

AMENDED IN ASSEMBLY AUGUST 18, 2005

AMENDED IN ASSEMBLY JULY 12, 2005

AMENDED IN ASSEMBLY JULY 5, 2005

AMENDED IN ASSEMBLY JUNE 23, 2005

AMENDED IN SENATE MAY 31, 2005

AMENDED IN SENATE MAY 16, 2005

AMENDED IN SENATE APRIL 25, 2005

AMENDED IN SENATE FEBRUARY 28, 2005

SENATE BILL

No. 1

Introduced by Senators Murray and Campbell

(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, Wolk, and Yee)

December 6, 2004

An act to amend Section 25744 of, to add Sections 25405.5 and 25405.6 to, and to add Chapter 8.8 (commencing with Section 25780) to Division 15 of, the Public Resources Code, and to amend ~~Section 379.6~~ Sections 379.6 and 2827 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 super clean 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 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 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~~ a 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

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

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

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

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

19 (c) The State Energy Resources Conservation and
20 Development Commission shall develop an offset program that
21 allows a developer or seller of production homes to forego the
22 offer requirement of this section on ~~one~~ a project, by installing
23 solar energy systems generating specified amounts of electricity
24 on other projects, *including, but not limited to, low-income*
25 *housing, multifamily, commercial, industrial, and institutional*
26 *developments*. The amount of electricity required to be generated
27 from solar energy systems used as an offset pursuant to this
28 subdivision, shall be equal to the amount of electricity generated
29 by solar energy systems installed on a similarly sized project
30 within that climate zone, assuming 20 percent of the prospective
31 buyers would have installed solar energy systems.

32 (d) *The requirements of this section shall not operate as a*
33 *substitute for the implementation of existing energy efficiency*
34 *measures, and the requirements of this section shall not result in*
35 *lower energy savings or lower energy efficiency levels than*
36 *would otherwise be achieved by the full implementation of energy*
37 *savings and energy efficiency standards established pursuant to*
38 *Section 25402.*

39 SEC. 2. Section 25405.6 is added to the Public Resources
40 Code, to read:

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

24 SEC. 3. Section 25744 of the Public Resources Code is
25 amended to read:

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

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

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

1 (2) The program shall provide monetary rebates, buydowns, or
2 equivalent incentives, subject to subparagraph (C), to purchasers,
3 lessees, lessors, or sellers of eligible electricity generating
4 systems. Incentives shall benefit the end-use consumer of
5 renewable generation by directly and exclusively reducing the
6 purchase or lease cost of the eligible system, or the cost of
7 electricity produced by the eligible system. Incentives shall be
8 issued on the basis of the rated electrical generating capacity of
9 the system measured in watts, or the amount of electricity
10 production of the system, measured in kilowatthours. Incentives
11 shall be limited to a maximum percentage of the system price, as
12 determined by the commission.

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

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

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

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

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

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

24 (d) Notwithstanding Section 399.6 of the Public Utilities Code
25 and subdivision (b), the Million Solar Roofs Initiative program
26 shall supplant that portion of the program to foster the
27 development of emerging renewable technologies that encourage
28 the installation of residential and commercial photovoltaic solar
29 energy systems. Upon disbursement of funds from the Million
30 Solar Roofs Initiative Trust Fund consistent with the Million
31 Solar Roofs Initiative program established pursuant to Chapter
32 8.8 (commencing with Section 25780), the photovoltaic portion
33 of the emerging renewable technologies program shall be
34 discontinued and the remaining funds from that program shall be
35 deposited into the Million Solar Roofs Initiative Trust Fund. The
36 commission shall not establish any other program to encourage
37 the increased installation of residential and commercial
38 photovoltaic solar energy systems.

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

1 CHAPTER 8.8. MILLION SOLAR ROOFS INITIATIVE

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 *and not more than 1 MW* alternating
16 current rated peak electricity. The commission may designate a
17 solar energy device that is not a photovoltaic solar collector or
18 other photovoltaic solar energy device to be a “solar energy
19 system” if the solar energy device has the primary purpose of
20 providing for the collection and distribution of solar energy for
21 the generation of electricity, and it meets or exceeds the
22 eligibility criteria established pursuant to subdivision (c) of
23 Section 25782.

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

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

37 (2) The Million Solar Roofs Initiative program shall supplant
38 that portion of the program to foster the development of
39 emerging renewable technologies funded pursuant to Section
40 25744, that encourages installation of residential and commercial

1 photovoltaic solar energy systems. Upon disbursement of funds
2 from the Million Solar Roofs Initiative Trust Fund consistent
3 with the Million Solar Roofs Initiative program, the photovoltaic
4 portion of the emerging renewable technologies program shall be
5 discontinued and the remaining funds from that program shall be
6 deposited into the Million Solar Roofs Initiative Trust Fund.

