

STATE OF CALIFORNIA

Public Utilities Commission  
San Francisco

## Memorandum

**Date:** May 28, 2009

**To:** The Commission  
(Meeting of June 4, 2009)

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

**Subject:** **SB 7 (Wiggins) - Renewable energy sources: net metering.  
As Amended May 5, 2009**

### **LEGISLATIVE SUBCOMMITTEE RECOMMENDATION: SUPPORT WITH TECHNICAL AMENDMENTS**

#### **SUMMARY OF BILL:**

This bill would amend Public Utilities (PU) Code 2827 to allow net energy metering customer-generators to carry forward an annual bill credit for up to 24 months (one, or both, of the two following 12-month periods).

This bill would change the date of a California Public Utilities Commission (CPUC) required report to the Governor and the Legislature on the costs and benefits of net energy metering (NEM) from January 1, 2010 to June 30, 2010, and require the CPUC to include an evaluation of the impact of net surplus electricity generation and bill credits.<sup>1</sup>

#### **SUMMARY OF SUPPORTING ARGUMENTS FOR RECOMMENDATION:**

This bill allows solar customer-generators to carry a net energy metering (NEM) bill credit forward for a longer period of time than is currently allowed. Currently, customer generators receive a monetary credit for any excess kilowatt hours generated. A customer can use the monetary bill credits towards any charges for net consumption that occur during other time periods. Bill credits roll forward month to month, and currently bill credits are reduced to zero at the end of each 12-month "true up" period. Under NEM, a customer is not paid by the utility for net excess generation – but the process of bill credits allows a customer to size a system to meet average total annual

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<sup>1</sup> PU Code 2827(c)(4) requires this report and describes necessary elements.

load. This is a simple way to manage fluctuations in generation and consumption across periods.

SB 7 provides a customer additional flexibility by allowing the monetary bill credits to be carried forward for 2 additional 12-month periods, or 2 additional years.

Also, the bill provides additional time for the CPUC to complete a NEM cost-benefit study so that the study (already underway) can incorporate additional analysis related to the impact of excess kilowatt hours and excess credits on solar generators and other ratepayers.

#### **SUMMARY OF SUGGESTED AMENDMENTS:**

**(1) Delete references to net surplus customer generator and net surplus electricity (2827(b)(6) and 2827(b)(7).**

**(2) Delete language in bill that modifies 2827 (h) (3) that would codify, in a confusing way, how to carry forward the 12 month bill credit.**

*"the eligible customer-generator is a net surplus customer-generator and the electricity distribution utility or cooperative shall allow the eligible customer-generator to apply the net surplus electricity as a credit for kilowatthours consumed during one, or both, of the two following 12-month Periods"*

**(3) Instead, modify the existing PU Code 2827 (h) (3) – as suggested in bold/underline below.**

(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 electricity distribution utility or cooperative during that same period, the eligible customer-generator is a net electricity producer and the electricity distribution utility or cooperative shall retain any excess kilowatthours generated during the prior 12-month period. The eligible customer-generator shall **be allowed to carry forward net credits as a monetary value as established in 2827 (h)(2) for 2 additional 12-month periods, but after that time the eligible customer-generator shall** not be owed any compensation for those **monetary credits excess kilowatt hours** unless the electricity distribution utility or cooperative enters into a purchase agreement with the eligible customer-generator for ~~those~~ excess kilowatthours.

#### **DETAILED ANALYSIS OF BILL'S PROVISIONS:**

The bill allows solar and wind NEM customers<sup>2</sup> with a net bill credit to carry credits forward to one or both of the next two 12-month true-up periods. This would mean that any annual fluctuations in demand or generation could be managed, and bill credits would not be lost to the customer after a 12 month period.

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<sup>2</sup> This bill does not modify other forms of NEM that are available to agricultural biogas facilities and fuel cells.

