

AMENDED IN ASSEMBLY JANUARY 16, 2002

AMENDED IN ASSEMBLY JANUARY 7, 2002

CALIFORNIA LEGISLATURE—2001–02 REGULAR SESSION

ASSEMBLY BILL

No. 58

Introduced by Assembly Member ~~Keeley~~ Members *Keeley and Pescetti*

(Coauthors: Assembly Members ~~Hertzberg, Kehoe, Leonard, Wesson, and Wright~~ *Kehoe and Richman*)

December 4, 2000

An act to amend Sections 2827 and 2827.7 of the Public Utilities Code, relating to public utilities.

LEGISLATIVE COUNSEL'S DIGEST

AB 58, as amended, Keeley. Net energy metering.

(1) Existing law requires every electric service provider to develop a standard contract or tariff providing for net energy metering, and to make this contract available to eligible customer-generators, upon request. Existing law, commencing on January 1, 2003, requires every electric service provider, upon request, to make available to eligible customer-generators contracts for net energy metering subject to specified limitations on the number of contracts.

This bill would require every electric service provider to ensure that requests for establishment of net energy metering are processed in a time period not exceeding that for *similarly situated* customers requesting new electric service, but not to exceed one month *from the date the electric service provider receives a completed application form from an eligible customer-generator*. The bill would require an electric

service provider that is unable to process the request within this timeframe, to notify the customer-generator and the Public Utilities Commission. The bill would also require every electric service provider to make forms and contracts for net energy metering available for download from the Internet and to expedite the establishment of net energy metering upon request from an eligible customer-generator.

(2) Existing law provides that generation eligible for net energy metering installed on or before December 31, 2002, is entitled to the net energy metering terms in effect on the date of installation for the life of the installation.

This bill would make this provision applicable regardless of any change in customer or ownership of the energy system.

Vote: majority. Appropriation: no. Fiscal committee: no. State-mandated local program: no.

The people of the State of California do enact as follows:

1 SECTION 1. Section 2827 of the Public Utilities Code, as
2 amended by Section 11 of Chapter 8 of the Statutes of the 2001–02
3 First Extraordinary Session, is amended to read:

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

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

14 (1) “Electric service provider” means an electrical
15 corporation, as defined in Section 218, a local publicly owned
16 electric utility, as defined in Section 9604, or an electrical
17 cooperative, as defined in Section 2776, or any other entity that
18 offers electrical service.

19 (2) “Eligible customer-generator” means a residential, small
20 commercial customer as defined in subdivision (h) of Section 331,
21 commercial, industrial, or agricultural customer of an electric
22 service provider, who uses a solar or a wind turbine electrical
23 generating facility, or a hybrid system of both, with a capacity of

not more than one megawatt that is located on the customer's owned, leased, or rented premises, is interconnected and operates in parallel with the electric grid, and is intended primarily to offset part or all of the customer's own electrical requirements.

(3) "Net energy metering" means measuring the difference between the electricity supplied through the electric grid and the electricity generated by an eligible customer-generator and fed back to the electric grid over a 12-month period as described in subdivision (e). Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in two directions. An additional meter or meters to monitor the flow of electricity in each direction may be installed with the consent of the customer-generator, at the expense of the electric service provider, and the additional metering shall be used only to provide the information necessary to accurately bill or credit the customer-generator pursuant to subdivision (e), or to collect solar or wind electric generating system performance information for research purposes. If the existing electrical meter of an eligible customer-generator is not capable of measuring the flow of electricity in two directions, the customer-generator shall be responsible for all expenses involved in purchasing and installing a meter that is able to measure electricity flow in two directions. If an additional meter or meters are installed, the net energy metering calculation shall yield a result identical to that of a single meter. An eligible customer-generator who already owns an existing solar or wind turbine electrical generating facility, or a hybrid system of both, is eligible to receive net energy metering service in accordance with this section.

