” Prior to an  
38 increase in the incentive level, the commission shall adopt  
39 definitions for “zero energy homes” and “zero energy

1 commercial structures” through a public process, including at  
2 least one public hearing with not less than 30 days’ notice.

3 (5) Notwithstanding paragraph (1), the commission may  
4 increase the incentive level by not more than 25 percent above  
5 the maximum incentive level established pursuant to paragraph  
6 (1) for solar energy systems that are installed on homes or  
7 commercial structures that exceed the commission’s established  
8 building standards by a specified percentage as determined by the  
9 commission.

10 (6) Awards shall be made for the installation of eligible solar  
11 energy systems on new or existing residential and commercial  
12 customer sites that are or will be receiving electrical distribution  
13 service from an electrical corporation that is contributing funds to  
14 support the Million Solar Roofs Initiative pursuant to Section  
15 379.8 of the Public Utilities Code.

16 (7) Awards shall not be made for eligible solar energy systems  
17 installed on the premises of individuals or entities that are not  
18 contributing funds to support the Million Solar Roofs Initiative,  
19 except for the following:

20 (A) Customers that participate in the California Alternate  
21 Rates for Energy or CARE program are eligible to receive  
22 awards.

23 (B) An electrical corporation, where the commission  
24 determines the solar energy system is appropriately sized to load  
25 and is installed, operated, or part of a program to facilitate  
26 achieving the goals of the Million Solar Roofs Initiative. An  
27 electrical corporation that receives an award for participation in  
28 the Million Solar Roofs Initiative shall not recover the value of  
29 that award from ratepayers in rates.

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

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

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

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

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

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

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

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

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

16 (d) The commission shall establish conditions on incentives  
17 that require all of the following:

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

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

31 (3) Appropriate energy efficiency improvements in the new or  
32 existing home or commercial structure where the solar energy  
33 system is installed.

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

37 (e) The commission may limit the distribution of funds  
38 available to the program based upon the receipt of funding or  
39 financial incentives from other federal or local government or  
40 public utility programs to promote solar energy.

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

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

22 25783. In administering the Million Solar Roofs Initiative,  
23 the commission shall do all the following:

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

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

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

38 (d) Develop and publish the estimated annual electrical  
39 generation and savings for solar energy systems. The estimates  
40 shall vary by climate zone, type of system, size, lifecycle costs,

1 electricity prices, and other factors the commission determines to  
2 be relevant to a consumer when making a purchasing decision.

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

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

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

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

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

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

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

15 25785. (a) The Million Solar Roofs Initiative Trust Fund is  
16 hereby created in the State Treasury.

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

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

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

1 awards known to the commission to represent a portion of a  
2 multiyear funding commitment.

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

5 379.6. (a) The commission, in consultation with the State  
6 Energy Resources Conservation and Development Commission,  
7 shall administer, until January 1, 2008, the self-generation  
8 incentive program for distributed generation resources originally  
9 established pursuant to Chapter 329 of the Statutes of 2000.  
10 Except as provided in subdivisions (b) and (c), the program shall  
11 be administered in the same form as it existed on January 1,  
12 2004.

13 (b) Eligibility for the self-generation incentive program's level  
14 3 incentive category shall be subject to the following conditions:

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

19 (2) Commencing January 1, 2007, all combustion-operated  
20 distributed generation projects using fossil fuel shall meet a NO<sub>x</sub>  
21 emissions rate standard of 0.07 pounds per megawatthour and a  
22 minimum efficiency of 60 percent. A minimum efficiency of 60  
23 percent shall be measured as useful energy output divided by fuel  
24 input. The efficiency determination shall be based on 100 percent  
25 load.

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

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

35 (A) The project operates solely on waste gas. The commission  
36 shall require a customer that applies for an incentive pursuant to  
37 this paragraph to provide an affidavit or other form of proof, that  
38 specifies that the project shall be operated solely on waste gas.  
39 Incentives awarded pursuant to this paragraph shall be subject to  
40 refund and shall be refunded by the recipient to the extent the

1 project does not operate on waste gas. As used in this paragraph,  
2 “waste gas” means natural gas that is generated as a byproduct of  
3 petroleum production operations and is not eligible for delivery  
4 to the utility pipeline system.

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

11 (c) In administering the self-generation incentive program, the  
12 commission may adjust the amount of rebates, include other  
13 ultraclean and low-emission distributed generation technologies,  
14 as defined in Section 353.2, and evaluate other public policy  
15 interests, including, but not limited to, ratepayers, and energy  
16 efficiency and environmental interests. The Million Solar Roofs  
17 Initiative program shall supplant that portion of the  
18 self-generation incentive program that encourages installation of  
19 residential and commercial photovoltaic solar energy systems.  
20 Upon disbursement by the State Energy Resources Conservation  
21 and Development Commission of funds from the Million Solar  
22 Roofs Initiative Trust Fund consistent with the Million Solar  
23 Roofs Initiative program established pursuant to Chapter 8.8  
24 (commencing with Section 25780) of Division 15 of the Public  
25 Resources Code, the photovoltaic portion of the self-generation  
26 incentive program shall be discontinued and the commission  
27 shall order the remaining funds from that program to be  
28 deposited into the Million Solar Roofs Initiative Trust Fund. The  
29 commission shall not establish any other program to encourage  
30 the increased installation of residential and commercial solar  
31 energy systems.

32 SEC. 6. Section 379.8 is added to the Public Utilities Code, to  
33 read:

34 379.8. (a) As used in this section, the following terms have  
35 the following meanings:

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

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

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

2 (4) “Solar energy system” means a photovoltaic solar collector  
3 or other photovoltaic solar energy device that has a primary  
4 purpose of providing for the collection and distribution of solar  
5 electrical energy for the generation of electricity, and that  
6 produces at least 1 kW alternating current rated peak electricity.  
7 The State Energy Resources Conservation and Development  
8 Commission may designate a solar energy device that is not a  
9 photovoltaic solar collector or other photovoltaic solar energy  
10 device to be a “solar energy system” if the solar energy device  
11 has the primary purpose of providing for the collection and  
12 distribution of solar energy for the generation of electricity, and  
13 it meets or exceeds the eligibility criteria established pursuant to  
14 subdivision (c) of Section 25782 of the Public Resources Code.

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

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

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

28 (2) Determine the level of additional funding needed to  
29 adequately support the goal of placing solar energy systems on  
30 one million residential and commercial customer sites or its  
31 equivalent of 3,000 MW solar generating capacity in the state by  
32 December 31, 2018. Any additional funding shall not exceed—\$  
33           *dollars* (\$    ) per kilowatthour for any class of  
34 customers and shall not result in the collection of more than one  
35 billion eight hundred thousand dollars (\$1,800,000,000) from  
36 customers within the service territories of the participating  
37 electrical corporations.

38 (3) In making the determination pursuant to paragraph (2), the  
39 commission shall consider the impact all existing solar incentive  
40 programs will have on achieving the goals of the program,

1 including cash and noncash incentives, state and federal tax  
2 benefits, credits from net energy metering that exceed the actual  
3 avoided costs of the replaced generation, and benefits from  
4 waivers of other electrical corporation costs and charges. For  
5 purposes of this paragraph, “other electrical corporation costs and  
6 charges” include the nonbypassable rate component of local  
7 distribution service imposed pursuant to Article 7 (commencing  
8 with Section 381) or Article 15 (commencing with Section 399),  
9 standby charges, cost responsibility surcharges, and installation  
10 costs.

11 (4) Encourage participation by a broad and diverse range of  
12 interests from all areas of the state, and interested state entities.

13 (d) The commission shall include the reasonable cost of the  
14 program in the distribution revenue requirements of electrical  
15 corporations.

16 (e) Notwithstanding any other provision of law, any charge  
17 imposed to fund the program adopted and implemented pursuant  
18 to this section shall be imposed upon all customers not  
19 participating in the California Alternate Rates for Energy or  
20 CARE program as provided in paragraph (2), including those  
21 residential customers subject to the rate cap required by Section  
22 80110 of the Water Code for existing baseline quantities or usage  
23 up to 130 percent of existing baseline quantities of electricity.

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

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

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

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

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

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

5 (4) Require time-variant pricing for all ratepayers with a solar  
6 energy system. The commission shall develop a time-variant  
7 tariff that creates the maximum incentive for ratepayers to install  
8 solar energy systems so that the system's peak electricity  
9 production coincides with California's peak electricity demands  
10 and that assures that ratepayers receive due value for their  
11 contribution to the purchase of solar energy systems and  
12 customers with solar energy systems continue to have an  
13 incentive to use electricity efficiently.

14 (5) Require San Diego Gas and Electric Company, Southern  
15 California Edison Company, and Pacific Gas and Electric  
16 Company to each designate at least one employee to be  
17 accountable for solar energy system installations and operations.

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

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

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

1 (h) The program adopted by the commission pursuant to this  
2 section shall also include elements for the purpose of funding a  
3 Million Solar Roofs Initiative by the State Energy Resources  
4 Conservation and Development Commission pursuant to Chapter  
5 8.8 (commencing with Section 25780) of Division 15 of the  
6 Public Resources Code. These program elements shall exclude  
7 customers participating in the State Energy Resources  
8 Conservation and Development Commission's Million Solar  
9 Roofs Initiative from the rate cap for residential customers for  
10 existing baseline quantities or usage by those customers of up to  
11 130 percent of existing baseline quantities, as required by Section  
12 80110 of the Water Code.

13 (i) Any rate structure for an electrical corporation in effect as  
14 of January 1, 2006, that provides for a separate per kW energy  
15 charge and a separate facilities charge for nonresidential  
16 customers with a maximum demand of more than 20 kW shall  
17 remain in effect for those nonresidential customers with a  
18 maximum demand of more than 20 kW who participate in the  
19 Million Solar Roofs Initiative pursuant to Chapter 8.8  
20 (commencing with Section 25780) of Division 15 of the Public  
21 Resources Code.

22 (j) Upon disbursement by the State Energy Resources  
23 Conservation and Development Commission of funds from the  
24 Million Solar Roofs *Initiative* Trust Fund consistent with the  
25 Million Solar Roofs Initiative program established pursuant to  
26 Chapter 8.8 (commencing with Section 25780) of Division 15 of  
27 the Public Resources Code, the photovoltaic portion of the  
28 self-generation incentive program shall be discontinued and the  
29 commission shall order the remaining funds from that program to  
30 be deposited into the Million Solar Roofs Initiative Trust Fund.  
31 The commission shall not establish any other program to  
32 encourage the increased installation of residential and  
33 commercial photovoltaic solar energy systems.

34 SEC. 7. Section 387.5 is added to the Public Utilities Code, to  
35 read:

36 387.5. (a) The governing body of a local publicly owned  
37 electric utility, as defined in subdivision (d) of Section 9604, that  
38 sells electricity at retail, shall adopt, implement, and finance a  
39 solar roofs initiative program, funded by a surcharge in  
40 accordance with subdivision (b), for the purpose of investing in,

1 and encouraging the increased installation of, residential and  
2 commercial solar energy systems. This program shall be  
3 consistent with the intent and goals of the Legislature to  
4 encourage the installation of 3,000 megawatts of photovoltaic  
5 solar energy in California in accordance with the Million Solar  
6 Roofs Initiative program (Chapter 8.8 (commencing with Section  
7 25780) of Division 15 of the Public Resources Code).

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

14 (c) A local publicly owned electric utility shall establish the  
15 program on or before January 1, 2007. Before establishing the  
16 program, the governing body of the local publicly owned utility  
17 shall give notice of, and hold, a public hearing to seek comment  
18 on the program from the community.

19 (d) A local publicly owned electric utility shall, on an annual  
20 basis beginning June 1, 2007, make available to its customers  
21 and to the State Energy Resources Conservation and  
22 Development Commission, information relating to the utility's  
23 solar roofs initiative program established pursuant to this section,  
24 including, but not limited to, the number of photovoltaic solar  
25 watts installed, the total number of photovoltaic systems  
26 installed, the total number of applicants, the amount of incentives  
27 awarded, and the contribution toward the program goals.

28 SEC. 8. No reimbursement is required by this act pursuant to  
29 Section 6 of Article XIII B of the California Constitution because  
30 the only costs that may be incurred by a local agency or school  
31 district will be incurred because this act creates a new crime or  
32 infraction, eliminates a crime or infraction, or changes the  
33 penalty for a crime or infraction, within the meaning of Section  
34 17556 of the Government Code, or changes the definition of a  
35 crime within the meaning of Section 6 of Article XIII B of the  
36 California Constitution.

37 SEC. 9. No reimbursement is required by this act pursuant to  
38 Section 6 of Article XIII B of the California Constitution for  
39 certain other costs that may be incurred by a local agency or  
40 school district because a local agency or school district has the

- 1 authority to levy service charges, fees, or assessments sufficient
- 2 to pay for the program or level of service mandated by this act,
- 3 within the meaning of Section 17556 of the Government Code.

O