STATE OF CALIFORNIA — Public Utilities Commission
San Francisco

M e m o r a n d u m

Date: April 17, 2008

To: The Commission
(Meeting of April 24, 2008)

From: Pamela Loomis, Deputy Director
Office of Governmental Affairs (OGA) — Sacramento

Subject: **AB 1920 (Huffman) - Solar and wind generating resources: net metering.**
As Amended: March 13, 2008

LEGISLATIVE SUBCOMMITTEE RECOMMENDATION: OPPOSE UNLESS AMENDED

SUMMARY OF BILL:

This bill would expand net energy metering for solar and wind customer-generators and require electric utilities to offer a standard contract for the purchase of net surplus electricity provided to the grid. The California Public Utilities Commission (CPUC) would determine the price paid for any net surplus electricity.

This bill would require the CPUC to include an evaluation of net surplus electricity compensation in its January 1, 2010 report to the Governor and the Legislature on the costs and benefits of net energy metering[1]. AB 1920 sets July 1, 2009 as the date by which the CPUC should establish a net surplus compensation rate.

SUMMARY OF SUPPORTING ARGUMENTS FOR RECOMMENDATION:

i. This bill would further complicate an already complex net energy metering statute, create an administrative burden for utilities at ratepayer expense, expose solar customers to added risk, and only marginally improve the problem it seeks to address. By allowing solar customer generators to oversize their systems, and offering net surplus compensation, this bill contradicts the original intent of net energy metering (NEM) and the State's approach to distributed solar power, which was based on incentivizing utility customers to install clean distributed generation to

[1] PU Code 2827(c)(4) requires this report.

offset their onsite load. NEM was designed to address this specific condition. While some customer generators may prefer to size their systems in excess of onsite load due to resource availability, roof size or future expansion expectations, there are other mechanisms, such as the feed-in-tariff approved in AB 1969 (Yee, 2006) and implemented in D.07-07-027 that are more appropriate than the current NEM or the proposed NEM modifications in AB1920.

ii. There are three major problems with this bill:

1. Under AB 1920 a single customer generator would receive payment for kWh credit at two different rates.

    - The first rate, full retail compensation, would apply to kWh provided to the grid up to the total amount of kWh consumed from the grid at the customer generator's site.
    - The second rate, which AB 1920 suggests be determined in a ratemaking proceeding, would apply to net excess kWh provided to the grid. It will be complicated to determine a time-of-use value for net excess as the bill proposes - which kWh are net energy metered, which are net excess?

2. AB 1920 appears to be a legislative fix to a problem for customers that installed systems at sizes greater than economically optimal. AB 1920 would invite future installations to be sized in excess of what is economically in the best interest of customers.

    - AB 1920 openly invites customer generators to oversize their systems and compensates consumers (excuses their installers…) that oversized their systems in the past.

    - Although AB1920 would provide some compensation for excess energy, it is unlikely that a net surplus compensation rate, as proposed, would provide sufficient incentive for solar customers to achieve a reasonable payback for that portion of solar systems that greatly exceed on-site load. There is a risk without a size-to-load restriction that unscrupulous solar installers may try to take advantage of customers by selling systems that are not properly sized for the load characteristics of the customer.

3. AB 1920 does not help many of the customers that are frustrated by losing excess bill credits at the end of each 12 month NEM "Annual True-Up" period.

    - AB 1920 would provide payment only to those customers with a net kWh credit. However, customers may have a net $ bill credit without a having a net kWh credit. Those customers would not benefit from this bill. Furthermore, customers that might have a net kWh credit today, see the net credit on their bill as a $ credit. Under AB 1920 the California Public Utilities Commission (CPUC) would establish a rate for net excess kWh, which would

be different from, most likely less than, the NEM rate for kWh currently used to calculate the $ credit. Not only would this be more confusing for customers, it may not satisfy their current concerns.

- For example, a customer with a $50 bill credit at the end of 12 months today may be upset that she "gives away" this money to the utility. However, that customer may not have produced any actual excess kWh, and therefore will not be helped by AB 1920. Another customer, with a $400 bill credit at the end of 12 months, may also have excess kWh. Since AB 1920 would provide compensation for that excess at a different rate than the NEM rate that was used to calculate the bill credit, the customer may receive only $200 in compensation. Both customers are unhappy with the current situation, and both customers may still be unhappy even if AB 1920 is implemented.

- It was the intent of the policies in place currently for customers to offset their onsite load only. CSI incentives (based on capacity) and NEM compensation at full retail rates (based on system output) provide an economic incentive for customers to not size above their own load. However, there are a number of customers whose systems for a wide range of reasons --- ranging from not understanding NEM to begin with to changing utility rates, installation of energy savings measures and/or climatic variation in a given year --- have produced more electricity than the customer has consumed. The legislature may wish to provide compensation to those customers at a reasonable rate for this excess. However, for the abovementioned reasons, AB1920 may not be the best vehicle for doing this. Further Commission analysis of the problem and appropriate solutions is required. Better public outreach by the utilities about optimal system sizing, and how NEM actually works is also necessary to educate customers and reduce further confusion.

