

HB

31

<target><bill>HB 31</bill><subject>HB
31</subject><comm>HENE26</comm></target>

ALASKA STATE LEGISLATURE

REPRESENTATIVE KURT OLSON

- Chair, Labor and Commerce
- Member: Rules, Resources

Session: January – April
State Capitol
Juneau, AK 99801-1182
Phone: 907-465-2693
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Interim: May – December
145 Main Street Loop, Ste 221
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Official Business

January 28, 2010

Representative Charisse Millett, Chair
Representative Bryce Edgmon, Co-Chair
House Energy Special Committee
Room 124, State Capitol
Juneau, Alaska 99801

Please find the attached amendment to House Bill 31 – Net Metering. This amendment reflects the recent efforts of the Regulatory Commission of Alaska to create net metering regulations for the state.

I respectfully request a hearing to discuss House Bill 31 and the amendment at your earliest convenience. Please do not hesitate to contact me or my staff, Jennifer Senette at 465-4530 with questions or concerns about this issue. I look forward to hearing from you and discussing this bill in further detail.

AMENDMENT

OFFERED IN THE HOUSE

BY REPRESENTATIVE ~~OSBORN~~

TO: HB 31

KANRAS

1 Page 1, line 1:

2 Delete "net energy metering for retail electricity suppliers and customers"

3 Insert "net metering of electric energy for electric utilities subject to economic
4 regulation by the Regulatory Commission of Alaska and for a utility's retail consumers"

5

6 Page 1, line 4, through page 2, line 27:

7 Delete all material and insert:

8 **** Section 1.** AS 42.05 is amended by adding a new section to read:

9 **Sec. 42.05.686. Net metering of electrical energy.** (a) This section applies to
10 every electric utility that is subject to exercise of the jurisdiction of the Regulatory
11 Commission of Alaska that extends to matters concerning rates and charges for public
12 utility services.

13 (b) The commission may modify or waive a requirement in this section, in
14 whole or in part, by order. The commission may act on an application for modification
15 or waiver and a showing of good cause or on the commission's own motion. An
16 application for modification or waiver under this section must be in writing and must
17 set out the pertinent facts in sufficient detail to support a finding by the commission
18 that no legitimate public interest will be served by enforcing the requirement
19 designated in the application. Under the authority set out in this subsection, the
20 commission may not modify or waive a requirement in another provision of AS 42.05.

21 (c) The commission may adopt by regulation additional requirements
22 pertaining to safety, power quality, and interconnection standards for consumer
23 generation systems participating in the net metering program if the commission

1 considers the requirements to be necessary to protect public safety and system
2 reliability.

3 (d) This section does not apply to the following systems of an electric utility
4 that is otherwise subject to exercise of the jurisdiction of the commission described in
5 (a) of this section:

6 (1) an independent electric system owned and operated by an electric
7 utility if

8 (A) except for fossil fuel generation for standby and emergency
9 power, 100 percent of the independent electric system's power is supplied by a
10 facility described in (l)(1) of this section; or

11 (B) the independent system had total retail sales of less than
12 5,000,000 kilowatt-hours during the previous calendar year; or

13 (2) any portion of the distribution system of the electric utility if and to
14 the extent the electric utility demonstrates to the commission that limiting net metering
15 installations in that portion of its distribution system is reasonably necessary to
16 address system stability constraints or other operational issues.

17 (e) Except as provided in (f) or (j) of this section, an electric utility subject to
18 this section shall

19 (1) make a net metering program available to each of its retail
20 consumers that requests interconnection; and

21 (2) allow eligible consumer generation systems complying with (l) of
22 this section to be interconnected to the electric utility's facilities in accordance with
23 interconnection standards approved or accepted by the commission.

24 (f) An electric utility may refuse to interconnect with a consumer that requests
25 net metering if interconnection would cause the total nameplate capacity of all eligible
26 consumer generation systems participating in the net metering program to exceed 1.5
27 percent of the electric utility's average retail demand. The utility shall notify the
28 commission if it refuses to interconnect with a potential net metering consumer under
29 this subsection.

30 (g) An electric utility that has a decrease in average retail demand that results
31 in the total nameplate capacity of eligible consumer generation systems exceeding 1.5

1 percent of average retail demand shall allow existing net metering consumers to
2 continue participating in the net metering program.

3 (h) By March 1 of each year, an electric utility shall submit a tariff filing
4 stating the number of kilowatts equivalent to 1.5 percent of the electric utility's
5 average retail demand for the previous calendar year and the total nameplate capacity
6 of eligible consumer generation systems participating in the net metering program at
7 the time of filing. The commission may require the filing to be made using a tariff
8 advice letter with accompanying tariff sheet.

9 (i) An electric utility may submit a tariff filing requesting an increase in the
10 limit on total nameplate capacity of eligible consumer generation systems participating
11 in the net metering program above 1.5 percent of the electric utility's average retail
12 demand. The commission may require the filing to be made using a tariff advice letter.

13 (j) An electric utility may deny participation in a net metering program to an
14 electric consumer that

15 (1) participates in another program if the program allows the consumer
16 to collect, through voluntary contributions from other participating consumers of the
17 utility, more than the non-firm power rate a kilowatt-hour for the sale of electric
18 energy; or

19 (2) sells electric energy under an existing contract if the contract
20 allows the consumer to collect more than the non-firm power rate a kilowatt-hour for
21 the sale of electric energy.

22 (k) An electric utility may install additional metering equipment for net
23 metering consumers. The electric utility

24 (1) is responsible for all costs related to the purchase, installation, and
25 maintenance of the additional metering equipment; and

26 (2) may not assess a recurring charge for the additional metering
27 equipment.