(c) (1) Every electric service provider shall develop a standard contract or tariff providing for net energy metering, and shall make this contract available to eligible customer-generators, upon request. Every electric service provider shall ensure that requests for establishment of net energy metering are processed in a time period not exceeding that for *similarly situated* customers requesting new electric service, but not to exceed one month *from the date the electric service provider receives a completed application form from an eligible customer-generator. If an electric service provider is unable to process the request within the allowable timeframe, the electric service provider shall notify both the customer-generator and the commission of the reason for its*



1 *inability to process the request and the date the request will be*
2 *completed.* Every electric service provider shall make all
3 necessary forms and contracts for net energy metering available
4 for download from the Internet, ~~and shall expedite the~~
5 ~~establishment of net energy metering upon request from an eligible~~
6 ~~customer-generator.~~

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

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

20 (d) Each net energy metering contract or tariff shall be
21 identical, with respect to rate structure, all retail rate components,
22 and any monthly charges, to the contract or tariff to which the same
23 customer would be assigned if such customer was not an eligible
24 customer-generator, except that eligible customer-generators shall
25 not be assessed standby charges on the electrical generating
26 capacity or the kilowatthour production of an eligible solar or wind
27 electrical generating facility. The charges for all retail rate
28 components for eligible customer-generators shall be based
29 exclusively on the customer-generator's net kilowatthour
30 consumption over a 12-month period, without regard to the
31 customer-generator's choice of electric service provider. Any new
32 or additional demand charge, standby charge, customer charge,
33 minimum monthly charge, interconnection charge, or other charge
34 that would increase an eligible customer-generator's costs beyond
35 those of other customers in the rate class to which the eligible
36 customer-generator would otherwise be assigned are contrary to
37 the intent of this legislation, and shall not form a part of net energy
38 metering contracts or tariffs.

39 (e) For eligible residential and small commercial
40 customer-generators, the net energy metering calculation shall be



1 made by measuring the difference between the electricity supplied
2 to the eligible customer-generator and the electricity generated by
3 the eligible customer-generator and fed back to the electric grid
4 over a 12-month period. The following rules shall apply to the
5 annualized net metering calculation:

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

15 (2) At the end of each 12-month period, where the electricity
16 supplied during the period by the electric service provider exceeds
17 the electricity generated by the eligible residential or small
18 commercial customer-generator during that same period, the
19 eligible residential or small commercial customer-generator is a
20 net electricity consumer and the electric service provider shall be
21 owed compensation for the eligible customer-generator's net
22 kilowatthour consumption over that same period. The
23 compensation owed for the eligible residential or small
24 commercial customer-generator's consumption shall be
25 calculated as follows:

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

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

14 (C) For all residential and small commercial
15 customer-generators and for each monthly period, the net balance
16 of moneys owed to the electric service provider for net
17 consumption of electricity or credits owed to the
18 customer-generator for net generation of electricity shall be
19 carried forward until the end of each 12-month period. For all
20 commercial, industrial, and agricultural customer-generators the
21 net balance of moneys owed shall be paid in accordance with the
22 electric service provider’s normal billing cycle, except that if the
23 commercial, industrial, or agricultural customer-generator is a net
24 electricity producer over a normal billing cycle, any excess
25 kilowatthours generated during the billing cycle shall be carried
26 over to the following billing period, valued according to the
27 procedures set forth in this section, and appear as a credit on the
28 customer-generator’s account, until the end of the annual period
29 when paragraph (3) of subdivision (e) shall apply.

30 (3) At the end of each 12-month period, where the electricity
31 generated by the eligible customer-generator during the 12-month
32 period exceeds the electricity supplied by the electric service
33 provider during that same period, the eligible customer-generator
34 is a net electricity producer and the electric service provider shall
35 retain any excess kilowatthours generated during the prior
36 12-month period. The eligible customer-generator shall not be
37 owed any compensation for those excess kilowatthours unless the
38 electric service provider enters into a purchase agreement with the
39 eligible customer-generator for those excess kilowatthours.



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

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

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

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

(g) This section shall remain in effect only until January 1, 2003, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2003, deletes or extends that date.

1 SEC. 2. Section 2827 of the Public Utilities Code, as added by
2 Section 12 of Chapter 8 of the Statutes of the 2001–02 First
3 Extraordinary Session, is amended to read:

4 2827. (a) The Legislature finds and declares that a program
5 to provide net energy metering for eligible customer-generators is
6 one way to encourage private investment in renewable energy
7 resources, stimulate in-state economic growth, enhance the
8 continued diversification of California’s energy resource mix, and
9 reduce interconnection and administrative costs for electricity
10 suppliers.

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

12 (1) “Electric service provider” means an electric corporation,
13 as defined in Section 218, a local publicly owned electric utility,
14 as defined in Section 9604, or an electrical cooperative, as defined
15 in Section 2776. “Electric service provider” also means an entity
16 that offers electrical service to residential and small commercial
17 customers, as defined in Section 394, if that entity offers net
18 energy metering. Any entity that offers net energy metering to
19 residential and small commercial customers shall comply with this
20 section.

21 (2) “Eligible customer-generator” means a residential
22 customer, or a small commercial customer as defined in
23 subdivision (h) of Section 331, of an electric service provider, who
24 uses a solar or a wind turbine electrical generating facility, or a
25 hybrid system of both, with a capacity of not more than 10
26 kilowatts that is located on the customer’s premises, is
27 interconnected and operates in parallel with the electric grid, and
28 is intended primarily to offset part or all of the customer’s own
29 electrical requirements.

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



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

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

(c) (1) Every electric service provider shall develop a standard contract or tariff providing for net energy metering, and shall make this contract available to eligible customer-generators, upon request, on a first-come-first-served basis until the time that the total rated generating capacity used by eligible customer-generators equals one-tenth of 1 percent of the electric service provider’s aggregate customer peak demand. Every electric service provider shall ensure that requests for establishment of net energy metering are processed in a time period not exceeding that for *similarly situated* customers requesting new electric service, but not to exceed one month *from the date the electric service provider receives a completed application form from an eligible customer-generator. If an electric service provider is unable to process the request within the allowable timeframe, the electric service provider shall notify both the customer-generator and the commission of the reason for its inability to process the request and the date the request will be completed.* Every electric service provider shall make all necessary forms and contracts for net energy metering available for download from the Internet, ~~and shall expedite the establishment of net energy metering upon request from an eligible customer-generator.~~

1 (2) On an annual basis, beginning in 1999, every electric
2 service provider shall make available to the ratemaking authority
3 information on the total rated generating capacity used by eligible
4 customer-generators that are customers of that provider in the
5 provider's service area. For those electric service providers who
6 are operating pursuant to Section 394, they shall make available
7 to the ratemaking authority the information required by this
8 paragraph for each eligible customer-generator that is their
9 customer for each service area of an electric corporation, local
10 publicly owned electric utility, or electrical cooperative, in which
11 the customer has net energy metering. The ratemaking authority
12 shall develop a process for making the information required by this
13 paragraph available to energy service providers, and for using that
14 information to determine when, pursuant to paragraph (3), a
15 service provider is not obligated to provide net energy metering to
16 additional customer-generators in its service area.

17 (3) Notwithstanding paragraph (1), an electric service provider
18 is not obligated to provide net energy metering to additional
19 customer-generators in its service area when the combined total
20 peak demand of all customer-generators served by all the electric
21 service providers in that service area furnishing net energy
22 metering to eligible customer-generators equals one-tenth of 1
23 percent of the aggregate customer peak demand of those electric
24 service providers.

25 (4) If a customer participates in direct transactions pursuant to
26 paragraph (1) of subdivision (b) of Section 365 with an electric
27 supplier that does not offer net energy metering and is therefore not
28 an electric service provider, the customer is not an eligible
29 customer-generator and the electric corporation, as defined in
30 Section 218, that provides distribution service for the direct
31 transactions, is not obligated to provide net energy metering to the
32 customer.

33 (5) If a customer participates in direct transactions pursuant to
34 paragraph (1) of subdivision (b) of Section 365 with an electric
35 supplier that offers net energy metering and is therefore an electric
36 service provider, and the customer is an eligible
37 customer-generator, the electric corporation, as defined in Section
38 218, that provides distribution service for the direct transactions
39 may recover from the customer's electric service provider the



1 incremental costs of metering and billing service related to net
2 energy metering in an amount set by the commission.

3 (d) Each net energy metering contract or tariff shall be
4 identical, with respect to rate structure, all retail rate components,
5 and any monthly charges, to the contract or tariff to which the same
6 customer would be assigned if such customer was not an eligible
7 customer-generator. The charges for all retail rate components for
8 eligible customer-generators shall be based exclusively on the
9 customer-generator's net kilowatthour consumption over a
10 12-month period, without regard to the customer-generator's
11 choice of electric service provider that offers net energy metering
12 and is subject to this section pursuant to paragraph (1) of
13 subdivision (b), in accordance with subdivision (e). Any new or
14 additional demand charge, standby charge, customer charge,
15 minimum monthly charge, interconnection charge, or other charge
16 that would increase an eligible customer-generator's costs beyond
17 those of other customers in the rate class to which the eligible
18 customer-generator would otherwise be assigned are contrary to
19 the intent of this legislation, and shall not form a part of net energy
20 metering contracts or tariffs.

21 (e) The net energy metering calculation shall be made by
22 measuring the difference between the electricity supplied to the
23 eligible customer-generator and the electricity generated by the
24 eligible customer-generator and fed back to the electric grid over
25 a 12-month period. The following rules shall apply to the
26 annualized net metering calculation:

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

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

1 compensation owed for the eligible customer-generator's net
2 12-month kilowatthour consumption shall be calculated as
3 follows:

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

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

31 (C) For all customer-generators and for each monthly period,
32 the net balance of moneys owed to the electric service provider for
33 net consumption of electricity or credits owed to the
34 customer-generator for net generation of electricity shall be
35 carried forward until the end of each 12-month period.

36 (3) At the end of each 12-month period, where the electricity
37 generated by the eligible customer-generator during the 12-month
38 period exceeds the electricity supplied by the electric service
39 provider during that same period, the eligible customer-generator
40 is a net electricity producer and the electric service provider shall



1 retain any excess kilowatthours generated during the prior
2 12-month period. The eligible customer-generator shall not be
3 owed any compensation for those excess kilowatthours unless the
4 electric service provider enters into a purchase agreement with the
5 eligible customer-generator for those excess kilowatthours.

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

13 (5) If an eligible customer-generator terminates the customer
14 relationship with the electric service provider, the electric service
15 provider shall reconcile the eligible customer-generator's
16 consumption and production of electricity during any part of a
17 12-month period following the last reconciliation, according to the
18 requirements set forth in this subdivision, except that those
19 requirements shall apply only to the months since the most recent
20 12-month bill.

21 (6) If an electric service provider providing net metering to a
22 customer-generator ceases providing that electrical service to that
23 customer during any 12-month period, and the customer-generator
24 enters into a new net metering contract or tariff with a new electric
25 service provider, the 12-month period, with respect to that new
26 electric service provider, shall commence on the date on which the
27 new electric service provider first supplies electric service to the
28 customer-generator.

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



1 (g) This section shall become operative on January 1, 2003.
2 SEC. 3. Section 2827.7 of the Public Utilities Code is
3 amended to read:
4 2827.7. Generation eligible for net energy metering that is
5 installed on or before December 31, 2002, shall be entitled,
6 regardless of any change in customer or ownership of the energy
7 system, for the life of the installation, to the net energy metering
8 terms in effect on the date of installation.