SUMMARY OF SUGGESTED AMENDMENTS:

- Remove all language that explicitly allows solar customer generators to size their systems to exceed onsite load. Endorsing system oversizing exposes solar customers to risks from unscrupulous installers.

- Remove language that grants the renewable attributes of net surplus electricity to the utility. Since this analysis suggests keeping the limitation on sizing systems to only meet load, net surplus should be minimal and the complexity of dividing renewable attributes from a single system would be costly and unnecessarily complex.

- Count the entire capacity of NEM customer generators toward the 2.5% cap. Attributing only the portion of the capacity that offsets onsite load to the cap is unnecessarily complex and would slow the interconnection process.

- Requiring the CPUC to investigate the problem and potential solutions rather than imposing one that might not actually address the problem.

- Delay date of implementation to provide CPUC time to conduct a rate-setting tariff proceeding.

- Below is text from AB 1920 with suggested edits.

Introduction

~~The bill would provide that upon adoption of the net surplus electricity compensation rate *and the eligible customer-generator electing to receive net surplus electricity compensation*~~ , any renewable energy credit, as defined, for net surplus electricity ~~belongs to the electric utility or cooperative purchasing the electricity and that net surplus electricity counts toward the electric utility or cooperative's *utility's* renewables portfolio standard purchasing requirements.~~

~~This bill would provide that investments for solar energy systems that exceed the electricity demand of a consumer shall be permitted, but only the capacity needed to offset part or all of the electricity demand of a consumer is eligible for ratepayer funded monetary incentives pursuant to the solar initiative programs.~~

Public Resources Code 25782

(2) The solar energy system is intended primarily to offset part or all of the electricity demand of the consumer~~. Investments for solar energy systems that exceed the electricity demand of the consumer shall be permitted, but only the capacity needed to offset part or all of the electricity demand of the consumer is eligible for ratepayer funded monetary incentives.~~

Public Utilities Code 387.5

(2) That solar energy systems receiving monetary incentives are intended primarily to offset part or all of the consumer's own electricity demand. ~~Investments for solar energy systems that exceed the electricity demand of a consumer shall be permitted, but only the capacity needed to offset part or all of the electricity demand of the consumer is eligible for ratepayer funded monetary incentives.~~

Public Utilities Code 2827

(c) (1) Every electric utility shall develop a standard contract or tariff providing for net energy metering, and shall make this standard contract or tariff 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~~ *of* eligible customer-generators exceeds 2.5 percent of the electric *utility's* aggregate customer peak demand. Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in two directions. ~~*Net surplus electricity is not "used" by eligible customer-generators, but is instead used by other customers of the electric utility, for purposes of determining whether the generating capacity used by eligible customer-generators exceeds 2.5 percent of the electric utility's aggregate customer peak demand. The electricity generated and used by eligible customer-generators is included in determining the electric utility's aggregate customer peak demand.*~~ An additional meter or meters to monitor the flow of electricity in each direction may be installed with the consent of the eligible customer-generator, at the expense of the electric utility, and the additional

metering shall be used only to provide the information necessary to accurately bill or credit the eligible 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 eligible 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 that is receiving service other than through the standard contract or tariff may elect to receive service through the standard contract or tariff until the electric utility reaches the generation limit of this paragraph. Eligibility for net energy metering does not limit an eligible customer-generator's eligibility for any other rebate, incentive, or credit provided by the electric utility, or pursuant to any governmental program, including rebates and incentives provided pursuant to the California Solar Initiative.

(3) An electric utility is not obligated to provide net energy metering to additional eligible customer-generators in its service area when the combined total peak demand of ~~all *electricity used by*~~ *eligible* customer-generators served by all the electric utilities in that service area furnishing net energy metering to eligible customer-generators exceeds 2.5 percent of the aggregate customer peak demand of those electric *utilities.* ~~*Net surplus electricity is not "used" by eligible customer-generators, but is instead used by other customers of the electric utility, for purposes of determining whether the generating capacity used by eligible customer-generators exceeds 2.5 percent of the electric utility's aggregate customer peak demand. The electricity generated and used by eligible customer-generators is included in determining the electric utility's aggregate customer peak demand.*~~

(4) By January 1, 2010, the commission, in consultation with the Energy Commission, shall submit a report to the Governor and the Legislature on the costs and benefits of net energy metering ~~and net surplus electricity compensation~~, wind energy co-metering, and co-energy metering to participating customers and nonparticipating customers and with options to replace the economic costs and benefits of net energy metering, wind energy co-metering, and co-energy metering with a mechanism that more equitably balances the interests of participating and nonparticipating customers, and that incorporates the findings of the report on economic and environmental costs and benefits of net metering required by subdivision (n).