28 (l) To be eligible for interconnection under a net metering program, a
29 generation system must

30 (1) be a facility that produces electric energy derived from one or more
31 of the following sources:

- 1 (A) solar photovoltaic and solar thermal energy;
- 2 (B) wind energy;
- 3 (C) biomass energy;
- 4 (D) hydroelectric energy;
- 5 (E) geothermal energy;
- 6 (F) hydrokinetic energy;
- 7 (G) ocean thermal energy;
- 8 (H) landfill gas or biogas produced from organic matter,
- 9 wastewater, anaerobic digesters, or municipal solid waste; and
- 10 (I) other sources, as approved by the commission, that
- 11 generally have similar environmental effects;

12 (2) be operated and owned or leased by the consumer and

13 (A) have a total nameplate capacity of not more than 25

14 kilowatts for each consumer premises;

15 (B) be located on or adjacent to the consumer's premises;

16 (C) be used primarily to offset part or all of the consumer's

17 requirements for electric energy; and

18 (D) include a device that converts direct current power into

19 alternating current power to ensure the generated power is compatible with

20 power generated by an electric utility;

21 (3) include an electric generator and its accompanying components

22 that connect the electric generator to a utility's electric distribution system, including

23 interface equipment and interface equipment controls, switchgear, inverter, and other

24 interface devices; and

25 (4) be physically interconnected to the consumer's side of the meter

26 from which electric service is provided by the utility to the consumer.

27 (m) Each electric utility with a consumer participating in a net metering

28 program shall measure the net electric energy during each monthly billing period, and

29 (1) if the utility supplied more electric energy to the consumer than the

30 consumer supplied to the utility during the monthly billing period, the electric utility

31 shall bill the consumer for the number of kilowatt-hours of net electric energy supplied

1 by the utility to the consumer at the applicable rates contained in the utility's currently
2 effective tariff; or

3 (2) if the consumer supplied more electric energy to the utility than the
4 utility supplied to the consumer during the monthly billing period, the electric utility
5 shall credit the consumer's account with an amount derived by multiplying the
6 kilowatt-hours of net electric energy supplied by the consumer to the utility by the
7 non-firm power rate contained in the utility's currently effective tariff, unless a
8 different rate has been established in a commission-approved contract; the electric
9 utility shall credit dollar amounts to the account of a net metering consumer for
10 furnishing electric energy to the utility under this paragraph and use the credits to
11 reduce dollar amounts owed by the consumer in subsequent monthly billing periods;
12 the credits do not expire or otherwise revert to the utility.

13 (n) Except as otherwise provided in (m) of this section regarding kilowatt-
14 hour charges, the electric utility may bill a net metering consumer for all applicable
15 charges authorized by the electric utility's approved tariff.

16 (o) An electric utility administering a net metering program may not charge a
17 consumer participating in the net metering program any additional fee for standby,
18 capacity, interconnection, or other net metering expense unless approved by the
19 commission.

20 (p) An electric utility may petition the commission to change electric rate
21 designs, consistent with regulations adopted by the commission, including appropriate
22 rate classes for net metered consumers. The commission shall allow the charge if the
23 utility can demonstrate an adverse material rate effect on utility consumers that do not
24 participate in the net metering program.

25 (q) In this section,

26 (1) "average retail demand" is the number of kilowatts determined by
27 dividing the total retail sales of the utility, measured in kilowatt-hours, for a calendar
28 year

29 (A) with 365 days, by 8,760 hours; or

30 (B) with 366 days, by 8,784 hours;

31 (2) "consumer" means a customer of an electric utility described in (a)

1 of this section that consumes the electricity purchased from the utility;

2 (3) "consumer premises" means all buildings and associated grounds
3 owned or leased by a consumer at a single location where an electric utility provides
4 service through one or more utility meters;

5 (4) "electric system" means an integrated electrical system that
6 includes, at a minimum, generation and distribution of electric energy;

7 (5) "independent electric system" means an electric system that is not
8 interconnected with another electric system;

9 (6) "nameplate capacity" means the maximum rated output of a
10 generator, prime mover, or other electric power production equipment under specific
11 conditions designated by the manufacturer;

12 (7) "net electric energy" means, as metered by the electric utility for a
13 specified period and expressed in kilowatt-hours, the amount by which the quantity of
14 electric energy supplied by the

15 (A) utility to the consumer exceeds the quantity of electric
16 energy supplied by the consumer to the utility; or

17 (B) consumer to the utility exceeds the quantity of electric
18 energy supplied by the utility to the consumer;

19 (8) "non-firm power rate" means the rate updated quarterly in an
20 electric utility's tariff in accordance with regulations adopted by the commission or
21 another non-firm power rate as may be authorized by the commission;

22 (9) "retail sales" means sales of electricity to the end-use consumer,
23 exclusive of any wholesale sales.

24 * **Sec. 2.** This Act takes effect January 1, 2011."

FISCAL NOTE

STATE OF ALASKA
2009 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HB 31
 () Publish Date: _____

Identifier (file name): HB031-CED-RCA-02-26-09 Dept. Affected: DCCED
 Title: _____ RDU: Regulatory Commission of Alaska
 Component: Regulatory Commission of Alaska
 Sponsor: Representative Olson
 Requester: House Energy Committee Component Number: 2417

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

| | Appropriation Required | Information | | | | | | |
|-------------------------------|---------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | FY 2010 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 |
| OPERATING EXPENDITURES | | | | | | | | |
| Personal Services | 48.3 | 48.3 | 98.2 | 98.2 | 98.2 | 98.2 | 98.2 | 98.2 |
| Travel | 5.0 | 5.0 | | | | | | |
| Contractual | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| Supplies | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Equipment | 5.0 | 5.0 | | | | | | |
| Land & Structures | | | | | | | | |
| Grants & Claims | | | | | | | | |
| Miscellaneous | | | | | | | | |
| TOTAL OPERATING | 66.2 | 66.2 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 |