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

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

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

24 (2) By January 1, 2010, the commission shall adopt a
25 performance-based incentive program in which at least 50
26 percent of the moneys expended pursuant to the Million Solar
27 Roofs Initiative is expended to provide incentives that are based
28 on the actual electrical output of the solar energy system and that
29 promote the installation of solar energy systems that maximize
30 electrical output to coincide with peak loads. In developing the
31 performance-based incentive program, the commission may:

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

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

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

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

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

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

21 (6) Awards shall be made for the installation of eligible solar
22 energy systems on new or existing residential and commercial
23 customer sites that are or will be receiving electrical distribution
24 service from an electrical corporation that is contributing funds to
25 support the Million Solar Roofs Initiative pursuant to Section
26 379.8 of the Public Utilities Code.

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

31 (A) Customers that participate in the California Alternate
32 Rates for Energy or ~~CARE program~~ (*CARE*) or *family electric*
33 *rate assistance (FERA) programs* are eligible to receive awards.

34 (B) An electrical corporation, where the commission
35 determines the solar energy system is appropriately sized to load
36 and is installed, operated, or part of a program to facilitate
37 achieving the goals of the Million Solar Roofs Initiative. An
38 electrical corporation that receives an award for participation in
39 the Million Solar Roofs Initiative shall not recover the value of
40 that award from ratepayers in rates.

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

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

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

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

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

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

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

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

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

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

28 (1) Appropriate siting and high quality installation of the solar
29 energy system by developing installation guidelines that
30 maximize the performance of the system and prevent qualified
31 systems from being inefficiently or inappropriately installed. The
32 conditions established by the commission shall not impact
33 housing designs or densities presently authorized by a city,
34 county, or city and county. The goal of this paragraph is to
35 achieve efficient installation of solar energy systems to promote
36 the greatest energy production per ratepayer dollar.

37 (2) Optimal solar energy system performance during periods
38 of peak electricity demand, including the use of advanced
39 metering systems, onsite performance meters, dispatchable
40 battery backup systems, and performance based incentives.

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

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

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

11 (f) Notwithstanding subdivision (e), the commission shall
12 provide not less than 10 percent of the overall funds for the
13 Million Solar Roofs Initiative, for installation of solar energy
14 systems on affordable housing projects undertaken pursuant to
15 Section 50052.5, 50053, or 50199.14 of the Health and Safety
16 Code. If deemed appropriate in consultation with the California
17 Tax Credit Allocation Committee, the commission may establish
18 a revolving loan or loan guarantee program for affordable
19 housing projects consistent with the requirements of Chapter 5.3
20 (commencing with Section 25425).

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

31 25783. In administering the Million Solar Roofs Initiative,
32 the commission shall do all the following:

33 (a) Examine and implement, to the extent appropriate,
34 financing options that could lower solar energy system financing
35 costs to residential and commercial customers. The commission
36 shall examine wholesale and retail mortgage markets, and other
37 issues that it deems appropriate.

38 (b) Acquire, if the commission determines it necessary,
39 appropriate technical and administrative services or expertise to
40 support the Million Solar Roofs Initiative. The commission may

1 award contracts to develop or administer all or a portion of the
2 Million Solar Roofs Initiative.

3 (c) Publish educational materials designed to demonstrate how
4 builders may incorporate solar energy systems during
5 construction as well as energy efficiency measures that best
6 complement solar energy systems.

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

12 (e) Provide assistance to builders and contractors in support of
13 the Million Solar Roofs Initiative. The assistance may include
14 technical workshops, training, educational materials, and related
15 research.

16 (f) Publish, and make available to the public, at least once
17 annually, the balance of funds available in the Million Solar
18 Roofs Initiative Trust Fund, the cost of the program, the
19 photovoltaic generating capacity installed, and the percentage of
20 new and existing residential and commercial customer sites that
21 are equipped with solar energy systems funded by the Million
22 Solar Roofs Initiative. This information shall be included in the
23 report to the Legislature made pursuant to subdivision (i).

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

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

35 (i) On or before January 1, 2009, and every year thereafter, the
36 commission shall submit to the Legislature an assessment of the
37 success of the Million Solar Roofs Initiative program. That
38 assessment shall include the number of residential and
39 commercial sites that have installed solar energy systems, the
40 electrical generating capacity of the installed solar energy

1 systems, the cost of the program, total electrical system benefits,
2 including the effect on electrical service rates, environmental
3 benefits, how the program affects the operation and reliability of
4 the electrical grid, how the program has affected peak demand
5 for electricity, the progress made toward reaching the goals of the
6 program, whether the program is on schedule to meet the
7 program goals, and recommendations for improving the program
8 to meet its goals.

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

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

23 25785. (a) The Million Solar Roofs Initiative Trust Fund is
24 hereby created in the State Treasury.

25 (b) The money in the fund may be expended to implement and
26 support the Million Solar Roofs Initiative pursuant to this chapter
27 upon appropriation by the Legislature in the annual Budget Act.
28 Up to 2 percent of the money in the fund may be expended for
29 the costs of the state's administration of this chapter, upon
30 appropriation by the Legislature.