~~(5) (A) Upon adoption of the net surplus electricity compensation rate by the ratemaking authority, any renewable energy credit, as defined in Section 399.12, for net surplus electricity purchased by the electric utility or cooperative shall belong to the electric utility or cooperative . Any renewable energy credit associated with electricity generated by the eligible customer-generator that is utilized by the eligible customer-generator shall remain the property of the eligible customer-generator.~~
~~(B) Upon adoption of the net surplus electricity compensation rate by the ratemaking authority, the net surplus electricity purchased by the electric utility or cooperative shall count toward the electric utility or cooperative's *utility's* renewables portfolio standard annual procurement targets for purposes of paragraph (1) of subdivision (b) of Section 399.15, or for a local publicly owned electric utility, the renewables portfolio standard annual procurement targets established pursuant to Section 387.~~

DIVISION ANALYSIS (Energy Division):

- Currently, net energy metering regulations do not require utilities to pay customers for surplus electricity provided to the grid in excess of electricity provided from the grid to the customer. This bill would permit customers to size on-site generation to exceed on-site load and receive service under a net metering tariff. However, the bill would ensure that only the capacity required to offset part or all of the electricity demand of the customer would be eligible for ratepayer funded monetary incentives through the California Solar Initiative (CSI). This bill would amend existing law [Public Resources Code 25782 and Public Utilities Code 387.5 and 2827].

- AB 1920 would amend net energy metering statute to allow for net surplus electricity compensation.

    - **CPUC Required to Set Rates for Net Surplus:** This bill would require utilities to offer a fixed contract for net surplus electricity produced by a NEM customer generator in a 12 month period. The CPUC would be responsible for determining a net surplus electricity compensation rate in a public proceeding by July 1, 2009. The bill requires that the rate include the value of the electricity, the value of renewable attributes, carbon value, time-of-use value, and distributed generation value. This net surplus electricity compensation rate would differ materially from the fully bundled retail NEM rate. Therefore customers would receive two separate rates for electricity produced by the same system: a fully bundled NEM rate for electricity that offsets onsite load; and a net surplus electricity compensation rate for excess.

    - **Allows Customers to Oversize Systems:** AB 1920 would enable full retail NEM customer generators to size onsite generation to exceed on-site load. As written, AB 1920 would permit solar photovoltaic (PV) customer generators participating in the California Solar Initiative to size on-site generation to exceed on-site load, up to 1MW. However, under this bill, only the capacity needed to offset part or all of the electricity demand of the customer would be eligible for CSI or other ratepayer funded monetary incentives.

    - **Splits REC Credit between Customer Owner and Utility:** This bill would divide the renewable energy attributes of electricity produced by a single customer-generator between that customer and the utility. Customer generators would retain the renewable energy credits (RECs) for electricity used to offset onsite load. The utility would get the RECs for net surplus electricity. It will be extremely confusing for onsite generators to have split ownership of their REC credits. It is difficult to predict how this provision would impact customer's ability to make green claims.

PROGRAM BACKGROUND:

- **How NEM Works Today:** Under net energy metering (NEM), a utility measures the difference between the electricity supplied to a customer and the electricity generated by a customer generator and supplied to the grid. Solar customer generators up to 1 MW and wind customer generators up to 50 kW receive a credit for the fully bundled retail rate of kWh supplied to the grid, and incur charges for kWh consumed from the grid. NEM customers pay the utility for net charges. Net credits may be banked for 12 months. At the end of 12 months, the utility conducts a true-up for each NEM customer account. The value of any net credits and any net excess kWh are granted to the utility, and customer account balances are reduced to zero. All ratepayers provide a subsidy to NEM customers by allowing NEM customers to get paid a "full retail rate" for their onsite generation; in exchange – any excess gets credited to the utility at the end of the 12 month period. The 12 month period is designed to allow a customer to size their system so that it offsets their total load on average without having to size their system to meet their maximum demand.

- **The Problem the Bill Seeks to Address: Excess Production (vs. Excess Bill Credits):** This legislation seeks to address the problem of NEM customers whose systems produce more kWh than they consume and who haven't been paid for those kWh. To illustrate the extent of this problem, in PG&E territory, there are 14,560 residential NEM customer generators and 929 commercial NEM customer generators with at least on annual true-up through the end of 2007.

  - Of the total, 1,338 residential customer generators (9%) and 109 commercial customer generators (12%) have produced net kWh surplus (i.e. the customer generator produced more than the customer consumed over twelve months).
  - The average net surplus was 1,332 kWh for residential customers and 7,378 kWh for commercial customers.
  - A greater number of customer generators, 3,881 residential (27%) and 162 commercial (17%) had a net bill credit in terms of dollars.

- However, AB 1920 would provide payment only to those customers with a net kWh credit. <u>Customers with a net $ credit, but without a net kWh credit, would not benefit from this bill.</u>

- **NEM limited to 2.5% of peak demand**
  - The availability of full retail NEM for solar and wind customer generators is currently limited by the installed capacity of customer generation on this tariff in a given utility territory. Once the installed capacity of customer generation on full retail NEM reaches 2.5% of peak load demand in a utility territory, a utility is no longer required to offer the rate. Full retail NEM is a significant incentive to solar customers, which combined with the rebates offered through the CSI make solar an economically feasible investment choice for customers.