The main provisions of the bill are identified below:

- The bill allows net bill credits for NEM customers to carry forward to one or both of the next two 12-month true-up periods.
- The bill does not alter the implementation of the CSI, Self Generation Incentive Program (SGIP) or NEM programs, but allows any bill credit to carry forward “*as a credit for kilowatthours consumed during one, or both, of the two following 12-month periods.*” The bill keeps CSI program requirements related to requiring customers to size solar systems equal to or less than their load.
- Amended Section 2827(c)(4) delays the NEM cost-benefit report to Legislature until June 30, 2010 and asks for additional evaluation of the impact of net surplus generation and credits.
- The bill improves significantly upon prior versions of the bill which would have paid customer generators for net surplus electricity.

The CPUC's responsibilities under this bill would be to review and approve amended utility NEM tariffs and to oversee a small expansion of the NEM cost benefit study that is already underway. Both activities are minor and absorbable in current workload.

#### **BACKGROUND INFORMATION ON IMPACTED PROGRAMS, PRACTICE OR POLICY:**

**Current Net Energy Metering (NEM) Program:** Under existing NEM program rules, 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. The "net difference" is billed to the customer, and so NEM is often described as letting a customer's meter 'run backwards and forward'.

Under current practice, NEM customers receive a monetary credit for any excess generation and receive a monetary charge for any consumption. Customers don't "swap" kilowatt hours with the utility. Under the current program, NEM customers can carry bill credits forward for only a 12 month period, after which time, the bill nets to zero and any excess credits are forfeited to the utility.

**California Solar Initiative (CSI):** This bill would support participation in the CSI, which provides incentives for solar installation, by facilitating and enhancing solar customer's net energy metering participation. The CSI has a goal of installing 1,940 MW of distributed solar by 2017 in investor-owned utility territories. The CSI provides both upfront and performance-based incentives for solar systems that are sized to offset customer load, and eligible for NEM. The economics of solar, at the present time, depend heavily on full retail NEM, which provides an ongoing mechanism for solar customers to balance their consumption and generation periods.

**Self Generation Incentive Program (SGIP):** This bill would support participation in the SGIP, which provides incentives for wind and fuel cells, by enhancing a wind customer's net energy metering participation. Small wind customers (with equipment less than 30 kW in size) are funded under a companion program administered by the California Energy Commission, the Emerging Renewables Program (ERP). Both SGIP and ERP funded wind turbines are eligible for NEM and would be affected by the changes proposed in this bill. Fuel cells are also eligible for NEM, see PU Code 2827.10, but the details of fuel-cell NEM are different and not affected by this bill.

#### **LEGISLATIVE HISTORY:**

Net Energy Metering statute (PU Code section 2827) was established by Senate Bill (SB) 656 (Alquist, 1995, co-author: Assembly Member Takasugi). NEM has been substantially altered several times including major revisions from SB 1 (Murray, 2006).

AB 1920 (Huffman, 2008) proposed similar changes to the Public Resources Code and the Public Utilities Code. AB 1920 would have also provided compensation for excess electricity generation by NEM customer generators and allowed over-sizing of systems. This bill was held in Senate Rules Committee.

AB 920 (Huffman, 2009) proposes compensation for excess electricity generation and the CPUC opposes this bill, because it fundamentally alters the intent of the NEM statute and confuses "net bill surplus" (measured in dollars) and "net surplus generation" (measured in kilowatt hours). AB 920 additionally requires that the CPUC establish a rate for net surplus generation through a ratemaking proceeding.

#### **OTHER STATES' OR FEDERAL INFORMATION (if known):**

Several other states allow for payment for excess generation. However, these states have far smaller solar incentive programs and many of them do not provide solar generators compensation for excess kilowatt hours at "full retail" rates. Oregon allows excess generation value to be used towards a fund for low income programs instead of directly compensating the customer.

#### **REPORTING REQUIREMENT (if any):**

PU Code 2827(c)(4) already requires a report to the legislature on the cost and benefits of the NEM program, due January 1, 2010. This bill would delay the due date to June 30, 2010 and add a requirement to the report to evaluate the impact of net surplus generation and credits.

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**Date:** May 28, 2009

## BILL LANGUAGE

BILL NUMBER: SB 7            AMENDED  
BILL TEXT

AMENDED IN SENATE    MAY 5, 2009  
AMENDED IN SENATE    APRIL 13, 2009

INTRODUCED BY    Senator Wiggins

DECEMBER 1, 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

SB 7, as amended, Wiggins. Renewable energy sources: *feed-in tariff*: 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 that recognizes the intent of the Legislature to encourage renewable resources, while taking into consideration the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement.~~

#### ~~—Existing~~

~~Under existing law, the Public Utilities Commission has regulatory authority over public utilities, including electrical corporations. Existing law authorizes the commission to fix the rates and charges for every public utility, and requires that those rates and charges be just and reasonable. Existing law relative to private energy producers requires every electric distribution utility or cooperative, 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~~

distribution utility or cooperative during a 12-month period, the eligible customer-generator is a net electricity producer and the electric distribution utility or cooperative 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 require the electricity distribution utility or cooperative ~~—, at the discretion of the eligible customer generator, to either: (1) provide net surplus electricity compensation for any net surplus electricity generated, or electricity distribution utility or cooperative credits owed, in the 12-month period, or (2) to allow the eligible customer-generator to apply the net surplus electricity, or electricity distribution utility or cooperative credits owed as defined~~ , as a credit for kilowatthours consumed during ~~one, or both, of the two following —, and any subsequent,~~ 12-month periods.

*Existing law requires the commission, in consultation with the Energy Commission, to submit a report to the Governor and the Legislature by January 1, 2010, on the costs and benefits of net energy metering, 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 from another specified report.*

*This bill would require the report be submitted by June 30, 2010, and require that the report additionally evaluate the impact of the generation of excess kilowatthours and excess credits based on time-of-use rates on participating and nonparticipating customers.*

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

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

~~— This bill would place additional requirements upon local publicly owned electric utilities with respect to providing net surplus electricity compensation payments and credits, thereby imposing a state mandated local program.~~

~~— (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 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 the consumer is eligible for ratepayer funded monetary incentives pursuant to the solar initiative programs.~~

~~— (3) The~~

~~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 reasons 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 consumer's own electricity demand. 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 ensure 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 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 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) 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 1. 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, and reduce interconnection and administrative costs for electricity suppliers.

(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) "Electricity distribution 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 electricity distribution utility or cooperative, who uses a solar or a wind turbine electrical generating facility, or a hybrid system of both, with a capacity of not more than one megawatt that is located on the customer's owned, leased, or rented premises, ~~or the customer is the benefiting accountholder, and~~ is interconnected and operates in parallel with the electric grid , *and is intended primarily to offset part or all of the customer's own electrical requirements* .

(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 (h). An eligible customer-generator who already owns an existing solar or wind turbine electrical generating facility, or a hybrid system of both, is eligible to receive net energy metering service in accordance with this section.

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

(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  ~~, or the number of electricity distribution utility or cooperative credits that exceeds the equivalent amount of electricity used,~~ by that eligible customer-generator.

~~(8) "Net surplus electricity compensation" means a payment at a~~

~~per kilowatthour rate offered by the electric distribution utility or cooperative to the net surplus customer generator for net surplus electricity pursuant to subdivision (h).~~

~~—(9)~~

(8) "Ratemaking authority" means, for an electrical corporation, electrical cooperative, or electric service provider, 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.

~~—(10)~~

(9) "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 electricity distribution 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 electricity distribution utility or cooperative'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. An additional meter or meters to monitor the flow of electricity in each direction may be installed with the consent of the customer-generator, at the expense of the electricity distribution utility or cooperative, and the additional metering shall be used only to provide the information necessary to accurately bill or credit the customer-generator pursuant to subdivision (h), or to collect solar or wind electric generating system performance information for research purposes. If the existing electrical meter of an eligible customer-generator is not capable of measuring the flow of electricity in two directions, the customer-generator shall be responsible for all expenses involved in purchasing and installing a meter that is able to measure electricity flow in two directions. If an additional meter or meters are installed, the net energy metering calculation shall yield a result identical to that of a single meter.

(2) (A) On an annual basis, beginning in 2003, every electricity distribution 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.

(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 electricity distribution utilities and cooperatives, and for using that information to determine when, pursuant to paragraphs (1) and (3), an

electricity distribution utility or cooperative is not obligated to provide net energy metering to additional customer-generators in its service area.

(3) An electricity distribution 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 electricity distribution 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 electricity distribution utilities or cooperatives.

(4) By ~~January 1,~~ June 30, 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, 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). *The report shall additionally evaluate the impact of the generation of excess kilowatthours and excess credits based on time-of-use rates on participating and nonparticipating customers.*

(d) Every electricity distribution 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 electricity distribution 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 energy compensation~~, including a signed interconnection agreement from an eligible customer-generator and the electric inspection clearance from the governmental authority having jurisdiction.

(2) Every electricity distribution 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 electricity distribution 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 electricity distribution utility or cooperative that provides distribution service for an eligible

customer-generator is not obligated to provide net energy metering to the customer.

(2) If a customer participates in direct transactions pursuant to paragraph (1) of subdivision (b) of Section 365 with an electric service provider, and the customer is an eligible customer-generator, the electricity distribution 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 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 solar or wind electrical generating facility, except that eligible customer-generators shall not be assessed standby charges on the electrical generating capacity or the kilowatthour production of an eligible solar or wind electrical generating facility. The charges for all retail rate components for eligible customer-generators shall be based exclusively on the customer-generator's net kilowatthour consumption over a 12-month period, without regard to the customer-generator's choice as to whom it purchases electricity 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 solar or wind electrical generating facility are contrary to the intent of this section, and shall not form a part of net energy metering contracts or tariffs.

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

(1) The eligible residential or small commercial customer-generator shall, at the end of each 12-month period following the date of final interconnection of the eligible customer-generator's system with an electricity distribution utility or cooperative, and at each anniversary date thereafter, be billed for electricity used during that 12-month period. The electricity distribution 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 electricity distribution 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 electricity

distribution 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 electricity distribution 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 electricity distribution 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 electricity distribution 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 electricity distribution 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 electricity distribution utility or cooperative'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 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 electricity distribution utility or cooperative during that same period ~~, or where the number of electricity distribution utility or~~

~~cooperative credits generated by the eligible customer generator during the 12 month period exceeds the equivalent amount of electricity used by the eligible customer generator during that same period, the eligible customer-generator~~

is a net surplus customer-generator and the electricity distribution utility or cooperative shall ~~at the discretion of the eligible customer generator, either: (A) provide a net surplus electricity compensation payment for any net surplus electricity generated, or electricity distribution utility or cooperative credits owed, during the prior 12 month period, or (B) allow the eligible customer-generator to apply the net surplus electricity, or electricity distribution utility or cooperative credits owed,~~ as a credit for kilowatthours consumed during ~~the following, or any subsequent, 12 month period. one, or both, of the two following 12-month periods:~~

~~(4) Net surplus electricity compensation shall provide for payment for every kilowatthour of electricity, or electricity distribution utility or cooperative credit owed, that is not less than the existing market cost for electricity (market price referent) as determined by the commission pursuant to subdivision (c) of Section 399.15.~~

~~(5)~~

(4) The electricity distribution 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 electricity distribution utility or cooperative for net electricity consumed, or the net surplus electricity generated, since the last 12-month period ended. Notwithstanding this subdivision, an electricity distribution utility or cooperative shall permit that customer to pay monthly for net energy consumed.

~~(6)~~

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

~~(7)~~

(6) If an electric service provider or electricity distribution 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 electricity distribution utility or cooperative, the 12-month period, with respect to that new electric service provider or electricity distribution utility or cooperative, shall commence on the date on which the new electric service provider or electricity distribution 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 electricity distribution 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.

(l) 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 (l), a 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 electricity distribution 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, 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.~~

~~— With respect to certain other costs, 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.~~

*SEC. 2. 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.*