31 (c) Revenues collected by electrical corporations pursuant to
32 Section 379.8 of the Public Utilities Code shall be transmitted to
33 the commission at least quarterly for deposit in the Million Solar
34 Roofs Initiative Trust Fund. The Treasurer shall immediately
35 deposit money received pursuant to this section into the Million
36 Solar Roofs Initiative Trust Fund for the current calendar year.

37 (d) Upon appropriation by the Legislature and notification by
38 the commission, the Controller shall pay all awards of the money
39 in the fund for purposes enumerated in this chapter. The
40 eligibility of an award shall be determined solely by the

1 commission based on the procedures it adopts under this chapter.
2 Based on the eligibility of an award, the commission shall also
3 establish the need for a multiyear commitment to any particular
4 award and so advise the Department of Finance. An eligible
5 award submitted by the commission to the Controller shall be
6 accompanied by a summary description of how payment of the
7 award furthers the purposes enumerated in this chapter, and an
8 accounting of future costs associated with any award or group of
9 awards known to the commission to represent a portion of a
10 multiyear funding commitment.

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

13 379.6. (a) The commission, in consultation with the State
14 Energy Resources Conservation and Development Commission,
15 shall administer, until January 1, 2008, the self-generation
16 incentive program for distributed generation resources originally
17 established pursuant to Chapter 329 of the Statutes of 2000.
18 Except as provided in subdivisions (b) and (c), the program shall
19 be administered in the same form as it existed on January 1,
20 2004.

21 (b) Eligibility for the self-generation incentive program's level
22 3 incentive category shall be subject to the following conditions:

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

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

34 (3) Combined heat and power units that meet the 60 percent
35 efficiency standard may take a credit to meet the applicable NO_x
36 emissions standard of 0.14 pounds per megawatthour or 0.07
37 pounds per megawatthour. Credit shall be at the rate of one
38 megawatthour for each 3.4 million British thermal units (Btus) of
39 heat recovered.

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

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

14 (B) The air quality management district or air pollution control
15 district, in issuing a permit to operate the project, determines that
16 operation of the project will produce an onsite net air emissions
17 benefit, compared to permitted onsite emissions if the project
18 does not operate. The commission shall require the customer to
19 secure the permit prior to receiving incentives.

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

1 SEC. 6. Section 379.8 is added to the Public Utilities Code, to
2 read:

3 379.8. (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) “kWh” means kilowatthours, as measured by the number
9 of kilowatts generated in an hour.

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

11 (4) “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 *and not more than 1 MW* alternating
16 current rated peak electricity. The State Energy Resources
17 Conservation and Development Commission may designate a
18 solar energy device that is not a photovoltaic solar collector or
19 other photovoltaic solar energy device to be a “solar energy
20 system” if the solar energy device has the primary purpose of
21 providing for the collection and distribution of solar energy for
22 the generation of electricity, and it meets or exceeds the
23 eligibility criteria established pursuant to subdivision (c) of
24 Section 25782 of the Public Resources Code.

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 finance a comprehensive solar energy program
30 pursuant to Chapter 8.8 (commencing with Section 25780) of
31 Division 15 of the Public Resources Code, to adequately fund the
32 Million Solar Roofs Initiative program.

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

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

38 (2) Determine the level of additional funding needed to
39 adequately support the goal of placing solar energy systems on
40 one million residential and commercial customer sites or its

1 equivalent of 3,000 MW solar generating capacity in the state by
 2 December 31, 2018. Any additional funding shall not exceed ___
 3 dollars (\$___) per kilowatthour for any class of customers and
 4 shall not result in the collection of more than one billion eight
 5 hundred thousand dollars (\$1,800,000,000) from customers
 6 within the service territories of the participating electrical
 7 corporations.

8 (3) In making the determination pursuant to paragraph (2), the
 9 commission shall consider the impact all existing solar incentive
 10 programs will have on achieving the goals of the program,
 11 including cash and noncash incentives, state and federal tax
 12 benefits, credits from net energy metering that exceed the actual
 13 avoided costs of the replaced generation, and benefits from
 14 waivers of other electrical corporation costs and charges. For
 15 purposes of this paragraph, “other electrical corporation costs and
 16 charges” include the nonbypassable rate component of local
 17 distribution service imposed pursuant to Article 7 (commencing
 18 with Section 381) or Article 15 (commencing with Section 399),
 19 standby charges, cost responsibility surcharges, and installation
 20 costs.

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

23 (d) The commission shall include the reasonable cost of the
 24 program in the distribution revenue requirements of electrical
 25 corporations.

26 (e) Notwithstanding any other provision of law, any charge
 27 imposed to fund the program adopted and implemented pursuant
 28 to this section shall be imposed upon all customers not
 29 participating in the California Alternate Rates for Energy ~~or~~
 30 ~~CARE program~~ (CARE) or family electric rate assistance
 31 (FERA) programs as provided in paragraph (2), including those
 32 residential customers subject to the rate cap required by Section
 33 80110 of the Water Code for existing baseline quantities or usage
 34 up to 130 percent of existing baseline quantities of electricity.