- The CSI has a goal of installing 3,000 MW of distributed solar by 2017. Based on the total number of MW of solar currently installed under full retail NEM, the utilities will exhaust the 2.5% cap before the 3,000 MW CSI goal is reached. The economics of solar, at the present time, depend heavily on full retail NEM. AB 1920 states that only the generating capacity used to offset electricity used by customer generators would count toward this 2.5% cap. Any excess capacity that provides electricity to the grid would not count towards this cap. AB 1920 is not clear about how to measure the capacity intended to offset electricity used on-site versus excess capacity. This bill provision would be difficult to implement.

LEGISLATIVE HISTORY:

AB 1969 (Yee, 2006), added PU Code Section 399.20, which requires utilities to offer a standard tariff for the purchase of electricity from eligible renewable energy generation facilities up to 1.5 MW. AB 1969 set the rate for this tariff at the market price referent (MPR) adjusted for time of delivery. On July 26, 2007, the Commission adopted D.07-07-027 ordering each utility to implement the tariff. The Order included a requirement that PG&E, SCE and SDG&E offer both a *full buy/sell option* and an *excess sales option* to customers.

The excess sales option in AB 1969 is similar to AB 1920. The main difference is that AB 1920 would offer full retail NEM, instead of the MPR for kWh produced up to on-site load, for solar and wind customer generators. Full retail NEM would be preferred in almost every case to AB 1969 for solar and wind customer generators under the 1 MW cap. Full retail NEM remains critical to the economics of solar at the present time. However, AB 1969 provides an alternative that may be attractive for renewable customer generators that want to size on-site generation capacity in excess of on-site load. AB 1969 also provides a simple mechanism for compensating customer generators for net excess by offering a single rate for all electricity purchased from a customer generator by the utility.

FISCAL IMPACT:

Total fiscal impact: $210,500. The bill would require a new proceeding to establish a net surplus electricity compensation rate. An appropriate rate for net surplus electricity compensation could be determined without a ratemaking proceeding. AB 1969 established a standard tariff for kWh of renewable energy produced at the market price determined by the Commission pursuant to PU Code Section 399.15. This market price referent (MPR) would be an appropriate rate for net surplus electricity produced by a renewable energy resource. By providing the Commission the authority in AB 1920 to establish the net surplus compensation rate based on the MPR or similar, much of the work required for a ratemaking proceeding and described in this fiscal impact report could be avoided. With this change, some of the work could be absorbed using existing staff resources.

STATUS:

AB 1920 is pending in the Assembly.

SUPPORT/OPPOSITION:

Support: Environment California (Sponsor)
Sempra Energy (Support if amended)
Sierra Club California
The Solar Alliance (Support if amended)

Opposition: California of California Utility Employees (CUE)
Pacific Gas and Electric Company (PG&E) (Oppose unless amended)
Southern California Edison (SCE)
The Utility Reform Network (TURN) (Oppose unless amended)

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Date: April 17, 2008

BILL LANGUAGE:

BILL NUMBER: AB 1920 AMENDED
BILL TEXT

AMENDED IN ASSEMBLY MARCH 13, 2008

INTRODUCED BY Assembly Member Huffman
(Coauthors: Assembly Members Laird and Portantino)
(Coauthor: Senator Migden)

FEBRUARY 8, 2008

An act to amend Section 25782 of the Public Resources Code, and to amend Sections 387.5 and 2827 of the Public Utilities Code, relating to energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 1920, as amended, Huffman. ~~Renewable energy~~ *Solar and wind generating* resources: net metering.

(1) The existing Public Utilities Act imposes various duties and responsibilities on the Public Utilities Commission with respect to the purchase of electricity and requires the commission to review and adopt a procurement plan and a renewable energy procurement plan for each electrical corporation pursuant to the California Renewables Portfolio Standard Program. The program requires that a retail seller of electricity, including electrical corporations, community choice aggregators, and electric service providers, but not including local publicly owned electric utilities, purchase a specified minimum percentage of electricity generated by eligible renewable energy resources, as defined, in any given year as a specified percentage of total kilowatthours sold to retail end-use customers each calendar year. Under existing law the governing board of a local publicly owned electric utility is responsible for implementing and enforcing a renewables portfolio standard.

The act defines an "electric service provider" as an entity that offers electrical service to customers within the service territory of an electrical corporation, as defined. Pursuant to the act, an "electric service provider" does not include an electrical corporation or a local publicly owned electric corporation, but does include the unregulated affiliates and subsidiaries of an electrical corporation.

