

STATE OF CALIFORNIA

Public Utilities Commission  
San Francisco

**M e m o r a n d u m**

**Date:** April 1, 2005

**To:** The Commission  
(Meeting of April 7, 2005)

**From:** Delaney L. Hunter, Director  
Office of Governmental Affairs (OGA) — Sacramento

**Subject: SB 1 (Murray and Campbell) Energy: renewable energy  
resources: Million Solar Roofs Initiative  
As Amended February 28, 2005**

**LEGISLATIVE SUBCOMMITTEE RECOMMENDATION:** Support

**SUMMARY:** This bill would require the California Energy Commission (CEC) to implement a “Million Solar Roofs Initiative” (MSRI) to provide incentives to residential and commercial utility customers. The bill establishes an MSRI Trust Fund in the State Treasury, which may be used to implement the Initiative and for CEC administration. Incentives would be issued by the state Controller. The Commission would be required to adopt, implement, and finance a comprehensive solar program equivalent to one million solar roofs or 3,000 MW, adopt time-variant tariffs, and provide a long-term funding mechanism through investor-owned utility distribution rates. The CPUC program would include provisions for funding the MSRI by the CEC.

**DIGEST:** Existing law (the Public Utilities Act) gives the Commission regulatory authority over public utilities, including electrical corporations. Existing law requires 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.

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

equivalent of 3,000 megawatts, establishing a self-sufficient solar industry in 10 years, and placing solar energy systems on 50 % of new home developments in 13 years.

The bill would establish the Million Solar Roofs Initiative Trust Fund and would continuously appropriate moneys deposited into the fund to the Energy Commission for purposes of carrying out the Million Solar Roofs Initiative. The program would require the Energy Commission to award incentives, pursuant to a declining schedule to be adopted by the Energy Commission, and would authorize certain other incentive programs, to support the installation of eligible solar energy systems. The bill would require the Energy Commission to establish eligibility criteria for solar energy systems and to establish conditions for incentives. The bill would require the Energy Commission to adopt guidelines governing the program at a publicly noticed meeting.

This bill would require that the Commission, on or before February 1, 2006, and in consultation with the Energy Commission, issue an order opening a proceeding, or expanding the scope of an existing proceeding, to adopt, implement, and finance a comprehensive solar energy program to invest in and encourage the increased installation of residential and commercial solar energy systems, with the goal of placing solar energy systems on 1,000,000 residential and commercial customer sites or its equivalent of 3,000 megawatts of solar generating capacity, by December 31, 2018. The bill would require funding of the Million Solar Roofs Initiative to be an element of the program adopted by the Commission. 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 Commission to adopt the program no later than January 1, 2007.

This bill would require all local publicly owned electric utilities, as defined, to establish a solar roofs initiative consistent with the program adopted and implemented by the Commission, within a reasonable time after the Commission establishes any program for electrical corporations. All local publicly owned electric utilities would be required to report, on an annual basis, to its customers and to the Energy Commission, information relative to the utility's solar roofs initiative and would authorize the Energy Commission to establish guidelines for the information to be included in the utility's annual report.

Existing law requires all electric service providers 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 Commission to order electrical corporations 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 0.5% of the electrical corporation's total electricity sales.

Existing law authorizes the PUC to fix the rates and charges for every public utility, and requires that those rates and charges be just and reasonable.

This bill would require the Commission, in collaboration with the Energy Commission, to develop time-variant electricity pricing tariffs for all customers that are not subject to mandatory time-variant pricing, including net-metered customers.

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 that not later than July 1, 2009, the Energy Commission initiate a public proceeding and make findings if and under what conditions solar energy systems are to be required on new residential and nonresidential buildings

## **DIVISION ANALYSIS (Energy):**

### **CPUC Responsibilities**

By February 1, 2006, the CPUC must begin a process to:

- Adopt, implement, and finance a comprehensive solar energy program, which will commence January 1, 2007.
- Evaluate current solar programs of CPUC and CEC to determine funding level needed to install solar systems at one million residential and commercial sites, or its equivalent of 3,000 MW of generating capacity, by December 31, 2018.
- Provide a long-term program funding source via electric utility distribution rates.
- Develop voluntary time-variant tariffs to value solar generation.
- Require electric utilities to increase net metering cap to 2% of total electricity sales until time-variant tariffs are adopted, then gradually increase the cap to 5%.
- Provide a funding source for the Million Solar Roofs Initiative by the CEC.

The CPUC-adopted program must be a cost-effective method to purchase peak electricity generating capacity, measured as the avoided costs of traditional power

plants and peaking units, plus the value of added system reliability and pollution reduction benefits.

The bill's mandates are consistent with policies being developed through a public process in a current CPUC proceeding (R.04-03-017).

- In December 2004 and March 2005, two CPUC rulings, respectively 1) solicited public comment on how the CPUC could implement a large-scale solar incentive program, and 2) requested CPUC and CEC staff to incorporate these comments into a joint agency staff report proposing such a program. The joint staff report, which will be completed in Spring 2005, is expected to address program funding needs and allocations, advanced metering and tariffs, appropriate incentive levels, capacity vs. performance-based incentives, and other related issues.
- The CPUC is exploring methods to evaluate the costs and benefits of distributed generation, including solar generating systems. The CPUC is scheduled to receive a round of public comments beginning April 7, and will hold hearings the week of May 8 regarding cost-benefit issues.
- The CPUC currently implements a solar incentive program, mandated by Assembly Bill 970 and Assembly Bill 1685. The funding mechanism, administrative structure, incentive disbursement, warranty requirements, monitoring and evaluation metering and hardware, program data web-posting, and utility program reporting requirements are already in place.

### **CEC Responsibilities**

By January 1, 2006, the CEC must:

- Develop and implement a multiyear Million Solar Roofs Initiative to provide funding and support to foster installation of solar energy systems. Program goals are:
  - One million homes and businesses (or its equivalent of 3,000 MW).
  - Self-sustaining solar industry in 10 years
  - Solar energy systems on 50% of new homes in 13 years.
- Establish program eligibility criteria, such as participation, system warranty, and performance monitoring requirements.
- Award monetary incentives up to the existing level of incentives in effect on January 1, 2006, declining by at least 7% per year, and to zero by December 31, 2016. Incentives can be increased up to:
  - 50% higher for "zero energy" homes and businesses,
  - 25% higher for structures exceeding the CEC's building standards.
- Adopt a definition of "zero energy" homes and businesses.
- Examine and implement financing options for residential and commercial customers.
- Acquire technical and administrative services to support the MSRI.
- Educate builders and contractors about MSRI, and how to integrate energy efficiency measures with solar energy systems.

- Provide the Department of Finance with a description of how incentive payment furthers the MSRI goals, and an accounting of future incentive costs.

The process for collecting utility distribution revenues is unclear. Although the Legislative Digest describes the “separate electrical rate component” known as the Public Goods Charge, the bill itself does not identify the PGC as the MSRI funding source.

The process for distributing incentive payments seems unduly cumbersome. Although unclear, it seems that funds are collected by the IOUs and transferred to the Treasury, who may use a portion to pay CEC administrative costs and forward the balance to the MSRI. The Controller makes incentive payments from the MSRI upon notification by the CEC. The IOU payment to the Treasury may, but is not required to, be used to fund the MSRI. The bill does not specify that funds used for CEC administration are specifically for MSRI implementation. The bill should clarify how, when, and to who funds from the MSRI Trust Fund would be distributed.

### **Investor-Owned Utility Responsibilities**

- PG&E, SCE, and SDG&E must:
- Designate one utility employee to be accountable for solar installations and operations.
- Designate one utility employee to monitor, report, and post on the utility website key program performance and progress data.
- Forward an as-yet undetermined amount of distribution revenue to the State Treasury.

### **RECOMMENDED AMENDMENTS:**

The analysis points out several items that need to be clarified. They are:

1. Clarify the MSRI funding source.
2. The bill should clarify how, when, and to who funds from the MSRI Trust Fund would be distributed.
3. How utility personnel should be accountable for solar “operations” of solar installations a function that is typically provided by the customer or system owner.

We would recommend working with the author and the sponsors to seek amendments to clarify these issues.

### **LEGISLATIVE HISTORY**

- AB 970 directed the CPUC to implement a differential incentive program for renewables and ultra-clean distributed generation, funded by utility distribution rates.

Last Session several bills were contemplated by the Legislature relative to solar. They are as follows:

- SB 199 (Murray) would have established the Solar Homes Peak Energy Procurement Program – a rebate program for installation of new solar energy systems with the goal of installing solar system of a million homes by 2017 funded by any increases in the PGC. Died in Assembly Utilities & Commerce Committee.
- SB 118 (Bowen) would have established a solar photovoltaic program funded by rates currently supporting demand response and interruptible programs. Died on Assembly Floor.
- AB 135 (Reyes) Extended by one year, until December 31, 2008, the Energy Commission's (CEC) authority to spend moneys collected in the Renewable Resources Trust Fund (RRTF) for emerging renewable technologies from other accounts within RRTF, but limits this authority to no more than \$60 million. Signed by Governor Schwarzenegger.

#### **STATUS:**

Assigned to Senate Energy, Utilities and Communications – no hearing date set.

#### **SUPPORT/OPPOSITION**

Support: Schwarzenegger Administration (sponsor)

Opposition:

#### **LEGISLATIVE STAFF CONTACT**

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**Date:** April 1, 2005

**BILL LANGUAGE:**

BILL NUMBER: SB 1            AMENDED  
BILL TEXT

AMENDED IN SENATE    FEBRUARY 28, 2005

INTRODUCED BY    Senators Murray and Campbell

DECEMBER 6, 2004

An act to ~~amend Section 25744 of, and to add Sections 25407, 25744.4, and 25744.5 to, the Public Resources Code, and to amend Sections 399.6, 399.8, and 2827 of, and to add Section 379.8 to, the Public Utilities Code, relating to energy, and making an appropriation therefor.~~ *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 add Sections 379.8, 387.5, and 760 to the Public Utilities Code, relating to solar energy, and making an appropriation therefor.*

LEGISLATIVE COUNSEL'S DIGEST

SB 1, as amended, Murray.    Energy: renewable energy resources: ~~California Renewables Portfolio Standard Program— 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.

~~The existing Public Utilities Act requires the Public Utilities Commission (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 PUC resolutions refer to the nonbypassable rate component as a "Public Goods Charge" (PGC). Existing law requires that the PGC not exceed, for any tariff schedule, the level that was in effect on January 1, 2000. Existing law requires that the PGC be adjusted annually at a rate equal to the lesser of the annual growth in electric commodity sales or inflation, as defined. Existing law requires the Energy Commission to transfer funds collected by electrical corporations for in state operation and development of existing and new and emerging renewable resources technologies into the Renewable Resource Trust Fund, to fund specified programs.~~

~~Existing law requires that 17.5% of the money collected under the renewable energy public goods charge be used to fund the Emerging~~

~~Renewable Resources Account within the Renewable Resource Trust Account, for the purpose of a multiyear, consumer based program to foster the development of emerging renewable technologies in distributed generation applications.—~~

~~—This bill would establish the Solar Homes Peak Energy Procurement Subaccount within the Emerging Renewable Resources Account and would make the moneys therein available, upon appropriation by the Legislature, to fund the Solar Homes Peak Energy Procurement Program, which the bill would establish. The bill would require the Energy Commission to award rebates, and would authorize the Energy Commission to provide incentives, to support the installation of solar energy systems, as defined, on existing and new residential construction. The bill would require that the amounts collected to fund energy efficiency, renewable energy, and research, development, and demonstration be set at the levels established by the PUC for 2005, and would require that any moneys collected above those 2005 levels during 2006 and 2007 be transferred to the Solar Homes Peak Energy Procurement Subaccount.—~~

~~—This bill would require that the PUC, on or before February 1, 2006, and in consultation with the Energy Commission, issue an order initiating an investigation and opening a ratemaking proceeding, or to expand the scope of an existing proceeding, to adopt and implement a program to invest in residential solar energy systems. The bill would require the PUC to complete its investigation and proceeding and adopt the program no later than January 1, 2008. The bill would require every local publicly owned electric utility, as defined, to establish a solar homes program consistent with the program adopted and implemented by the PUC, within a reasonable time after the PUC establishes any program for electrical corporations. Each local publicly owned electric utility would be required to report, on an annual basis, to its customers and to the Energy Commission, information relative to the utility's solar homes program and would authorize the Energy Commission to establish guidelines for the information to be included in the annual report.—~~

~~(2) Under the Reliable Electric Service Investments Act, the Energy Commission was required to hold moneys collected for renewable energy and deposited in the Renewable Resource Trust Fund until further action by the Legislature. The act requires the Energy Commission to create an initial investment plan, in accordance with specified objectives, to govern the allocation of funds in the Renewable Resource Trust Fund collected between January 1, 2002, and January 1, 2007, in order to ensure a fully competitive and self sustaining California renewable energy supply. Existing law requires the Energy Commission, on or before March 31, 2006, to prepare an investment plan proposing the application of moneys collected between January 1, 2007, and January 1, 2012.—~~

~~—This bill would delete the requirement that moneys collected for renewable energy and deposited in the Renewal Resource Trust Fund be held until further action by the Legislature. The bill would require the Energy Commission, on or before March 31, 2006, to prepare a report, rather than an investment plan, describing the application of moneys collected between January 1, 2007, and January 1, 2012, and to describe the use of any funds applied toward program activities during the period January 1, 2002, through March 31, 2006.—~~

~~—(3) Existing law authorizes a local government to develop and administer a program to encourage the construction of buildings that use solar thermal and photovoltaic systems meeting certain standards~~

~~and requires that any program recognize owners and builders who participate in the program by awarding these owners and builders a "Sunny Homes Seal."~~

~~— This bill would require that beginning January 1, 2008, 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 and to disclose certain information.~~

~~— (4) Existing law requires every electric service provider, 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 every electric service provider, 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 that every electric service provider, upon request, 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 5% of the electric service provider's aggregate customer peak demand and would delete certain provisions of existing law relative to the annualized net metering calculation.~~

~~— (5) Under existing law, a violation of the Public Utilities Act or an order or direction of the PUC is a crime.~~

~~— Because various provisions of this bill are within the act and require action by the PUC to implement the bill's requirements, a violation of those provisions would be a crime thereby imposing a state mandated local program by creating a new crime.~~

~~— (6) 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 a specified reason.~~

*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.*

*This bill would establish the Million Solar Roofs Initiative, administered by the Energy Commission, with the goals of placing 1,000,000 solar energy systems, as defined, on new and existing residential and commercial customer sites, or its generation capacity equivalent of 3,000 megawatts, establishing a self-sufficient solar industry in 10 years, and placing solar energy systems on 50 % of new*

home developments in 13 years. The bill would establish the Million Solar Roofs Initiative Trust Fund and would continuously appropriate moneys deposited into the fund to the Energy Commission for purposes of carrying out the Million Solar Roofs Initiative. The program would require the Energy Commission to award incentives, pursuant to a declining schedule to be adopted by the Energy Commission, and would authorize certain other incentive programs, to support the installation of eligible solar energy systems. The bill would require the Energy Commission to establish eligibility criteria for solar energy systems and to establish conditions for incentives. The bill would require the Energy Commission to adopt guidelines governing the program at a publicly noticed meeting.

This bill would require that the PUC, on or before February 1, 2006, and in consultation with the Energy Commission, issue an order opening a proceeding, or expanding the scope of an existing proceeding, to adopt, implement, and finance a comprehensive solar energy program to invest in and encourage the increased installation of residential and commercial solar energy systems, with the goal of placing solar energy systems on 1,000,000 residential and commercial customer sites or its equivalent of 3,000 megawatts of solar generating capacity, by December 31, 2018. The bill would require funding of the Million Solar Roofs Initiative to be an element of the program adopted by the PUC. The bill would require that the reasonable cost of the program be included in the distribution revenue requirements of electrical corporations. The bill would require that the program adopted by the PUC be a cost-effective investment by ratepayers in peak electricity generation capacity that enables ratepayers to recoup the cost of their investment through lower rates as a result of avoiding purchases of electricity at peak rates generated by traditional generation resources. The bill would require the PUC to adopt the program no later than January 1, 2007.

This bill would require all local publicly owned electric utilities, as defined, to establish a solar roofs initiative consistent with the program adopted and implemented by the PUC, within a reasonable time after the PUC establishes any program for electrical corporations. All local publicly owned electric utilities would be required to report, on an annual basis, to its customers and to the Energy Commission, information relative to the utility's solar roofs initiative and would authorize the Energy Commission to establish guidelines for the information to be included in the utility's annual report. 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 electrical corporations 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 0.5% of the electrical corporation's total electricity sales.

(3) Existing law authorizes the PUC to fix the rates and charges for every public utility, and requires that those rates and charges be just and reasonable.

This bill would require the PUC, in collaboration with the Energy Commission, to develop time-variant electricity pricing tariffs for all customers that are not subject to mandatory time-variant pricing, including net-metered customers.

(4) 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 that not later than July 1, 2009, the Energy Commission initiate a public proceeding and make findings if and under what conditions solar energy systems are to be required on new residential and nonresidential buildings.

(5) 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.

(6) 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: 2/3. Appropriation: yes. Fiscal committee: yes.  
State-mandated local program: yes.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

~~SECTION 1. The Legislature finds and declares all of the~~

SECTION 1. 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 alternating current rated peak electricity.

(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.

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

25405.6. Not later than July 1, 2009, 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. For purposes of this section, a 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. Chapter 8.8 (commencing with Section 25780) is added to Division 15 of the Public Resources Code, to read:

#### 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 energy for the generation of electricity, and that produces at least 1 kW alternating current rated peak electricity.

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

25782. (a) 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.

(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.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

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

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

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

(6) 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.

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

(1) Appropriate siting and high quality installation of the solar energy system.

(2) Optimal solar energy system performance during periods of peak electricity demand, including the use of advanced metering systems, on-site 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.

(e) The commission may 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 other government or utility funding, incentive, or credit, except for any income or property tax credit or exemption.

(f) The commission may provide proportional program support, not to exceed 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) 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 kW, 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 those 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 for the Million Solar Roofs Initiative 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.

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 and may be used for the commission's administration only upon appropriation in the annual Budget Act.

(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. After setting aside in the fund money

that may be needed for expenditures authorized by subdivision (b), the Treasurer shall immediately deposit money received pursuant to this section into the Million Solar Roofs Initiative Trust Fund for the current calendar year. Notwithstanding Section 13340 of the Government Code, the money in the fund is hereby continuously appropriated to the commission without regard to fiscal year for the purposes enumerated in this chapter.

(d) Upon 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. 4. Section 379.8 is added to the Public Utilities Code, to read:

379.8. (a) 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 adopt, implement, and finance a comprehensive solar energy program to invest in and encourage the increased installation of residential and commercial solar energy systems in the state. The goal of the program is 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.

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

(1) Evaluate current programs of the commission and the State Energy Resources Conservation and Development Commission to 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.

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

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

(d) Notwithstanding any other provision of law, any charge imposed to fund the programs adopted and implemented pursuant to this section shall be imposed upon all customers, 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.

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

(f) 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) Make time-variant pricing available for all ratepayers with a solar energy system, upon adoption of time-variant pricing tariffs pursuant to Section 760. The commission shall structure any time-variant pricing so 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.

(8) Notwithstanding Section 2827, require electrical corporations 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 percent of the electrical corporation's total electricity sales. However, the net metering cap shall not exceed 2 percent until the commission has established an appropriate net metering time-variant rate design 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 this section.

(9) The commission may impose the requirements of this subdivision on an electrical corporation in addition to those specified, when and to the extent the commission determines this to be appropriate.

(g) 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.

SEC. 5. 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 Section 9604, shall establish a comprehensive solar roofs initiative consistent with programs adopted and implemented by the commission pursuant to Section 379.8.

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

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

(d) A local publicly owned electric utility shall, on an annual basis beginning June 1, 2007, report to its customers and to the State Energy Resources Conservation and Development Commission, information relative to the utility's solar roofs initiative. The State Energy Resources Conservation and Development Commission may establish guidelines for the information to be included in the utility's annual report. Any guidelines established pursuant to this subdivision shall be adopted in the manner specified in Section 25784 of the Public Resources Code. Notwithstanding any other provision of law, any guidelines adopted by the State Energy Resources Conservation and Development Commission pursuant to this subdivision shall be exempt from the requirements of Chapter 3.5 (commencing with Section 11340) of Part I of Division 3 of Title 2 of the Government Code.

SEC. 6. Section 760 is added to the Public Utilities Code, to read:

760. The commission, in collaboration with the State Energy Resources Conservation and Development Commission, shall develop optional time-variant electricity pricing tariffs for all customers who are not subject to mandatory time-variant pricing, including net-metered customers.

SEC. 7.

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. 8.

No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution 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.

All matter omitted in this version of the bill appears in the bill as introduced in Senate, Dec. 6, 2004 (JR11)