35 The costs of the program adopted and implemented pursuant to
 36 this section may not be recovered from customers participating in
 37 the California Alternate Rates for Energy or CARE program
 38 established pursuant to Section 739.1, except to the extent that
 39 program costs are recovered out of the nonbypassable system
 40 benefits charge authorized pursuant to Section 399.8.

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

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

5 (1) Be a cost-effective investment by ratepayers in peak
6 electricity generation capacity that enables ratepayers to recoup
7 the cost of their investment through lower rates as a result of
8 avoiding purchases of electricity at peak rates generated by
9 traditional powerplants and peaker generation units, with
10 additional system reliability and pollution reduction benefits.

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

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

15 (4) Require time-variant pricing for all ratepayers with a solar
16 energy system. The commission shall develop a time-variant
17 tariff that creates the maximum incentive for ratepayers to install
18 solar energy systems so that the system's peak electricity
19 production coincides with California's peak electricity demands
20 and that assures that ratepayers receive due value for their
21 contribution to the purchase of solar energy systems and
22 customers with solar energy systems continue to have an
23 incentive to use electricity efficiently.

24 (5) Require San Diego Gas and Electric Company, Southern
25 California Edison Company, and Pacific Gas and Electric
26 Company to each designate at least one employee to be
27 accountable for solar energy system installations and operations.

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

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

36 ~~(8) Notwithstanding Section 2827, require an electric service~~
37 ~~provider to expand the availability of net energy metering so that~~
38 ~~it is offered on a first-come-first-served basis until the time that~~
39 ~~the total rated generating capacity used by all eligible~~
40 ~~customer-generators exceeds 5 percent of the electric service~~

1 provider's aggregate customer peak demand. However, the net
2 metering cap shall not exceed 2 percent until the commission has
3 established an appropriate net metering time-variant rate design
4 that considers the costs to all net metering participants and
5 ratepayers as a whole and that considers the recovery of the fixed
6 costs of providing distribution service to customers. The
7 commission shall monitor the level of net energy metering for
8 each electrical corporation to ensure that the cap is increased in a
9 timely manner as needed to further the objectives of this section.

10 (h) The program adopted by the commission pursuant to this
11 section shall also include elements for the purpose of funding a
12 Million Solar Roofs Initiative by the State Energy Resources
13 Conservation and Development Commission pursuant to Chapter
14 8.8 (commencing with Section 25780) of Division 15 of the
15 Public Resources Code. These program elements shall exclude
16 customers participating in the State Energy Resources
17 Conservation and Development Commission's Million Solar
18 Roofs Initiative from the rate cap for residential customers for
19 existing baseline quantities or usage by those customers of up to
20 130 percent of existing baseline quantities, as required by Section
21 80110 of the Water Code.

22 (i) Any rate structure for an electrical corporation in effect as
23 of January 1, 2006, that provides for a separate per kW energy
24 charge and a separate facilities charge for nonresidential
25 customers with a maximum demand of more than 20 kW shall
26 remain in effect for those nonresidential customers with a
27 maximum demand of more than 20 kW who participate in the
28 Million Solar Roofs Initiative pursuant to Chapter 8.8
29 (commencing with Section 25780) of Division 15 of the Public
30 Resources Code. *This section does not alter or affect the*
31 *authority of the commission to allocate costs in a manner it*
32 *determines to be just and reasonable.*

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

1 be deposited into the Million Solar Roofs Initiative Trust Fund.
2 The commission shall not establish any other program to
3 encourage the increased installation of residential and
4 commercial photovoltaic solar energy systems.

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

7 387.5. (a) The governing body of a local publicly owned
8 electric utility, as defined in subdivision (d) of Section 9604, that
9 sells electricity at retail, shall adopt, implement, and finance a
10 solar roofs initiative program, funded by a surcharge in
11 accordance with subdivision (b), for the purpose of investing in,
12 and encouraging the increased installation of, residential and
13 commercial solar energy systems. This program shall be
14 consistent with the intent and goals of the Legislature to
15 encourage the installation of 3,000 megawatts of photovoltaic
16 solar energy in California in accordance with the Million Solar
17 Roofs Initiative program (Chapter 8.8 (commencing with Section
18 25780) of Division 15 of the Public Resources Code).

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

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

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

39 SEC. 8. Section 2827 of the Public Utilities Code is amended
40 to read:

1 2827. (a) The Legislature finds and declares that a program
2 to provide net energy metering for eligible customer-generators
3 is one way to encourage substantial private investment in
4 renewable energy resources, stimulate in-state economic growth,
5 reduce demand for electricity during peak consumption periods,
6 help stabilize California's energy supply infrastructure, enhance
7 the continued diversification of California's energy resource mix,
8 and reduce interconnection and administrative costs for
9 electricity suppliers.

10 (b) As used in this section, the following definitions apply:

11 (1) "Electric service provider" means an electrical corporation,
12 as defined in Section 218, a local publicly owned electric utility,
13 as defined in Section 9604, or an electrical cooperative, as
14 defined in Section 2776, or any other entity that offers electrical
15 service. This section shall not apply to a local publicly owned
16 electric utility, as defined in Section 9604 of the Public Utilities
17 Code, that serves more than 750,000 customers and that also
18 conveys water to its customers.

19 (2) "Eligible customer-generator" means a residential, small
20 commercial customer as defined in subdivision (h) of Section
21 331, commercial, industrial, or agricultural customer of an
22 electric service provider, who uses a solar or a wind turbine
23 electrical generating facility, or a hybrid system of both, with a
24 capacity of not more than one megawatt that is located on the
25 customer's owned, leased, or rented premises, is interconnected
26 and operates in parallel with the electric grid, and is intended
27 primarily to offset part or all of the customer's own electrical
28 requirements.

29 (3) "Net energy metering" means measuring the difference
30 between the electricity supplied through the electric grid and the
31 electricity generated by an eligible customer-generator and fed
32 back to the electric grid over a 12-month period as described in
33 subdivision (h). Net energy metering shall be accomplished using
34 a single meter capable of registering the flow of electricity in two
35 directions. An additional meter or meters to monitor the flow of
36 electricity in each direction may be installed with the consent of
37 the customer-generator, at the expense of the electric service
38 provider, and the additional metering shall be used only to
39 provide the information necessary to accurately bill or credit the
40 customer-generator pursuant to subdivision (h), or to collect solar

1 or wind electric generating system performance information for
2 research purposes. If the existing electrical meter of an eligible
3 customer-generator is not capable of measuring the flow of
4 electricity in two directions, the customer-generator shall be
5 responsible for all expenses involved in purchasing and installing
6 a meter that is able to measure electricity flow in two directions.
7 If an additional meter or meters are installed, the net energy
8 metering calculation shall yield a result identical to that of a
9 single meter. An eligible customer-generator who already owns
10 an existing solar or wind turbine electrical generating facility, or
11 a hybrid system of both, is eligible to receive net energy metering
12 service in accordance with this section.

13 (4) “Wind energy co-metering” means any wind energy
14 project greater than 50 kilowatts, but not exceeding one
15 megawatt, where the difference between the electricity supplied
16 through the electric grid and the electricity generated by an
17 eligible customer-generator and fed back to the electric grid over
18 a 12-month period is as described in subdivision (h). Wind
19 energy co-metering shall be accomplished pursuant to Section
20 2827.8.

21 (5) “Co-energy metering” means a program that is the same in
22 all other respects as a net energy metering program, except that
23 the local publicly owned electric utility, as defined in Section
24 9604, has elected to apply a generation-to-generation energy and
25 time-of-use credit formula as provided in subdivision (i).

26 (6) “Ratemaking authority” means, for an electrical
27 corporation as defined in Section 218, or an electrical
28 cooperative as defined in Section 2776, the commission, and for
29 a local publicly owned electric utility as defined in Section 9604,
30 the local elected body responsible for regulating the rates of the
31 local publicly owned utility.

32 (c) (1) Every electric service provider shall develop a standard
33 contract or tariff providing for net energy metering, and shall
34 make this contract available to eligible customer-generators,
35 upon request, on a first-come-first-served basis until the time that
36 the total rated generating capacity used by eligible
37 customer-generators exceeds ~~one-half of~~ 5 percent of the
38 electric service provider’s aggregate customer peak demand.
39 *However, the net metering cap shall not exceed 2 percent until*
40 *the commission has established an appropriate net metering*

1 *time-variant rate design, pursuant to Section 379.8, that*
2 *considers the costs to all net metering participants and*
3 *ratepayers as a whole and that considers the recovery of the*
4 *fixed costs of providing distribution service to customers. The*
5 *commission shall monitor the level of net energy metering for*
6 *each electrical corporation to ensure that the cap is increased in*
7 *a timely manner as needed to further the objectives of the Million*
8 *Solar Roofs Initiative program and Section 379.8.*

9 (2) On an annual basis, beginning in 2003, every electric
10 service provider shall make available to the ratemaking authority
11 information on the total rated generating capacity used by
12 eligible customer-generators that are customers of that provider
13 in the provider's service area. For those electric service providers
14 who are operating pursuant to Section 394, they shall make
15 available to the ratemaking authority the information required by
16 this paragraph for each eligible customer-generator that is their
17 customer for each service area of an electric corporation, local
18 publicly owned electric utility, or electrical cooperative, in which
19 the customer has net energy metering. The ratemaking authority
20 shall develop a process for making the information required by
21 this paragraph available to energy service providers, and for
22 using that information to determine when, pursuant to paragraph
23 (3), a service provider is not obligated to provide net energy
24 metering to additional customer-generators in its service area.

25 (3) Notwithstanding paragraph (1), an electric service provider
26 is not obligated to provide net energy metering to additional
27 customer-generators in its service area when the combined total
28 peak demand of all customer-generators served by all the electric
29 service providers in that service area furnishing net energy
30 metering to eligible customer-generators exceeds ~~one-half of~~ ± 5
31 percent of the aggregate customer peak demand of those electric
32 service providers.

33 (d) Electric service providers shall make all necessary forms
34 and contracts for net metering service available for download
35 from the Internet.

36 (e) (1) Every electric service provider shall ensure that
37 requests for establishment of net energy metering are processed
38 in a time period not exceeding that for similarly situated
39 customers requesting new electric service, but not to exceed 30
40 working days from the date the electric service provider receives

1 a completed application form for net metering service, including
2 a signed interconnection agreement from an eligible
3 customer-generator and the electric inspection clearance from the
4 governmental authority having jurisdiction. If an electric service
5 provider is unable to process the request within the allowable
6 timeframe, the electric service provider shall notify both the
7 customer-generator and the ratemaking authority of the reason
8 for its inability to process the request and the expected
9 completion date.

10 (2) Electric service providers shall ensure that requests for an
11 interconnection agreement from an eligible customer-generator
12 are processed in a time period not to exceed 30 working days
13 from the date the electric service provider receives a completed
14 application form from the eligible customer-generator for an
15 interconnection agreement. If an electric service provider is
16 unable to process the request within the allowable timeframe, the
17 electric service provider shall notify the customer-generator and
18 the ratemaking authority of the reason for its inability to process
19 the request and the expected completion date.

20 (f) (1) If a customer participates in direct transactions
21 pursuant to paragraph (1) of subdivision (b) of Section 365 with
22 an electric supplier that does not provide distribution service for
23 the direct transactions, the service provider that provides
24 distribution service for an eligible customer-generator is not
25 obligated to provide net energy metering to the customer.

26 (2) If a customer participates in direct transactions pursuant to
27 paragraph (1) of subdivision (b) of Section 365 with an electric
28 supplier, and the customer is an eligible customer-generator, the
29 service provider that provides distribution service for the direct
30 transactions may recover from the customer's electric service
31 provider the incremental costs of metering and billing service
32 related to net energy metering in an amount set by the ratemaking
33 authority.

34 (g) Each net energy metering contract or tariff shall be
35 identical, with respect to rate structure, all retail rate components,
36 and any monthly charges, to the contract or tariff to which the
37 same customer would be assigned if the customer did not use an
38 eligible solar or wind electrical generating facility, except that
39 eligible customer-generators shall not be assessed standby
40 charges on the electrical generating capacity or the kilowatthour

1 production of an eligible solar or wind electrical generating
2 facility. The charges for all retail rate components for eligible
3 customer-generators shall be based exclusively on the
4 customer-generator's net kilowatthour consumption over a
5 12-month period, without regard to the customer-generator's
6 choice of electric service provider. Any new or additional
7 demand charge, standby charge, customer charge, minimum
8 monthly charge, interconnection charge, or any other charge that
9 would increase an eligible customer-generator's costs beyond
10 those of other customers who are not customer-generators in the
11 rate class to which the eligible customer-generator would
12 otherwise be assigned if the customer did not own, lease, rent, or
13 otherwise operate an eligible solar or wind electrical generating
14 facility are contrary to the intent of this section, and shall not
15 form a part of net energy metering contracts or tariffs.

16 (h) For eligible residential and small commercial
17 customer-generators, the net energy metering calculation shall be
18 made by measuring the difference between the electricity
19 supplied to the eligible customer-generator and the electricity
20 generated by the eligible customer-generator and fed back to the
21 electric grid over a 12-month period. The following rules shall
22 apply to the annualized net metering calculation:

23 (1) The eligible residential or small commercial
24 customer-generator shall, at the end of each 12-month period
25 following the date of final interconnection of the eligible
26 customer-generator's system with an electric service provider,
27 and at each anniversary date thereafter, be billed for electricity
28 used during that period. The electric service provider shall
29 determine if the eligible residential or small commercial
30 customer-generator was a net consumer or a net producer of
31 electricity during that period.

32 (2) At the end of each 12-month period, where the electricity
33 supplied during the period by the electric service provider
34 exceeds the electricity generated by the eligible residential or
35 small commercial customer-generator during that same period,
36 the eligible residential or small commercial customer-generator is
37 a net electricity consumer and the electric service provider shall
38 be owed compensation for the eligible customer-generator's net
39 kilowatthour consumption over that same period. The
40 compensation owed for the eligible residential or small

1 commercial customer-generator’s consumption shall be
2 calculated as follows:

3 (A) For all eligible customer-generators taking service under
4 tariffs employing “baseline” and “over baseline” rates, any net
5 monthly consumption of electricity shall be calculated according
6 to the terms of the contract or tariff to which the same customer
7 would be assigned to or be eligible for if the customer was not an
8 eligible customer-generator. If those same customer-generators
9 are net generators over a billing period, the net kilowatthours
10 generated shall be valued at the same price per kilowatthour as
11 the electric service provider would charge for the baseline
12 quantity of electricity during that billing period, and if the
13 number of kilowatthours generated exceeds the baseline quantity,
14 the excess shall be valued at the same price per kilowatthour as
15 the electric service provider would charge for electricity over the
16 baseline quantity during that billing period.

17 (B) For all eligible customer-generators taking service under
18 tariffs employing “time of use” rates, any net monthly
19 consumption of electricity shall be calculated according to the
20 terms of the contract or tariff to which the same customer would
21 be assigned to or be eligible for if the customer was not an
22 eligible customer-generator. When those same
23 customer-generators are net generators during any discrete time
24 of use period, the net kilowatthours produced shall be valued at
25 the same price per kilowatthour as the electric service provider
26 would charge for retail kilowatthour sales during that same time
27 of use period. If the eligible customer-generator’s time of use
28 electrical meter is unable to measure the flow of electricity in two
29 directions, paragraph (3) of subdivision (b) shall apply.

30 (C) For all residential and small commercial
31 customer-generators and for each billing period, the net balance
32 of moneys owed to the electric service provider for net
33 consumption of electricity or credits owed to the
34 customer-generator for net generation of electricity shall be
35 carried forward as a monetary value until the end of each
36 12-month period. For all commercial, industrial, and agricultural
37 customer-generators the net balance of moneys owed shall be
38 paid in accordance with the electric service provider’s normal
39 billing cycle, except that if the commercial, industrial, or
40 agricultural customer-generator is a net electricity producer over

1 a normal billing cycle, any excess kilowatthours generated during
2 the billing cycle shall be carried over to the following billing
3 period as a monetary value, calculated according to the
4 procedures set forth in this section, and appear as a credit on the
5 customer-generator's account, until the end of the annual period
6 when paragraph (3) shall apply.

7 (3) At the end of each 12-month period, where the electricity
8 generated by the eligible customer-generator during the
9 12-month period exceeds the electricity supplied by the electric
10 service provider during that same period, the eligible
11 customer-generator is a net electricity producer and the electric
12 service provider shall retain any excess kilowatthours generated
13 during the prior 12-month period. The eligible
14 customer-generator shall not be owed any compensation for
15 those excess kilowatthours unless the electric service provider
16 enters into a purchase agreement with the eligible
17 customer-generator for those excess kilowatthours.

18 (4) The electric service provider shall provide every eligible
19 residential or small commercial customer-generator with net
20 electricity consumption information with each regular bill. That
21 information shall include the current monetary balance owed the
22 electric service provider for net electricity consumed since the
23 last 12-month period ended. Notwithstanding this subdivision, an
24 electric service provider shall permit that customer to pay
25 monthly for net energy consumed.

26 (5) If an eligible residential or small commercial
27 customer-generator terminates the customer relationship with the
28 electric service provider, the electric service provider shall
29 reconcile the eligible customer-generator's consumption and
30 production of electricity during any part of a 12-month period
31 following the last reconciliation, according to the requirements
32 set forth in this subdivision, except that those requirements shall
33 apply only to the months since the most recent 12-month bill.

34 (6) If an electric service provider providing net metering to a
35 residential or small commercial customer-generator ceases
36 providing that electrical service to that customer during any
37 12-month period, and the customer-generator enters into a new
38 net metering contract or tariff with a new electric service
39 provider, the 12-month period, with respect to that new electric
40 service provider, shall commence on the date on which the new

1 electric service provider first supplies electric service to the
2 customer-generator.

3 (i) Notwithstanding any other provisions of this section, the
4 following provisions shall apply to an eligible
5 customer-generator with a capacity of more than 10 kilowatts,
6 but not exceeding one megawatt, that receives electrical service
7 from a local publicly owned electric utility, as defined in Section
8 9604, that has elected to utilize a co-energy metering program
9 unless the electric service provider chooses to provide service for
10 eligible customer-generators with a capacity of more than 10
11 kilowatts in accordance with subdivisions (g) and (h):

12 (1) The eligible customer-generator shall be required to utilize
13 a meter, or multiple meters, capable of separately measuring
14 electricity flow in both directions. All meters shall provide
15 “time-of-use” measurements of electricity flow, and the customer
16 shall take service on a time-of-use rate schedule. If the existing
17 meter of the eligible customer-generator is not a time-of-use
18 meter or is not capable of measuring total flow of energy in both
19 directions, the eligible customer-generator shall be responsible
20 for all expenses involved in purchasing and installing a meter
21 that is both time-of-use and able to measure total electricity flow
22 in both directions. This subdivision shall not restrict the ability of
23 an eligible customer-generator to utilize any economic incentives
24 provided by a government agency or the electric service provider
25 to reduce its costs for purchasing and installing a time-of-use
26 meter.

27 (2) The consumption of electricity from the electric service
28 provider shall result in a cost to the eligible customer-generator
29 to be priced in accordance with the standard rate charged to the
30 eligible customer-generator in accordance with the rate structure
31 to which the customer would be assigned if the customer did not
32 use an eligible solar or wind electrical generating facility. The
33 generation of electricity provided to the electric service provider
34 shall result in a credit to the eligible customer-generator and shall
35 be priced in accordance with the generation component,
36 established under the applicable structure to which the customer
37 would be assigned if the customer did not use an eligible solar or
38 wind electrical generating facility.

39 (3) All costs and credits shall be shown on the eligible
40 customer-generator’s bill for each billing period. In any months

1 in which the eligible customer-generator has been a net consumer
2 of electricity calculated on the basis of value determined pursuant
3 to paragraph (2), the customer-generator shall owe to the electric
4 service provider the balance of electricity costs and credits during
5 that billing period. In any billing period in which the eligible
6 customer-generator has been a net producer of electricity
7 calculated on the basis of value determined pursuant to paragraph
8 (2), the electric service provider shall owe to the eligible
9 customer-generator the balance of electricity costs and credits
10 during that billing period. Any net credit to the eligible
11 customer-generator of electricity costs may be carried forward to
12 subsequent billing periods, provided that an electric service
13 provider may choose to carry the credit over as a kilowatt hour
14 credit consistent with the provisions of any applicable tariff,
15 including any differences attributable to the time of generation of
16 the electricity. At the end of each 12-month period, the electric
17 service provider may reduce any net credit due to the eligible
18 customer-generator to zero.

19 (j) A solar or wind turbine electrical generating system, or a
20 hybrid system of both, used by an eligible customer-generator
21 shall meet all applicable safety and performance standards
22 established by the National Electrical Code, the Institute of
23 Electrical and Electronics Engineers, and accredited testing
24 laboratories such as Underwriters Laboratories and, where
25 applicable, rules of the Public Utilities Commission regarding
26 safety and reliability. A customer-generator whose solar or wind
27 turbine electrical generating system, or a hybrid system of both,
28 meets those standards and rules shall not be required to install
29 additional controls, perform or pay for additional tests, or
30 purchase additional liability insurance.

31 (k) If the commission determines that there are cost or revenue
32 obligations for an electric corporation, as defined in Section 218,
33 that may not be recovered from customer-generators acting
34 pursuant to this section, those obligations shall remain within the
35 customer class from which any shortfall occurred and may not be
36 shifted to any other customer class. Net-metering and
37 co-metering customers shall not be exempt from the public
38 benefits charge. In its report to the Legislature, the commission
39 shall examine different methods to ensure that the public benefits
40 charge remains a nonbypassable charge.

1 (l) A net metering customer shall reimburse the Department of
2 Water Resources for all charges that would otherwise be imposed
3 on the customer by the commission to recover bond-related costs
4 pursuant to an agreement between the commission and the
5 Department of Water Resources pursuant to Section 80110 of the
6 Water Code, as well as the costs of the department equal to the
7 share of the department's estimated net unavoidable power
8 purchase contract costs attributable to the customer. The
9 commission shall incorporate the determination into an existing
10 proceeding before the commission, and shall ensure that the
11 charges are nonbypassable. Until the commission has made a
12 determination regarding the nonbypassable charges, net metering
13 shall continue under the same rules, procedures, terms, and
14 conditions as were applicable on December 31, 2002.

15 (m) In implementing the requirements of subdivisions (k) and
16 (l), a customer-generator shall not be required to replace its
17 existing meter except as set forth in paragraph (3) of subdivision
18 (b), nor shall the electric service provider require additional
19 measurement of usage beyond that which is necessary for
20 customers in the same rate class as the eligible
21 customer-generator.

22 (n) On or before January 1, 2005, the commission shall submit
23 a report to the Governor and the Legislature that assesses the
24 economic and environmental costs and benefits of net metering
25 to customer-generators, ratepayers, and utilities, including any
26 beneficial and adverse effects on public benefit programs and
27 special purpose surcharges. The report shall be prepared by an
28 independent party under contract with the commission.

29 (o) It is the intent of the Legislature that the Treasurer
30 incorporate net energy metering and co-energy metering projects
31 undertaken pursuant to this section as sustainable building
32 methods or distributive energy technologies for purposes of
33 evaluating low-income housing projects.

34 *SEC. 9. (a) It is the intent of the Legislature in establishing*
35 *the Million Solar Roofs Initiative that all individuals or entities*
36 *that contribute funds to support the Millions Solar Roofs*
37 *Initiative, including residential, commercial, and governmental*
38 *customers be eligible to receive awards under the initiative.*

39 *(b) It is the intent of the Legislature in establishing the Million*
40 *Solar Roofs Initiative that no moneys be diverted from any*

1 *existing programs for low-income ratepayers, or from*
2 *cost-effective energy efficiency or demand response programs.*

3 ~~SEC. 8.~~

4 *SEC. 10.* No reimbursement is required by this act pursuant to
5 Section 6 of Article XIII B of the California Constitution because
6 the only costs that may be incurred by a local agency or school
7 district will be incurred because this act creates a new crime or
8 infraction, eliminates a crime or infraction, or changes the
9 penalty for a crime or infraction, within the meaning of Section
10 17556 of the Government Code, or changes the definition of a
11 crime within the meaning of Section 6 of Article XIII B of the
12 California Constitution.

13 ~~SEC. 9.~~

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