Existing law relative to private energy producers defines an "electric service provider" as an electrical corporation, electrical cooperative, or local publicly owned electric utility, excluding a local publicly owned electric utility that serves more than 750,000 customers and that also conveys water to its customers. Existing law relative to private energy producers requires every electric service provider, upon request, to make available to an eligible customer-generator, as defined, a standard contract or tariff 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 a specified amount. Existing law provides that where the electricity generated by the eligible customer-generator exceeds the electricity supplied by the electric service provider during a 12-month period, the eligible customer-generator is a net electricity producer and the electric service provider retains any excess kilowatthours generated and the customer-generator is not owed compensation for those excess kilowatthours unless the electric service provider enters into a purchase agreement with the eligible customer-generator for those excess kilowatthours.

This bill would replace the definition of "electric service provider" in existing law relative to private energy producers with a definition of "electric ~~utility or cooperative." The bill would expand the definition of an "eligible customer-generator" to include customers that generate electricity using an eligible renewable energy resource that meets existing sizing, interconnection, and operating requirements for solar and wind generation.~~ *utility."* The bill would require the ratemaking authority, as defined, for the electric utility ~~or cooperative~~ to adopt, by July 1, 2009, a net surplus electricity compensation rate to compensate a net surplus customer-generator, as defined, for net surplus electricity, as defined, generated by an eligible customer-generator and delivered to the grid that is in excess of the amount of electricity that is delivered from the grid to the eligible customer-generator. The bill would require the electric utility ~~or cooperative~~ to offer a standard contract or tariff to eligible customer-generators that includes this rate. *The net surplus electricity compensation rate would be applicable to any eligible customer-generator that affirmatively elects to receive net surplus electricity compensation. The bill would, for an electric utility that is an electrical corporation or electrical cooperative, authorize the commission to adopt requirements for providing notice and the manner by which eligible customer-generators may elect to receive net surplus electricity compensation.* The bill would provide that upon adoption of the net surplus electricity compensation rate *and the eligible customer-generator electing to receive net surplus electricity compensation* , any renewable energy credit, as defined, for net surplus electricity belongs to the electric utility ~~or cooperative~~ purchasing the electricity and that net surplus electricity counts toward the electric ~~utility or cooperative's~~ *utility's* renewables portfolio standard purchasing requirements.

Under existing law, a violation of any order, decision, rule, direction, demand, or requirement of the commission is a crime.

Because ~~the~~ this bill would require action by the commission to implement its requirements, a violation of these provisions would impose a state-mandated local program by expanding the definition of a crime.

(2) In a decision, the commission adopted the California Solar Initiative to provide incentives to customer-side photovoltaics and solar thermal electric projects under one megawatt. Existing law requires the commission, in implementing the California Solar Initiative, as defined, to authorize the award of monetary incentives for up to the first megawatt of alternating current generated by a solar energy system, as defined, that meets eligibility criteria established by the State Energy Resources Conservation and

Development Commission. The eligibility requirements include a requirement that the solar energy system is intended primarily to offset part or all of the consumer's own electricity demand. Existing law requires the governing body of a local publicly owned electric utility that sells electricity at retail, to adopt, implement, and finance a solar initiative program, for the purpose of investing in, and encouraging the increased installation of, residential and commercial solar energy systems, meeting certain requirements. The eligibility requirements include the requirement that solar energy systems receiving monetary incentives are intended primarily to offset part or all of the consumer's own electricity demand.

This bill would provide that investments for solar energy systems that exceed the electricity demand of a consumer shall be permitted, but only the capacity needed to offset part or all of the electricity demand of a consumer is eligible for ratepayer funded monetary incentives pursuant to the solar initiative programs.

(3) 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.

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 25782 of the Public Resources Code is amended to read:

25782. (a) The commission shall, by January 1, 2008, in consultation with the Public Utilities Commission, local publicly owned electric utilities, and interested members of the public, establish eligibility criteria for solar energy systems receiving ratepayer funded incentives that include all of the following:

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

(2) The solar energy system is intended primarily to offset part or all of the electricity demand of the consumer. Investments for solar energy systems that exceed the electricity demand of the consumer shall be permitted, but only the capacity needed to offset part or all of the electricity demand of the consumer is eligible for ratepayer funded monetary incentives.

(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.

(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.

(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.

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

(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.

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

(b) The commission shall establish conditions on ratepayer funded 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.

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

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

(d) Upon establishment of eligibility criteria pursuant to subdivision (a), no ratepayer funded incentives shall be made for a solar energy system that does not meet the eligibility criteria.

SEC. 2. Section 387.5 of the Public Utilities Code is amended to read:

387.5. (a) In order to further the state goal of encouraging the installation of 3,000 megawatts of photovoltaic solar energy in California within 10 years, 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 initiative program, funded in accordance with subdivision (b), for the purpose of investing in, and encouraging the increased installation of, residential and commercial solar energy systems.

(b) On or before January 1, 2008, a local publicly owned electric utility shall offer monetary incentives for the installation of solar energy systems of at least two dollars and eighty cents ($2.80) per installed watt, or for the electricity produced by the solar energy system, measured in kilowatthours, 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 an average of 7 percent per year.

(c) A local publicly owned electric utility shall initiate a public proceeding to fund a solar energy program to adequately support the goal of installing 3,000 megawatts of photovoltaic solar energy in California. 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, 2008.

(d) The solar energy program of a local publicly owned electric utility shall be consistent with all of the following:

(1) That a solar energy system receiving monetary incentives comply with the eligibility criteria, design, installation, and

electrical output standards or incentives established by the State Energy Resources Conservation and Development Commission pursuant to Section 25782 of the Public Resources Code.

(2) That solar energy systems receiving monetary incentives are intended primarily to offset part or all of the consumer's own electricity demand. Investments for solar energy systems that exceed the electricity demand of a consumer shall be permitted, but only the capacity needed to offset part or all of the electricity demand of the consumer is eligible for ratepayer funded monetary incentives.

(3) That 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.

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

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

(6) That the solar energy system be connected to the electric utility's electrical distribution system within the state.

(7) That 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.

(8) That the solar energy system be installed in conformance with the manufacturer's specifications and in compliance with all applicable electrical and building code standards.

(e) A local publicly owned electric utility shall, on an annual basis beginning June 1, 2008, make available to its customers, to the Legislature, and to the State Energy Resources Conservation and Development Commission, information relating to the utility's solar 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.

(f) In establishing the program required by this section, no moneys shall be diverted from any existing programs for low-income ratepayers, or from cost-effective energy efficiency or demand response programs.

(g) The statewide expenditures for solar programs adopted, implemented, and financed by local publicly owned electric utilities shall be seven hundred eighty-four million dollars ($784,000,000). The expenditure level 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 subdivisions (a) and (b).

SEC. 3. 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 combined with net surplus compensation, co-energy metering, and wind energy co-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, reduce interconnection and administrative costs for electricity suppliers and encourage conservation and efficiency.

(b) As used in this section, the following terms have the following meanings:

(1) "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 has elected to apply a generation-to-generation energy and time-of-use credit formula as provided in subdivision (i).

(2) "Electrical cooperative" means an electrical cooperative as defined in Section 2776.

(3) "Electric utility ~~or cooperative~~ " means an electrical corporation, a local publicly owned electric utility, or an electrical cooperative, or any other entity, except an electric service provider, that offers electrical service. This section shall not apply to a local publicly owned electric utility that serves more than 750,000 customers and that also conveys water to its customers.

(4) "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 utility ~~or cooperative~~ , who uses ~~an eligible renewable energy resource~~ *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, and is interconnected and operates in parallel with the electric grid.

~~(5) "Eligible renewable energy resource" has the same meaning as in Section 399.12.~~

~~(6)~~

(5) "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~~ *subdivisions (c) and* (h).

~~(7)~~

(6) "Net surplus customer-generator" means an eligible customer-generator that generates more electricity during a 12-month period than is supplied by the electric utility ~~or cooperative~~ to the eligible customer-generator during the same 12-month period.

~~(8)~~

(7) "Net surplus electricity" means all electricity generated by an eligible customer-generator measured in kilowatthours over a 12-month period that exceeds the amount of electricity consumed by that eligible customer-generator.

~~(9)~~

(8) "Net surplus electricity compensation" means a per kilowatthour rate offered by the electric utility ~~or cooperative~~ to the net surplus customer-generator for net surplus electricity that is set by the ratemaking authority pursuant to subdivision (h).

~~(10)~~

(9) "Ratemaking authority" means, for an electrical

corporation or electrical cooperative, the commission, and for a local publicly owned electric utility, the local elected body responsible for setting the rates of the local publicly owned utility.

~~(11)~~

(10) "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.

(c) (1) Every electric utility ~~or cooperative~~ shall develop a standard contract or tariff providing for net energy metering, and shall make this standard contract or tariff 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 2.5 percent of the electric ~~utility or cooperative's~~ *utility's* aggregate customer peak demand. Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in two directions. *Net surplus electricity is not "used" by eligible customer-generators, but is instead used by other customers of the electric utility, for purposes of determining whether the generating capacity used by eligible customer-generators exceeds 2.5 percent of the electric utility's aggregate customer peak demand. The electricity generated and used by eligible customer-generators is included in determining the electric utility's aggregate customer peak demand.* An additional meter or meters to monitor the flow of electricity in each direction may be installed with the consent of the eligible customer-generator, at the expense of the electric utility ~~or cooperative~~ , and the additional metering shall be used only to provide the information necessary to accurately bill or credit the eligible customer-generator pursuant to subdivision (h), or to collect ~~generating system performance information for research purposes relative to the eligible renewable energy resource~~ *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 eligible 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 that is receiving service other than through the standard contract or tariff may elect to receive service through the standard contract or tariff until the electric utility ~~or cooperative~~ reaches the generation limit of this paragraph. Eligibility for net energy metering does not limit an eligible customer-generator's eligibility for any other rebate, incentive, or credit provided by the electric utility ~~or cooperative~~ , or pursuant to any governmental program, including rebates and incentives provided pursuant to the California Solar Initiative.

(2) (A) On an annual basis, beginning in 2003, every electric

utility ~~or cooperative~~ 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 and the net surplus electricity purchased by the electric utility ~~or cooperative~~ pursuant to this section.

(B) An electric service provider operating pursuant to Section 394 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 eligible customer-generator has net energy metering.

(C) The ratemaking authority shall develop a process for making the information required by this paragraph available to electric utilities ~~and cooperatives~~ , and for using that information to determine when, pursuant to paragraphs (1) and (3), an electric utility ~~or cooperative~~ is not obligated to provide net energy metering to additional eligible customer-generators in its service area.

(3) An electric utility ~~or cooperative~~ is not obligated to provide net energy metering to additional eligible customer-generators in its service area when the combined total peak demand of all *electricity used by eligible* customer-generators served by all the electric utilities ~~or cooperatives~~ in that service area furnishing net energy metering to eligible customer-generators exceeds 2.5 percent of the aggregate customer peak demand of those electric ~~utilities or cooperatives.~~ *utilities. Net surplus electricity is not "used" by eligible customer-generators, but is instead used by other customers of the electric utility, for purposes of determining whether the generating capacity used by eligible customer-generators exceeds 2.5 percent of the electric utility's aggregate customer peak demand. The electricity generated and used by eligible customer-generators is included in determining the electric utility's aggregate customer peak demand.*

(4) By January 1, 2010, the commission, in consultation with the Energy Commission, shall submit a report to the Governor and the Legislature on the costs and benefits of net energy metering and net surplus electricity compensation, wind energy co-metering, and co-energy metering to participating customers and nonparticipating customers and with options to replace the economic costs and benefits of net energy metering, wind energy co-metering, and co-energy metering with a mechanism that more equitably balances the interests of participating and nonparticipating customers, and that incorporates the findings of the report on economic and environmental costs and benefits of net metering required by subdivision (n).

(d) Every electric utility ~~or cooperative~~ shall make all necessary forms and contracts for net energy metering and net surplus electricity compensation service available for download from the Internet.

(e) (1) Every electric utility ~~or cooperative~~ shall ensure that requests for establishment of net energy metering and net surplus electricity compensation 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 it receives a completed application form for net energy metering service or net surplus electricity compensation, including a signed

interconnection agreement from an eligible customer-generator and the electric inspection clearance from the governmental authority having jurisdiction.

(2) Every electric utility ~~or cooperative~~ 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 it receives a completed application form from the eligible customer-generator for an interconnection agreement.

(3) If an electric utility ~~or cooperative~~ is unable to process a request within the allowable timeframe pursuant to paragraph (1) or (2), it shall notify the eligible 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 service provider that does not provide distribution service for the direct transactions, the electric utility ~~or cooperative~~ that provides distribution service for the eligible customer-generator is not obligated to provide net energy metering or net surplus electricity compensation to the customer.

(2) If a customer participates in direct transactions pursuant to paragraph (1) of subdivision (b) of Section 365 with an electric service provider, and the customer is an eligible customer-generator, the electric utility ~~or cooperative~~ 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 and net surplus electricity compensation in an amount set by the ratemaking authority.

(g) Except for the time-variant kilowatthour pricing portion of any tariff adopted by the commission pursuant to paragraph (4) of subdivision (a) of Section 2851, 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 ~~renewable energy resource~~ *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 ~~renewable energy resource~~ *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 eligible customer-generator's choice as to whom it purchases electricity from that is not self-generated. 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 eligible 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 ~~renewable energy resource~~ *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 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 utility ~~or cooperative~~ , and at each anniversary date thereafter, be billed for electricity used during that 12-month period. The electric utility ~~or cooperative~~ shall determine if the eligible residential or small commercial customer-generator was a net consumer or a net surplus customer-generator during that period.

(2) At the end of each 12-month period, where the electricity supplied during the period by the electric utility ~~or cooperative~~ 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 utility ~~or cooperative~~ shall be owed compensation for the eligible customer-generator's net kilowatthour consumption over that 12-month 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 contracts or tariffs employing "baseline" and "over baseline" rates ~~or charges~~ , 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 utility ~~or cooperative~~ 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 utility ~~or cooperative~~ would charge for electricity over the baseline quantity during that billing period.

(B) For all eligible customer-generators taking service under contracts or tariffs employing "time of use" rates ~~or charges~~ , 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 utility ~~or cooperative~~ 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, subparagraph (A) of paragraph (1) of subdivision (c) shall apply.

(C) For all eligible residential and small commercial customer-generators and for each billing period, the net balance of

moneys owed to the electric utility ~~or cooperative~~ for net consumption of electricity or credits owed to the eligible 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 eligible commercial, industrial, and agricultural customer-generators, the net balance of moneys owed shall be paid in accordance with the electric ~~utility or cooperative's~~ *utility's* normal billing cycle, except that if the eligible 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 eligible commercial, industrial, or agricultural 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 utility ~~or cooperative~~ during that same period, the eligible customer-generator is a net surplus customer-generator and the electric utility ~~or cooperative shall provide net surplus electricity compensation for any net surplus electricity generated during the prior 12-month period. Every electric utility or cooperative shall, by January 31, 2009, provide notice of this paragraph to existing customer-generators, in a form approved by the ratemaking authority. For any eligible customer-generator receiving service pursuant to a contract or tariff that provides that the electric utility or cooperative retains any excess kilowatthours and that the eligible customer-generator is not owed compensation for those excess kilowatthours, the requirements of this paragraph shall commence on February 1, 2009, and the eligible customer-generator's 12-month billing cycle will continue until January 31, 2010. The requirements of this paragraph apply to any eligible customer-generator that commence service pursuant to the standard contract or tariff after January 1, 2009.~~ *shall, upon an affirmative election by the eligible customer-generator, provide net surplus electricity compensation for any net surplus electricity generated during the prior 12-month period. For an eligible customer-generator that does not affirmatively elect to receive service pursuant to net surplus electricity compensation, the electric utility shall retain any excess kilowatthours generated during the prior 12-month period. The eligible customer-generator shall not be owed any compensation for the net surplus electricity unless the electric utility enters into a purchase agreement with the eligible customer-generator for those excess kilowatthours. Every electric utility shall, by January 31, 2009, provide notice to eligible customer-generators that they are eligible to receive net surplus electricity compensation for net surplus electricity, that they must elect to receive net surplus electricity compensation, and that the 12-month period commences when the electric utility receives the eligible customer-generator's election. The commission may, for an electric utility that is an electrical corporation or electrical cooperative, adopt requirements for providing notice and the manner by which eligible customer-generators may elect to receive net surplus electricity compensatio n.*

(4) The ratemaking authority shall, by July 1, 2009, establish a net surplus electricity compensation rate to compensate the net surplus customer-generator for all net surplus electricity generated by the net surplus customer-generator. The commission shall establish the rate in a ratemaking proceeding. The ratemaking authority for a local publicly owned electric utility shall establish the rate in a public proceeding. The net surplus electricity compensation rate shall be established so as to provide the net surplus customer-generator fair and adequate compensation for the net surplus electricity, including the value of the electricity itself, the value of the renewable attributes of the electricity, the carbon value or other environmental attributes of the electricity, the time-of-use value or peak demand value of the electricity, and the distributed generation value of the electricity.

(5) (A) Upon adoption of the net surplus electricity compensation rate by the ratemaking authority, any renewable energy credit, as defined in Section 399.12, for net surplus electricity purchased by the electric utility ~~or cooperative~~ shall belong to the electric utility ~~or cooperative~~ . Any renewable energy credit associated with electricity generated by the eligible customer-generator that is utilized by the eligible customer-generator shall remain the property of the eligible customer-generator.

(B) Upon adoption of the net surplus electricity compensation rate by the ratemaking authority, the net surplus electricity purchased by the electric utility ~~or cooperative~~ shall count toward the electric ~~utility or cooperative's~~ *utility's* renewables portfolio standard annual procurement targets for purposes of paragraph (1) of subdivision (b) of Section 399.15, or for a local publicly owned electric utility, the renewables portfolio standard annual procurement targets established pursuant to Section 387.

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

(7) If an eligible residential or small commercial customer-generator terminates the customer relationship with the electric ~~utility or cooperative, the electricity distribution utility or cooperative~~ *utility, the electric utility* 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.

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

contract or tariff with a new electric service provider or electric utility ~~or cooperative~~ , the 12-month period, with respect to that new electric service provider or electric utility ~~or cooperative~~ , shall commence on the date on which the new electric service provider or electric utility ~~or cooperative~~ 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 electric service from a local publicly owned electric utility that has elected to utilize a co-energy metering program unless the local publicly owned electric utility 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 an electric utility ~~or cooperative~~ to reduce its costs for purchasing and installing a time-of-use meter.

(2) The consumption of electricity from the local publicly owned electric utility 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 local publicly owned electric utility 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 local publicly owned electric utility 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 local publicly owned electric utility 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 a local publicly owned electric utility may choose to carry the credit over as a

kilowatthour credit consistent with the provisions of any applicable contract or tariff, including any differences attributable to the time of generation of the electricity. At the end of each 12-month period, the local publicly owned electric utility 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, including Underwriters Laboratories and, where applicable, rules of the 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 energy metering and co-energy metering customers shall not be exempt from the public goods charges imposed pursuant to Article 7 (commencing with Section 381), Article 8 (commencing with Section 385), or Article 15 (commencing with Section 399) of Chapter 2.3 of Part 1. In its report to the Legislature, the commission shall examine different methods to ensure that the public goods charges remain nonbypassable.

() A net energy metering, co-energy metering, or wind energy co-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 energy metering, co-energy metering, and wind energy co-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 (), an eligible customer-generator shall not be required to replace its existing meter except as set forth in subparagraph (A) of paragraph (1) of subdivision (c), nor shall the electric utility ~~or cooperative~~ require additional measurement of usage beyond that which is necessary for customers in the same rate class as the eligible customer-generator.

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

SEC. 4. 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.