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| CAPITAL EXPENDITURES | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|--|

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|-------------------------------|--|--|--|--|--|--|--|--|
| CHANGE IN REVENUES () | | | | | | | | |
|-------------------------------|--|--|--|--|--|--|--|--|

FUND SOURCE (Thousands of Dollars)

| | | | | | | | | |
|----------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1002 Federal Receipts | | | | | | | | |
| 1003 GF Match | | | | | | | | |
| 1004 GF | 66.2 | 66.2 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 |
| 1005 GF/Program Receipts | | | | | | | | |
| 1037 GF/Mental Health | | | | | | | | |
| Other Interagency Receipts | | | | | | | | |
| TOTAL | 66.2 | 66.2 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 |

Estimate of any current year (FY2009) cost: _____

POSITIONS

| | | | | | | | |
|-----------|---|---|---|---|---|---|---|
| Full-time | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Part-time | | | | | | | |
| Temporary | | | | | | | |

ANALYSIS: (Attach a separate page if necessary)

This proposed legislation would require retail suppliers of electricity to offer residential and commercial customers net energy metering. Net metering allows customers generating electricity from alternative energy sources to receive an offset against their utility bills for electricity generated from their on-site facility and delivered to local distribution utility facilities. Customers that generate more electricity than they consume during a billing period would receive energy credits. Customers may sell energy credits to a retail electric supplier at the supplier's negotiated firm purchase power price as determined and approved by the Regulatory Commission of Alaska (RCA).
 (Continued on page 2)

Prepared by: Robert M. Pickett, Chairman Phone (907) 276-6222
 Division: Regulatory Commission of Alaska Date/Time 3/2/09 8:00 AM
 Approved by: Emil R. Notti, Commissioner Date 3/2/2009
Commerce, Community, and Economic Development

FISCAL NOTE

**STATE OF ALASKA
2009 LEGISLATIVE SESSION**

BILL NO. HB 31

ANALYSIS CONTINUATION

The RCA would be required to establish through regulations a voting procedure for cooperatives seeking waiver of the exemption from net metering requirements. The RCA would also be required to review and approve (1) any negotiated power purchase agreement for excess customer generation between a customer and an economically regulated electric utility, and (2) any utility tariff provision designed to implement a rate for the purchase of excess generation. The RCA may also be required to ensure compliance with statutory net metering requirements. From a rate-setting perspective, this proposed legislation would result in a reallocation of utility cost away from non-firm renewable power producers to other utility customers. This reallocation may be controversial and would likely further complicate rate proceedings. To perform these obligations, RCA would need to hire a Utility Financial Analyst III (Range 21) to address enforcement of net metering requirements and assist in rate proceedings for regulated electric utilities.

This fiscal note identifies the costs associated with adding the new position. These costs include salary and benefits, travel for one-time training, one-time startup costs for equipment and supplies and annual contractual charges. The salary and benefits costs are lower in FY2010 because the effective date of this bill is January 1, 2010. This position is required to attend a two week training course provided by the National Association of Regulatory Commissioners that is designed specifically for regulators to provide a basic understanding of modern regulatory theory and processes.

The RCA's budget is funded through Regulatory Cost Charges (RCC) and direct charge mechanisms. The RCC is recalculated each year and allows the agency to recover its operating expenses through an assessment on revenues of regulated utilities and pipeline carriers. Utilities exempt from economic regulation by the RCA do not pay RCCs, but may be required to pay the actual costs of services provided by the RCA.

General Funds are requested because at the current statutory RCC cap is 0.7% and no additional RCC receipts are available. If General Funds are not appropriated an increase to the statutory RCC cap will be necessary.

FISCAL NOTE

STATE OF ALASKA
2009 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HB 31
 () Publish Date: _____

Identifier (file name): HB031-CED-RCA-03-23-09
 Title: Net Energy Metering
 Sponsor: Representative Olson
 Requester: House Energy Committee
 Dept. Affected: DCCED
 RDU: Regulatory Commission of Alaska
 Component: Regulatory Commission of Alaska
 Component Number: 2417

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

| | Appropriation Required | Information | | | | | | |
|-------------------------------|---------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | FY 2010 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 |
| OPERATING EXPENDITURES | | | | | | | | |
| Personal Services | 48.3 | 48.3 | 98.2 | 98.2 | 98.2 | 98.2 | 98.2 | 98.2 |
| Travel | 5.0 | 5.0 | | | | | | |
| Contractual | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| Supplies | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Equipment | 5.0 | 5.0 | | | | | | |
| Land & Structures | | | | | | | | |
| Grants & Claims | | | | | | | | |
| Miscellaneous | | | | | | | | |
| TOTAL OPERATING | 66.2 | 66.2 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 |

| | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|--|
| CAPITAL EXPENDITURES | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|--|

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|-------------------------------|--|--|--|--|--|--|--|--|
| CHANGE IN REVENUES () | | | | | | | | |
|-------------------------------|--|--|--|--|--|--|--|--|

FUND SOURCE (Thousands of Dollars)

| | | | | | | | | |
|--------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1002 Federal Receipts | | | | | | | | |
| 1003 GF Match | | | | | | | | |
| 1004 GF | | | | | | | | |
| 1005 GF/Program Receipts | | | | | | | | |
| 1037 GF/Mental Health | | | | | | | | |
| Regulatory Cost Charges (1141) | 66.2 | 66.2 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 |
| TOTAL | 66.2 | 66.2 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 |

Estimate of any current year (FY2009) cost: _____

POSITIONS

| | | | | | | | |
|-----------|---|---|---|---|---|---|---|
| Full-time | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Part-time | | | | | | | |
| Temporary | | | | | | | |

ANALYSIS: (Attach a separate page if necessary)

This proposed legislation would require retail suppliers of electricity to offer residential and commercial customers net energy metering. Net metering allows customers generating electricity from alternative energy sources to receive an offset against their utility bills for electricity generated from their on-site facility and delivered to local distribution utility facilities. Customers that generate more electricity than they consume during a billing period would receive energy credits. Customers may sell energy credits to a retail electric supplier at the supplier's negotiated firm purchase power price as determined and approved by the Regulatory Commission of Alaska (RCA).

(Continued on page 2)

Prepared by: Robert M. Pickett, Chairman Phone (907) 276-6222
 Division: Regulatory Commission of Alaska Date/Time 3/23/09 8:00 AM
 Approved by: Emil R. Notti, Commissioner Date 3/23/2009
Department of Commerce, Community, and Economic Development

FISCAL NOTE

STATE OF ALASKA
2009 LEGISLATIVE SESSION

BILL NO. HB 31 _____

ANALYSIS CONTINUATION

The RCA would be required to establish through regulations a voting procedure for cooperatives seeking waiver of the exemption from net metering requirements. The RCA would also be required to review and approve (1) any negotiated power purchase agreement for excess customer generation between a customer and an economically regulated electric utility, and (2) any utility tariff provision designed to implement a rate for the purchase of excess generation. The RCA may also be required to ensure compliance with statutory net metering requirements. From a rate-setting perspective, this proposed legislation would result in a reallocation of utility cost away from non-firm renewable power producers to other utility customers. This reallocation may be controversial and would likely further complicate rate proceedings. To perform these obligations, RCA would need to hire a Utility Financial Analyst III (Range 21) to address enforcement of net metering requirements and assist in rate proceedings for regulated electric utilities.

This fiscal note identifies the costs associated with adding the new position. These costs include salary and benefits, travel for one-time training, one-time startup costs for equipment and supplies and annual contractual charges. The salary and benefits costs are lower in FY2010 because the effective date of this bill is January 1, 2010. This position is required to attend a two week training course provided by the National Association of Regulatory Commissioners that is designed specifically for regulators to provide a basic understanding of modern regulatory theory and processes.

The RCA's budget is funded through Regulatory Cost Charges (RCC) and direct charge mechanisms. The RCC is recalculated each year and allows the agency to recover its operating expenses through an assessment on revenues of regulated utilities and pipeline carriers. Utilities exempt from economic regulation by the RCA do not pay RCCs, but may be required to pay the actual costs of services provided by the RCA.

ALASKA STATE LEGISLATURE

REPRESENTATIVE KURT OLSON

- Chair, Labor and Commerce
- Member: Rules, Resources, Military and Veterans Affairs



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Juneau, AK 99801-1182
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Kenai, AK 99611
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Official Business

Sponsor Statement **HB 31 – Net Metering**

With our windy coasts, untapped rivers, and huge tidal resources, Alaska has the potential to be a national leader in the development of renewable energy sources. Though the state already produces 25% of its energy from renewable sources, we can do more to promote the use of these resources to meet Alaska's energy needs. House Bill 31 is an opportunity to do just that. This legislation promotes the private investment in renewable energy systems by giving Alaskans the option of net metering.

Net metering allows grid-tied customers who generate electricity from renewable resources to receive credit from their utility for the excess power they generate beyond what they consume. HB 31 allows customers to apply these credits towards the following billing period or to sell unused credits back to the retailer. This legislation thus provides a simple arrangement that allows customers to use the excess electricity they generate to offset electricity used at other times during the billing period.

Not only does this legislation encourage Alaskans to take ownership of their own energy generation, it is an inexpensive way for the state to promote the use of renewable energy systems. Alaska is rich with renewable energy sources, and giving consumers a financial incentive to tap into them benefits both the state and the environment.

Forty states currently provide a net metering option to consumers. Though these requirements are often enacted by state utility regulators, state lawmakers may step in to enact net metering laws through legislative action. The legislatures of Washington, Oregon, and California have addressed net metering in this fashion, and I urge this body to follow their lead.

House Bill 31 is a chance to encourage Alaskans to take advantage of our renewable energy resources and an opportunity that should not be missed. I respectfully ask for your consideration of this bill and look forward to hearing your questions and concerns.

Email: Representative_Kurt_Olson@legis.state.ak.us

ALASKA STATE LEGISLATURE

REPRESENTATIVE KURT OLSON

- Chair, Labor and Commerce
- Member: Rules, Resources, Military and Veterans Affairs



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Sectional Summary **HB 31 – Net Metering**

The following is a sectional summary of HB 31 and is not an authoritative representation of the bill. For an authoritative interpretation, please refer to the bill itself.

Section 1: amends AS 42.45 which establishes rural and statewide energy programs.

Subsection (a) creates a net metering option for customers operating an energy production facility.

Subsection (b) allows customers to acquire credits when the customer's energy facility generates more energy than the customer consumes. The retail supplier of energy credits customers in kilowatt-hours. Credits may be applied by the customer towards the following billing periods.

Subsection (c) allows customers to sell energy credits not used towards the next month's bill back to the retail supplier. Credit prices are to be determined and approved by the Regulatory Commission of Alaska.

Subsection (d) exempts retail suppliers organized as cooperatives from net metering requirements. The exemption may be waived upon a majority vote of the membership of the cooperative, effectively allowing cooperatives to "opt-in" to the net metering program.

Subsection (e) exempts from net metering requirements any retail electricity supplier that generates 100 percent of its power from alternative energy systems.

Section 2: provides for an effective date.

ALASKA STATE LEGISLATURE

REPRESENTATIVE KURT OLSON

- Chair, Labor and Commerce
- Member: Rules, Resources

Session: January -- April
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Juneau, AK 99801-1182
Phone: 907-465-2693
Fax: 907-465-3835



Interim: May -- December
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Phone: 907-283-2690
Fax: 907-283-2763

Official Business

January 28, 2010

Representative Charisse Millett, Chair
Representative Bryce Edgmon, Co-Chair
House Energy Special Committee
Room 124, State Capitol
Juneau, Alaska 99801

Please find the attached amendment to House Bill 31 – Net Metering. This amendment reflects the recent efforts of the Regulatory Commission of Alaska to create net metering regulations for the state.

I respectfully request a hearing to discuss House Bill 31 and the amendment at your earliest convenience. Please do not hesitate to contact me or my staff, Jennifer Senette at 465-4530 with questions or concerns about this issue. I look forward to hearing from you and discussing this bill in further detail.

Email: Representative_Kurt_Olson@legis.state.ak.us

ALASKA STATE LEGISLATURE

REPRESENTATIVE KURT OLSON

- Chair, Labor and Commerce
- Member: Rules, Resources

Session: January – April
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Juneau, AK 99801-1182
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Interim: May – December
145 Main Street Loop, Ste 221
Kenai, AK 99611
Phone: 907-283-2690
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Official Business

Sectional Summary Proposed Amendment to HB 31 – Net Metering

The following is sectional summary of the proposed HB 31 amendment and is not an authoritative representation of the amendment. For an authoritative interpretation, please refer to the amendment itself.

Section 1: amends AS 42.05 by adding a new section to read:

Section 42.05.686. Net metering of electrical energy

Subsections (a) and (b) address the applicability of the net metering requirement and the possibility of waiving requirements upon application

Subsection (c) allows the commission to adopt by regulation additional requirements for consumer generation systems participating in the net metering program

Subsection (d) makes an exception for certain systems of an electric utility

Subsections (e)-(h) relate to the net metering of electricity, including setting an overall capacity limitation on net metering

Subsection (i) allows an electric utility to request an increase in the limit on total capacity of eligible consumer generation systems participating in the net metering program

Subsection (j) describes circumstances in which an electric utility may deny participation in a net metering program

Subsection (k) allows an electric utility to install additional metering equipment for net metering consumers

Subsection (l) specifies eligibility criteria for consumer generation facilities, including a generation capacity limit of 25 kilowatts

Email: Representative_Kurt_Olson@legis.state.ak.us

Subsections (m)-(p) address charges or credits for net electricity

Subsection (q) defines the terms used in this bill

Section 2: provides for an effective date

Regulatory Commission of Alaska
701 West Eighth Avenue, Suite 300
Anchorage, Alaska 99501
(907) 276-6222; TTY (907) 276-4533

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STATE OF ALASKA

THE REGULATORY COMMISSION OF ALASKA

Before Commissioners:

Robert M. Pickett, Chairman
Kate Giard
Paul F. Lisankie
Anthony A. Price
Janis W. Wilson

In the Matter of the Consideration of the
Adoption of Regulations Implementing Net
Metering

R-09-1

ORDER NO. 3

ORDER ADOPTING REGULATIONS

BY THE COMMISSION:

Summary

We adopt regulations establishing net metering requirements for certain electric utilities.

Background

After declining to adopt a federal net metering standard,¹ we opened this docket to consider regulations implementing an Alaska-specific net metering standard.

¹ See Order R-06-5(7), dated August 27, 2008 and titled *Order Declining to Adopt Federal Net Metering, Fuel Diversity, and Fossil Fuel Generation Efficiency Standards*.

1 We issued a straw man proposal to generate comment on elements of a net metering
2 requirement,² and held a technical conference to discuss the net metering
3 requirement.³ We issued proposed regulations for comment⁴ and provided public
4 notice of our intent to consider net metering regulations.⁵

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²See Order R-06-5(8)/R-09-1(1)/R-09-2(1), dated February 6, 2009 and titled
12 *Order Closing Docket, Opening Dockets, Subsuming Applicable Portions of*
13 *Docket R-06-5 Record into Dockets R-09-1 and R-09-2, Scheduling Technical*
14 *Conferences, and Requiring Filings.*

15 ³The technical conference was held as scheduled on March 4, 2009.
16 Organizations represented at the net metering technical conference included Alaska
17 Center for the Environment (Margaret Adsit), Alaska Power Association (Crystal Enkvist
18 and Dean Thompson), Alaska Power & Telephone Association (Danny Gonce), Alaska
19 Village Electric Cooperative (Meera Kohler), Alaskan Wind Industries (Nadia Daggett),
20 Chilkoot Indian Association (Scott Hansen), Chugach Electric Association, Inc. (Don
21 Edwards and Rick Freymiller), Golden Valley Electric Association (Kirk Gibson, Ethan
22 Falatko, and Mike Wright), Homer Electric Association (Jim Patras and Rick Eckert),
23 Interstate Renewable Energy Council (Jason Keyes), Matanuska Electric Association
24 (Jim Walker), MEA Ratepayers Alliance (Tim Leach), the Municipality of Anchorage
25 d/b/a Municipal Light & Power (Robert Reagan), the National Wildlife Foundation (Pat
26 Lavin), the Regulatory Affairs and Public Advocacy Section of the Alaska Attorney
General's Office (Sam Cason and Janet Fairchild), Rural Energy Enterprises (Lonnie
Jackson), Sitka Global Warming Group (Michelle Putz), TDX Power (Jennifer Owens),
and Your Clean Energy LLC (Andy Baker). Individuals appearing on their own behalf
were David Mogar, Will Schlein, Jim Stimpfle, and Jeff Turner (Chief of Staff for
Representative Charisse Millet).

⁴See Order R-09-1(2), dated June 12, 2009 and titled *Order Issuing Proposed
Regulations for Comment.*

⁵See *Notice of Proposed Changes in the Regulations of the Regulatory
Commission of Alaska*, dated June 12, 2009.

1 We reviewed over 45 comments during the public comment period, which included an
2 opportunity for initial and reply comments.⁶

3 Commission Staff presented a comment summary and suggested several
4 revisions to the proposed regulations based on public comment. After reviewing the
5 public comments and agreeing on revisions to the proposed regulations at our
6 October 14, 2009 public meeting, we voted to adopt the net metering regulations that
7 are attached to this order as Appendix A.⁷

8 Discussion

9 Net metering allows a consumer to reduce his or her load requirement by
10 interconnecting on-site generation facilities to electric utility facilities. The amount of
11 customer-generated power is compared to the customer's electric consumption for the
12 applicable billing period, with the customer either billed for net electric consumption or
13 credited for generating more electricity than used in a billing period.

14 We adopted a net metering requirement that will apply to certain Alaskan
15 electric utilities. While the parameters of our net metering requirement vary from
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18 ⁶Initial comments were filed by Representative Alan Austerman, Alaska Center
19 for the Environment, Alaska Power Association, Ole Anderson, Melissa Aronson,
20 Christopher Brewton, Robert Burns, Chugach Electric Association, Nina Faust and
21 Edgar Bailey, Dr. Frederick Foster, Jeff Friedman, Golden Valley Electric Association,
22 Matt Gray, Dianne Holmes, Frank L. Holmes, Homer Electric Members Forum,
23 Interstate Renewable Energy Council, Pat Irwin, Tim June, Philip Kaluza, Sherry
24 Kimmons, Kootznoowoo Incorporated, James Lawrence, J.T. Lindholm, Bill Lynch,
25 Peter McKay, Mark Masteller, Duff Mitchell, Deborah Nakada, the National Wildlife
26 Federation, Representative Paul Seaton, Peter Schneider, Rebecca Shaffer, Phil St.
John, Michael J. Van Note, Paulette Wellington, Lawrence Whiting, Michelle Wilber,
Yukon River Inter-Tribal Watershed Council, and Bryan Zak. Reply comments were
filed by Alaska Power Association, Chugach Electric Association, the National Wildlife
Federation, and the Municipality of Anchorage d/b/a Municipal Light and Power.

⁷October 14, 2009 public meeting transcripts at 173-175.

1 pending net metering legislation,⁸ we believe that our net metering regulations reflect an
2 appropriate compromise that facilitates net metering in Alaska and adequately protects
3 the interests of utilities, net metering consumers, and utility customers that do not net
4 meter. We create a new Article in Chapter 50 (*Energy Conservation*) to incorporate net
5 metering requirements (3 AAC 50.900 – 3 AAC 50.949). The elements of our proposed
6 net metering regulations are discussed below.

7 3 AAC 50.900, Applicability and Waiver

8 This section addresses the applicability of our net metering requirement by
9 identifying categories of electric utilities subject to the net metering requirement.⁹
10 Generally speaking, the net metering requirement applies to all electric utilities subject
11 to economic regulation by this agency. However, the requirement does not apply to an
12 economically regulated electric utility (1) with 100 percent of its electrical power supplied
13 by an eligible facility, as defined in 3 AAC 50.949,¹⁰ or (2) for independent systems that
14 have retail sales of less than 5,000,000 kilowatt hours during the utility's previous fiscal
15 year.¹¹ In addition, an electric utility demonstrating that limiting net metering

16
17 ⁸The 26th Alaska State Legislature has three pending legislative bills that would
18 require retailer suppliers of electricity to provide net metering - House Bill 31, House Bill
19 66, and Senate Bill 131.

20 ⁹Appendix B to this Order lists the utilities subject to the net metering
21 requirement.

22 ¹⁰Specifically, "eligible facility" means a facility that produces electric energy
23 derived from solar photovoltaic and solar thermal energy; wind energy; biomass energy;
24 hydroelectric energy; geothermal energy; hydrokinetic energy; ocean thermal energy;
25 landfill gas or biogas produced from organic matter, wastewater, anaerobic digesters, or
26 municipal solid waste; and other sources as approved by us that generally have similar
environmental impact. See 3 AAC 50.949(9).

¹¹For example, Alaska Power Company provides service to 21 different
communities, each having a separate electrical system. Only five of the separate
electric systems sold more than 5,000,000 kilowatt during the 2007 fiscal year. These
five systems would be the only portions of Alaska Power Company required to
participate in the net metering program.

1 installations is reasonably necessary to address system stability constraints or other
2 operational issues is not required to provide net metering over the affected portion of its
3 distribution system. This section also allows us to waive any requirement in
4 3 AAC 50.900 – 3 AAC 50.949 upon application and for good cause shown.

5 3 AAC 50.910, Net Metering of Electricity

6 Subsection (a) requires covered electric utilities to make net metering
7 available to its customers, and allows the interconnection of customer generation
8 systems to the electric utility's facilities. Subsection (b) states an overall capacity
9 limitation on net metering, allowing an electric utility to refuse net metering service if the
10 overall nameplate capacity of all net metering systems interconnected with the utility
11 exceeds a pre-defined cap (1.5 percent of the electric utility's average retail demand).
12 Subsection (c) precludes a utility from disconnecting existing net metering customers
13 should the cumulative nameplate capacity of net metering systems interconnected to
14 the utility's distribution system exceed the cap as a result of a decrease in average
15 demand. Subsection (d) requires an electric utility to annually publish in its tariff the
16 number of kilowatt hours equivalent to 1.5 percent of the electric utility's average retail
17 demand.

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18 3 AAC 50.920, Consumer Generation System

19 This section specifies eligibility criteria for consumer generation facilities,
20 including a generation capacity limit of 25 kilowatts.

21 3 AAC 50.930, Charges or Credits for Net Electricity

22 Subsection (a) requires an electric utility to measure a net metering
23 consumer's energy consumption and generation, with net metering consumers being
24 billed for net consumption and receiving bill credits when the customer's generation
25 exceeds usage. Subsection (b) addresses the application of bill credits as dollar
26 amounts to subsequent monthly billing periods. Subsection (c) allows an electric utility

1 to charge a net metering consumer for non-generation related consumer charges
2 provided those charges are authorized by the electric utility's tariff. Subsection (d)
3 precludes an electric utility from charging a net metering consumer additional fees for
4 net metering service unless we approve the charge. Subsection (e) states an electric
5 utility may request a change to its rate design to incorporate a net metering customer
6 class. It requires the electric utility to demonstrate an adverse material rate impact on
7 non-net metering customers to justify a net metering customer class.

8 3 AAC 50.940, Interconnection of Customer Generation Facilities

9 This section allows us to establish interconnection requirements for
10 customer generation systems.

11 3 AAC 50.950, Definitions

12 This section defines terms used in the net metering regulations, including
13 a definition specifying eligible sources of electricity for net metering purposes.¹²

14 **ORDER**

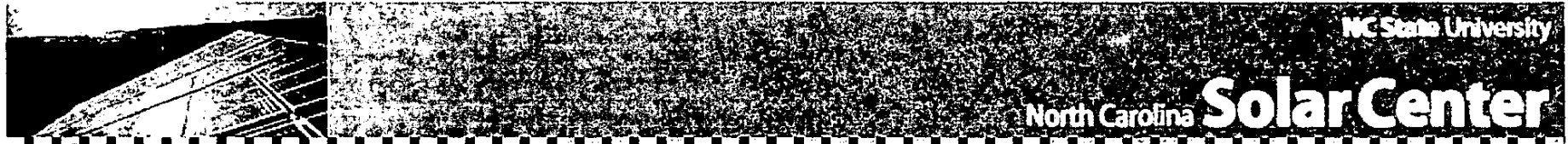
15 THE COMMISSION FURTHER ORDERS that the regulations set out in Appendix A to
16 this order are adopted.

17 DATED AND EFFECTIVE at Anchorage, Alaska, this 15th day of January, 2010.

18 BY DIRECTION OF THE COMMISSION
19 (Commissioner Anthony A. Price, dissenting.)



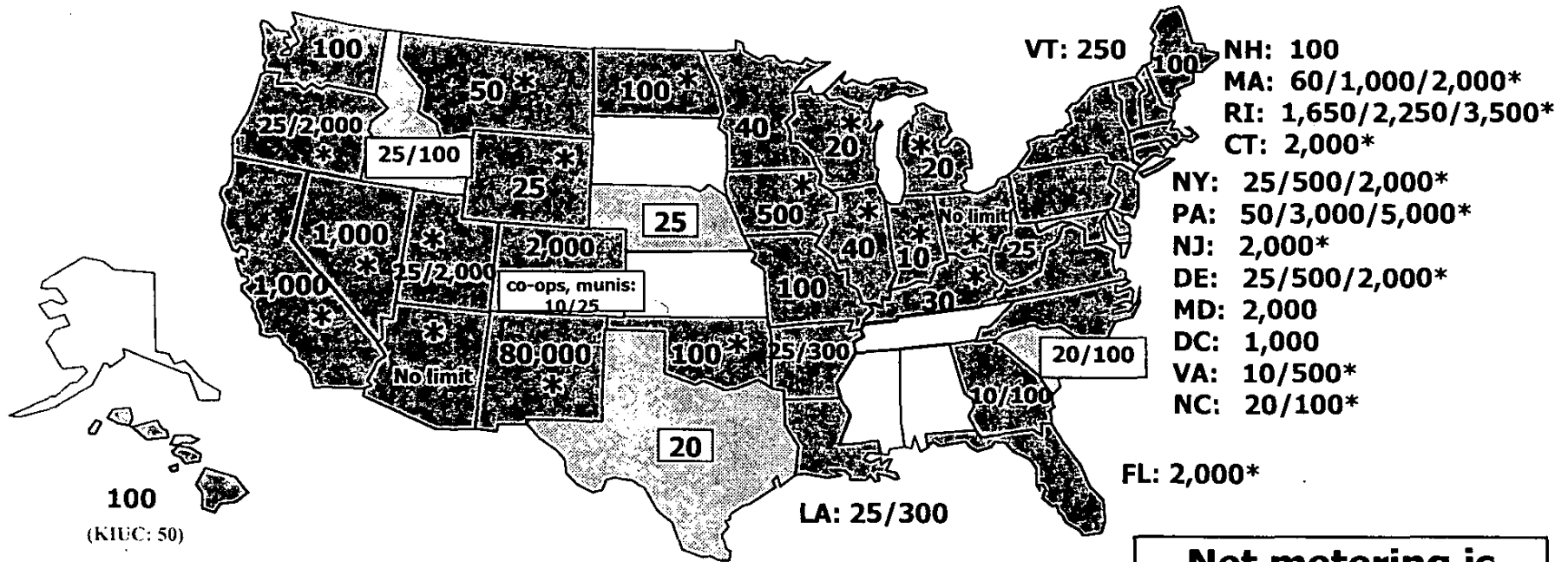
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26 See footnote 10.






DSIRE: www.dsireusa.org

February 2009

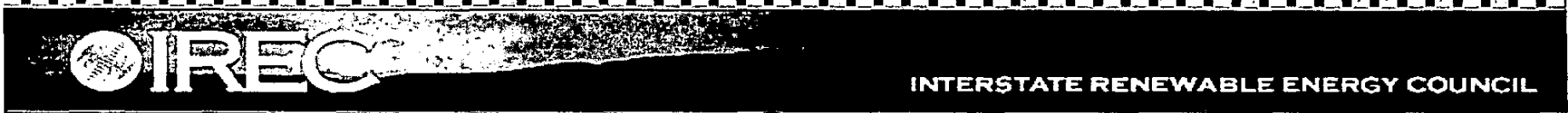
Net Metering



-  State-wide net metering for all utility types
-  State-wide net metering for certain utility types only (e.g., investor-owned utilities)
-  Net metering offered voluntarily by one or more individual utilities

Net metering is available in 44 states + D.C.

Note: Numbers indicate individual system size limit in kilowatts (kW). Some states' limits vary by customer type, technology and/or system application; this is the case when multiple numbers appear for one state. Other limits may also apply. For complete details, see www.dsireusa.org.



when homeowners tap into an array of rebate programs, they can cut that price by almost one half."

NEW JERSEY'S CLEAN ENERGY PROGRAM

In New Jersey, small solar-electric systems of fewer than 10 kw qualify for a rebate of \$5 per watt. The rebate covers up to 60 percent of the system costs under a program funded by the state and administered by utility companies. New Jersey also provides a sales tax credit for solar-electric system installations.

By fall 2000, there had been little publicity about this program, with most applicants finding out about it by word-of-mouth. One of the major utilities in the state reported in late August only 10 applications had been processed. Some of the impediments to the program included lack of publicity and early difficulties homeowners had locating solar contractors. Now a short list of utility-qualified contractors is provided to interested homeowners.

CALIFORNIA'S REBATE PROGRAMS

California has myriad state, local and utility-sponsored rebate programs, state property tax exemptions and other incen-



Pam Chang beams from the top of her new thin-film Building-Integrated Photovoltaic (BIPV) roof on her home in Berkeley, California.

tives to help homeowners install solar-electric rooftops—and they are being used. Some solar programs in California reported receiving 250 inquiries a week.

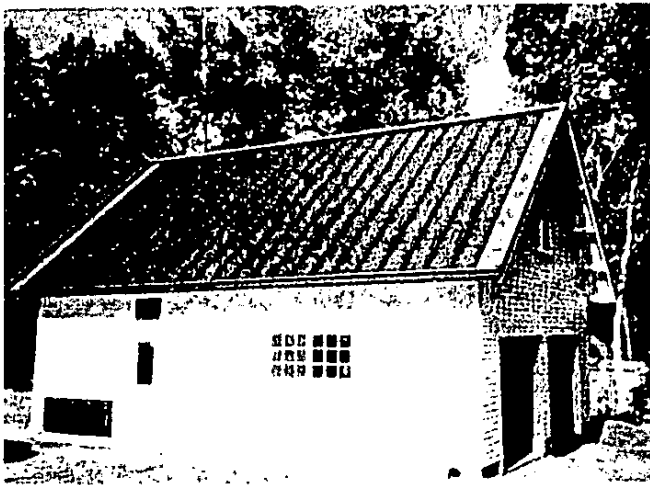
The "Emerging Renewable Buy Down Program" and "Self-generation Program" both offer rebates of up to \$4.50 per watt or 50 percent off the price of purchasing the system, whichever is less.

The Los Angeles Department of Water and Power (LADWP) offers even more generous rebates as part of an effort to in-

stall 100,000 solar rooftops in the city of Los Angeles by 2010. Under the LADWP program, financial incentives include a maximum \$3 per watt for systems manufactured outside of Los Angeles, and a maximum of \$5 per watt for systems manufactured within the city.

TO FIND A SOLAR ROOF DEALER

The fastest way to learn what rebates are available in your area is to contact a local solar roof dealer. The dealer will know



from the utility grid and the electrical meter runs forward. The net difference between electricity exported to the grid and grid-electricity used forms the basis for the homeowner's electric bill. In many states, net metering is annualized. The utility credits solar electricity produced by the rooftop system during the summer against electricity needed from the grid during the winter.

About Net Metering

Net-metering is a "win-win" for the utility and the homeowner. The utility adds more clean power to its network from a power source located close to demand centers, reducing not only the need to build new plants to meet peak demands but also reducing the load on distribution lines. The process is a win for the homeowner, who doesn't need a bank of batteries to store electricity to power the household at night or during overcast days. Instead the system uses the utility grid as a storage battery.

When the solar-electric rooftop produces more electricity than the household needs (at midday when the family is away at work and school), electricity is sent to the utility grid and the home's meter runs backward. When the household needs more electricity than the system produces (at night), it is drawn



**Interstate Renewable Energy Council (IREC) "Connecting to the Grid" Project
State and Utility Net-Metering Rules, Regulations and Programs
(Updated October 2008)**

| Program | System Size Limit / Customer Classes Eligible | Eligible Technologies | Limit on Total Capacity | Treatment of Net Excess Generation (NEG) | Interconnection Standards for Net Metering | Utilities Involved |
|----------------------------------|---|--|---|---|--|---|
| Arizona - Arizona Public Service | 100 kW / All customers | Solar, Wind, Biomass | 15 MW | Credited at retail rate to customer's next bill; granted to utility at end of calendar year | (Utility guidelines) | Arizona Public Service |
| Arizona - Salt River Project | 20 kW / Residential | Photovoltaics | None | Purchased monthly by utility at average monthly market price minus a price adjustment of \$0.00017/kWh | (Utility guidelines) | Salt River Project |
| Arizona - Tucson Electric Power | 10 kW / