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AMENDED IN SENATE FEBRUARY 28, 2005

SENATE BILL No. 1

Introduced by ~~Senators Murray and Campbell~~ *Senator Murray*
(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 add Sections 7110.3, 7110.4, and 7146 to the Business and Professions Code,* 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 Sections 379.6 and 2827 of, and to add Sections 379.8 and 387.5 to, the Public Utilities Code, relating to solar ~~energy~~ *electricity*.

LEGISLATIVE COUNSEL'S DIGEST

SB 1, as amended, Murray. ~~Energy~~ *Electricity*: renewable energy resources: Million Solar Roofs Initiative*: contractors: regulation of electrical work*.

(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~~ *peakloads*. 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 *annual funding associated with 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 *annual funding associated with 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 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%~~ *2.5%* 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 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) Existing law requires individuals who perform work as electricians to become certified by January 1, 2005, and prohibits uncertified individuals from performing electrical work for which certification is required after that date. After the January 1, 2005, certification deadline, an uncertified person may perform electrical work for which certification is required to obtain on-the-job experience as a registered apprentice, if the uncertified person meets certain requirements. Existing law authorizes the California Apprenticeship Council to extend for up to two years the January 1, 2005, certification deadline.

This bill would require that the electrical work related to the installation of a solar energy system pursuant to the Million Solar Roofs Initiative program, be performed under contract by a contractor meeting certain licensure requirements. The bill would require that all persons who engage in the connection of electrical devices of 100 volt-amperes or above for a solar energy system pursuant to the Million Solar Roofs Initiative program be electricians certified pursuant to the above-described requirements.

(5) Existing law, the Contractors' State License Law, provides for the licensure and regulation of contractors and authorizes the Contractors' State License Board to conduct all functions and duties relating to the licensing, regulation, and discipline of licensees.

This bill would provide that employment of an uncertified person to perform work as an electrician for which certification is required pursuant to the above-described requirements constitutes a cause for disciplinary action. The bill would additionally provide that the failure to provide adequate direct supervision of an uncertified person

performing electrical work as a registered apprentice constitutes a cause for disciplinary action. The bill would require that certain contractors seeking renewal of a licensee provide certain information relative to their familiarity with these requirements and compliance with certain certification requirements.

~~(4)~~

(6) 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)~~

(7) 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:

SECTION 1. Section 7110.3 is added to the Business and Professions Code, to read:

7110.3. Employment of an uncertified person to perform work as an electrician for which certification is required by Section 3099.2 of the Labor Code constitutes a cause for disciplinary action.

SEC. 2. Section 7110.4 is added to the Business and Professions Code, to read:

7110.4. The failure to provide adequate direct supervision of an uncertified person performing electrical work, as required by Section 3099.4 of the Labor Code, constitutes a cause for disciplinary action.

SEC. 3. Section 7146 is added to the Business and Professions Code, to read:

7146. (a) After January 1, 2008, a licensee seeking renewal of a class C-10 electrical license shall certify under penalty of perjury, that the licensee is familiar with the requirements of Section 3099.2 of the Labor Code and will not employ uncertified persons to perform work for which certification is required by Section 3099.2 of the Labor Code.

(b) After January 1, 2008, a licensee seeking renewal of a class C-10 electrical license shall submit with a renewal application, a list of current employees that perform work for which certification is required by Section 3099.2 of the Labor Code, and for each listed employee, one of the following:

(1) The employee's certification number.

(2) A statement that the employee is a registered apprentice within the meaning of subdivision (d) of Section 3099.2 of the Labor Code.

(3) A statement that the employee is registered with the Division of Apprenticeship Standards pursuant to Section 3099.4 of the Labor Code.

(c) The registrar may charge an additional fee for license renewals, not to exceed ten dollars ($10), to administer this section.

~~SECTION 1.~~

SEC. 4. Section 25405.5 is added to the Public Resources Code, to read:

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

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

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

(3) "Solar energy system" means a photovoltaic solar collector or other photovoltaic solar energy device that has a primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, and that produces at least 1 kW, but not more than 1 megawatt, alternating current rated peak electricity. The commission may designate a solar energy device that is not a photovoltaic solar collector or other photovoltaic solar energy device to be a "solar energy system" if

the solar energy device *produces at least 1 kW, but not more than 1 megawatt, alternating current rated peak electricity,* has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, and it meets or exceeds the eligibility criteria established pursuant to subdivision (c) of Section 25782.

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

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

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

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

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

~~SEC. 2.~~

SEC. 5. Section 25405.6 is added to the Public Resources Code, to read:

25405.6. Not later than July 1, 2006, the commission shall initiate a public proceeding and make findings if, and under what

conditions, solar energy systems shall be required on new residential and new nonresidential buildings, including the establishment of numerical targets. A solar energy system shall not be required for a residential building unless the commission determines, based upon consideration of all costs associated with the system, that the system is cost effective when amortized over the economic life of the structure. When determining the cost effectiveness of the solar energy system, the commission shall consider the availability of governmental rebates, tax deductions, net-metering, and other quantifiable factors, provided that the commission can determine the availability of these financial incentives if a solar energy system is made mandatory and not elective. The commission shall periodically update the standards and adopt any revision that the commission determines is necessary, including revisions that reflect changes in the financial incentives originally considered by the commission when determining cost effectiveness of the solar energy system. For purposes of this section, "solar energy system" means a photovoltaic solar collector or other photovoltaic solar energy device that has a primary purpose of providing for the collection and distribution of solar energy for the generation of electricity.

~~SEC. 3.~~

SEC. 6. Section 25744 of the Public Resources Code is amended to read:

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

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

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

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

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

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

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

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

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

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

(d) Notwithstanding Section 399.6 of the Public Utilities Code and subdivision (b), the Million Solar Roofs Initiative program shall supplant that portion of the program to foster the development of emerging renewable technologies that encourage the installation of residential and commercial photovoltaic solar energy systems. Upon disbursement of funds from the Million Solar Roofs Initiative Trust Fund consistent with the Million Solar Roofs Initiative program established pursuant to Chapter 8.8 (commencing with Section 25780), the photovoltaic portion of the emerging renewable technologies program shall be discontinued and the ~~remaining funds from that~~ *annual funding*

associated with the photovoltaic portion of the emerging renewable technologies program shall be deposited into the Million Solar Roofs Initiative Trust Fund. The commission shall not establish any other program to encourage the ~~increased~~ installation of residential and commercial photovoltaic solar energy systems.

~~SEC. 4.~~

SEC. 7. Chapter 8.8 (commencing with Section 25780) is added to Division 15 of the Public Resources Code, to read:

CHAPTER 8.8. MILLION SOLAR ROOFS INITIATIVE

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

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

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

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

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

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

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

(g) Increasing California's solar electricity generation market will also bring additional manufacturing, installation, and sales

jobs to the state at a higher rate than most conventional energy production sources.

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

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

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

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

(b) "kWh" means kilowatthours, as measured by the number of kilowatts generated in an hour.

(c) "MW" means megawatts or 1,000,000 watts.

(d) "Solar energy system" means a photovoltaic solar collector or other photovoltaic solar energy device that has a primary purpose of providing for the collection and distribution of solar ~~electrical~~ energy for the generation of electricity, and that produces at least 1 kW and not more than 1 MW alternating current rated peak electricity. The commission may designate a solar energy device that is not a photovoltaic solar collector or other photovoltaic solar energy device to be a "solar energy system" if the solar energy device has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, *it produces at least 1 kW, but not more than 1 megawatt, alternating current rated peak electricity,* and it meets or exceeds the eligibility criteria established pursuant to subdivision (c) of Section 25782.

(e) "Million Solar Roofs Initiative" means the program established by this chapter.

25782. (a) (1) The commission shall develop and implement a multiyear Million Solar Roofs Initiative to provide funding and support to foster the installation of solar energy systems on new and existing residential and commercial customer sites in

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

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

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

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

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

(2) By January 1, 2010, the commission shall adopt a performance-based incentive program in which at least 50 percent of the moneys *thereafter* expended pursuant to the Million Solar Roofs Initiative is expended to provide incentives that are based on the actual electrical output of the solar energy system and that promote the installation of solar energy systems

that maximize electrical output to coincide with peak loads. *The commission shall ensure that the performance-based incentive declines each year thereafter at a rate of no less than 7 percent per year.* In developing the performance-based incentive program, the commission may:

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

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

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

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

~~(4)~~

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

~~(5)~~

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

~~(6)~~

(5) Awards shall be made for the installation of eligible solar energy systems on new or existing residential and commercial customer sites that are or will be receiving electrical distribution

service from an electrical corporation that is contributing funds to support the Million Solar Roofs Initiative pursuant to Section 379.8 of the Public Utilities Code.

~~(7)~~

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

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

(B) An electrical corporation, where the commission determines the solar energy system is appropriately sized to load and is installed, operated, or part of a program to facilitate achieving the goals of the Million Solar Roofs Initiative. An electrical corporation that receives an award for participation in the Million Solar Roofs Initiative shall not recover the value of that award from ratepayers in rates. *Awards for eligible solar energy systems made pursuant to this subparagraph shall not exceed 100 MW alternating current rated peak electricity for any electrical corporation.*

(7) A solar energy system that is installed on a nonresidential structure that receives monetary incentives from the Million Solar Roofs Initiative Trust Fund is subject to the requirements of subdivision (h) of Section 399.14 of the Public Utilities Code, if the solar energy system is an eligible renewable energy resource that receives production incentives or supplemental energy payments pursuant to Sections 25742 and 25743.

(c) The commission shall*, by January 1, 2007,* establish eligibility criteria for solar energy systems, including the following:

(1) Design, installation, and electrical output standards or incentives.

~~(1)~~

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

~~(2)~~

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

~~(3)~~

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

~~(4)~~

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

~~(5)~~

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

~~(6)~~

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

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

(8) The electrical work related to the installation of the solar energy system is performed under contract by a California contractor possessing the appropriate active license designated by the Contractors' State License Board for performing electrical work to install a solar energy system. A C-46 license holder shall only be eligible to install a solar energy system under the Million Solar Roofs Initiative program if the license is active and in good standing on September 1, 2005. All persons who engage in the connection of electrical devices of 100 volt-amperes or above shall be electricians certified pursuant to Sections 3099 and 3099.2 of the Labor Code.

~~(8)~~

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

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

(1) Appropriate siting and high quality installation of the solar energy system by developing installation guidelines that maximize the performance of the system and prevent qualified systems from being inefficiently or inappropriately installed. The

conditions established by the commission shall not impact housing designs or densities presently authorized by a city, county, or city and county. The goal of this paragraph is to achieve efficient installation of solar energy systems to promote the greatest energy production per ratepayer dollar.

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

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

~~(4) Rate~~

(e) The commission shall set rating standards for equipment, components, and systems to assure reasonable performance and to develop standards that provide for compliance with the minimum ratings.

~~(e)~~

(f) The commission may limit the distribution of funds available to the program based upon the receipt of funding or financial incentives from other federal or local government or public utility programs to promote solar energy. *The commission shall not limit the distribution of funds available to the program based upon the receipt of financial loans from any governmental or private entity.*

~~(f)~~

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

~~(g)~~

(h) Pursuant to this chapter, the commission may provide incentives in the form of a monetary incentive or its equivalent to purchasers, lessees, lessors, or sellers of an eligible solar energy

system. The incentive shall benefit the end-use consumer by directly and exclusively reducing the purchase or lease cost of the eligible solar energy system, or the cost of electricity produced by the eligible solar energy system. Incentives shall be issued on the basis of the rated electrical capacity of the system measured in watts, or in the electricity production of the system, measured in kWh, as determined by the commission.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

~~SEC. 5.~~

SEC. 8. Section 379.6 of the Public Utilities Code is amended to read:

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

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

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

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

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

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

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

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

(c) In administering the self-generation incentive program, the commission may adjust the amount of rebates, include other

ultraclean and low-emission distributed generation technologies, as defined in Section 353.2, and evaluate other public policy interests, including, but not limited to, ratepayers, and energy efficiency and environmental interests. The Million Solar Roofs Initiative program shall supplant that portion of the self-generation incentive program that encourages installation of residential and commercial photovoltaic solar energy systems. Upon disbursement by the State Energy Resources Conservation and Development Commission of funds from the Million Solar Roofs Initiative Trust Fund consistent with the Million Solar Roofs Initiative program established pursuant to Chapter 8.8 (commencing with Section 25780) of Division 15 of the Public Resources Code, the photovoltaic portion of the self-generation incentive program shall be discontinued and the commission shall order the ~~remaining funds from that~~ *annual funding associated with the photovoltaic portion of the self-generation incentive* program to be deposited into the Million Solar Roofs Initiative Trust Fund. The commission shall not establish any other program to encourage the ~~increased~~ installation of residential and commercial solar energy systems.

~~SEC. 6.~~

SEC. 9. Section 379.8 is added to the Public Utilities Code, to read:

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

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

(2) "kWh" means kilowatthours, as measured by the number of kilowatts generated in an hour.

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

(4) "Solar energy system" means a photovoltaic solar collector or other photovoltaic solar energy device that has a primary purpose of providing for the collection and distribution of solar electrical energy for the generation of electricity, and that produces at least 1 kW and not more than 1 MW alternating current rated peak electricity. The State Energy Resources Conservation and Development Commission may designate a solar energy device that is not a photovoltaic solar collector or other photovoltaic solar energy device to be a "solar energy

system" if the solar energy device has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, *produces at least 1 kW, but not more than 1 megawatt, alternating current rated peak electricity,* and it meets or exceeds the eligibility criteria established pursuant to subdivision (c) of Section 25782 of the Public Resources Code.

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

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

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

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

(3) In making the determination pursuant to paragraph (2), the commission shall consider the impact all existing solar incentive programs will have on achieving the goals of the program, including cash and noncash incentives, state and federal tax benefits, credits from net energy metering that exceed the actual avoided costs of the replaced generation, and benefits from waivers of other electrical corporation costs and charges. For purposes of this paragraph, "other electrical corporation costs and charges" include the nonbypassable rate component of local distribution service imposed pursuant to Article 7 (commencing with Section 381) or Article 15 (commencing with Section 399),

standby charges, cost responsibility surcharges, and installation costs.

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

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

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

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

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

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

(1) 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 powerplants and peaker generation units, with additional system reliability and pollution reduction benefits.

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

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

(4) Require time-variant pricing for all ratepayers with a solar energy system. The commission shall develop a time-variant tariff that creates the maximum incentive for ratepayers to install solar energy systems so that the system’s peak electricity

production coincides with California's peak electricity demands and that assures that ratepayers receive due value for their contribution to the purchase of solar energy systems and customers with solar energy systems continue to have an incentive to use electricity efficiently.

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

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

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

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

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

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

~~SEC. 7.~~

SEC. 10. Section 387.5 is added to the Public Utilities Code, to read:

387.5. (a) The governing body of a local publicly owned electric utility, as defined in subdivision (d) of Section 9604, that sells electricity at retail, shall adopt, implement, and finance a solar roofs initiative program, funded ~~by a surcharge~~ in accordance with subdivision (b), for the purpose of investing in, and encouraging the increased installation of, residential and commercial solar energy systems. This program shall be consistent with the intent and goals of the Legislature to encourage the installation of 3,000 megawatts of photovoltaic solar energy in California in accordance with ~~the Million Solar Roofs Initiative program (Chapter 8.8 (commencing with Section 25780) of Division 15 of the Public Resources Code).~~ *Sections 25780 and 25781, and paragraph (1) of subdivision (a) of Section 25782 of the Public Resources Code.*

(b) On or before January 1, 2007, a local publicly owned electric utility shall ~~establish a new surcharge sufficient to~~ offer monetary incentives for the installation of solar energy systems of at least two dollars and ~~forty cents ($2.40) per installed watt of photovoltaic solar energy~~ *eighty cents ($2.80) per installed watt, or for the electricity produced by the solar energy system, measured in kWh, as determined by the governing board of a local publicly owned electric utility, for photovoltaic solar*

energy systems. The incentive level shall decline each year thereafter at a rate of no less than 7 percent per year.

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

(c) A local publicly owned electric utility shall initiate a public proceeding to fund a solar energy program to adequately support the goals of the Million Solar Roofs Initiative program in accordance with Sections 25780 and 25781 and paragraph (1) of subdivision (a) of Section 25782 of the Public Resources Code. The proceeding shall determine what additional funding, if any, is necessary to provide the incentives pursuant to subdivision (b). The public proceeding shall be completed and the comprehensive solar energy program established by January 1, 2007.

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

(e) It is the intent of the Legislature that, in establishing the program required by this section, no moneys be diverted from any existing programs for low-income ratepayers, or from cost-effective energy efficiency or demand response programs.

(f) It is the intent of the Legislature that the statewide expenditure cap for local publicly owned electric utilities shall not exceed seven hundred million dollars ($700,000,000). The expenditure cap for each local publicly owned electric utility shall be based on that utility's percentage of the total statewide load served by all local publicly owned electric utilities. Expenditures by a local publicly owned electric utility may be less than the utility's cap amount, provided that funding is adequate to provide the incentives required by subdivision (b).

~~SEC. 8.~~

SEC. 11. Section 2827 of the Public Utilities Code is amended to read:

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

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

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

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

(3) "Net energy metering" means measuring the difference between the electricity supplied through the electric grid and the electricity generated by an eligible customer-generator and fed back to the electric grid over a 12-month period as described in subdivision (h). Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in two directions. An additional meter or meters to monitor the flow of electricity in each direction may be installed with the consent of the customer-generator, at the expense of the electric service

provider, and the additional metering shall be used only to provide the information necessary to accurately bill or credit the customer-generator pursuant to subdivision (h), or to collect solar or wind electric generating system performance information for research purposes. If the existing electrical meter of an eligible customer-generator is not capable of measuring the flow of electricity in two directions, the customer-generator shall be responsible for all expenses involved in purchasing and installing a meter that is able to measure electricity flow in two directions. If an additional meter or meters are installed, the net energy metering calculation shall yield a result identical to that of a single meter. An eligible customer-generator who already owns an existing solar or wind turbine electrical generating facility, or a hybrid system of both, is eligible to receive net energy metering service in accordance with this section.

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

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

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

(c) (1) Every electric service provider shall develop a standard contract or tariff providing for net energy metering, and shall make this contract available to eligible customer-generators, upon request, on a first-come-first-served basis until the time that the total rated generating capacity used by eligible customer-generators exceeds ~~5~~ *2.5* percent of the electric service

provider's aggregate customer peak demand. ~~However, the net metering cap shall not exceed 2 percent until the commission has established an appropriate net metering time-variant rate design, pursuant to Section 379.8, that considers the costs to all net metering participants and ratepayers as a whole and that considers the recovery of the fixed costs of providing distribution service to customers. The commission shall monitor the level of net energy metering for each electrical corporation to ensure that the cap is increased in a timely manner as needed to further the objectives of the Million Solar Roofs Initiative program and Section 379.8.~~

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

(3) Notwithstanding paragraph (1), an electric service provider is not obligated to provide net energy metering to additional customer-generators in its service area when the combined total peak demand of all customer-generators served by all the electric service providers in that service area furnishing net energy metering to eligible customer-generators exceeds ~~5~~ *2.5* percent of the aggregate customer peak demand of those electric service providers.

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

(e) (1) Every electric service provider shall ensure that requests for establishment of net energy metering are processed

in a time period not exceeding that for similarly situated customers requesting new electric service, but not to exceed 30 working days from the date the electric service provider receives a completed application form for net metering service, including a signed interconnection agreement from an eligible customer-generator and the electric inspection clearance from the governmental authority having jurisdiction. If an electric service provider is unable to process the request within the allowable timeframe, the electric service provider shall notify both the customer-generator and the ratemaking authority of the reason for its inability to process the request and the expected completion date.

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

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

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

(g) Each net energy metering contract or tariff shall be identical, with respect to rate structure, all retail rate components, and any monthly charges, to the contract or tariff to which the same customer would be assigned if the customer did not use an

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

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

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

(2) At the end of each 12-month period, where the electricity supplied during the period by the electric service provider exceeds the electricity generated by the eligible residential or small commercial customer-generator during that same period, the eligible residential or small commercial customer-generator is a net electricity consumer and the electric service provider shall

be owed compensation for the eligible customer-generator's net kilowatthour consumption over that same period. The compensation owed for the eligible residential or small commercial customer-generator's consumption shall be calculated as follows:

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

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

(C) For all residential and small commercial customer-generators and for each billing period, the net balance of moneys owed to the electric service provider for net consumption of electricity or credits owed to the customer-generator for net generation of electricity shall be carried forward as a monetary value until the end of each 12-month period. For all commercial, industrial, and agricultural customer-generators the net balance of moneys owed shall be

paid in accordance with the electric service provider's normal billing cycle, except that if the commercial, industrial, or agricultural customer-generator is a net electricity producer over a normal billing cycle, any excess kilowatthours generated during the billing cycle shall be carried over to the following billing period as a monetary value, calculated according to the procedures set forth in this section, and appear as a credit on the customer-generator's account, until the end of the annual period when paragraph (3) shall apply.

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

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

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

(6) If an electric service provider providing net metering to a residential or small commercial customer-generator ceases providing that electrical service to that customer during any 12-month period, and the customer-generator enters into a new

net metering contract or tariff with a new electric service provider, the 12-month period, with respect to that new electric service provider, shall commence on the date on which the new electric service provider first supplies electric service to the customer-generator.

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

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

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

would be assigned if the customer did not use an eligible solar or wind electrical generating facility.

(3) All costs and credits shall be shown on the eligible customer-generator's bill for each billing period. In any months in which the eligible customer-generator has been a net consumer of electricity calculated on the basis of value determined pursuant to paragraph (2), the customer-generator shall owe to the electric service provider the balance of electricity costs and credits during that billing period. In any billing period in which the eligible customer-generator has been a net producer of electricity calculated on the basis of value determined pursuant to paragraph (2), the electric service provider shall owe to the eligible customer-generator the balance of electricity costs and credits during that billing period. Any net credit to the eligible customer-generator of electricity costs may be carried forward to subsequent billing periods, provided that an electric service provider may choose to carry the credit over as a kilowatthour credit consistent with the provisions of any applicable tariff, including any differences attributable to the time of generation of the electricity. At the end of each 12-month period, the electric service provider may reduce any net credit due to the eligible customer-generator to zero.

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

(k) If the commission determines that there are cost or revenue obligations for an electric corporation, as defined in Section 218, that may not be recovered from customer-generators acting pursuant to this section, those obligations shall remain within the customer class from which any shortfall occurred and may not be shifted to any other customer class. Net-metering and

co-metering customers shall not be exempt from the public benefits charge. In its report to the Legislature, the commission shall examine different methods to ensure that the public benefits charge remains a nonbypassable charge.

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

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

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

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

~~SEC. 9.~~

SEC. 12. (a) It is the intent of the Legislature in establishing the Million Solar Roofs Initiative that all individuals or entities

that contribute funds to support the Millions Solar Roofs Initiative, including residential, commercial, and governmental customers be eligible to receive awards under the initiative.

(b) It is the intent of the Legislature in establishing the Million Solar Roofs Initiative that no moneys be diverted from any existing programs for low-income ratepayers, or from cost-effective energy efficiency or demand response programs.

~~SEC. 10.~~

SEC. 13. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

~~SEC. 11.~~

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

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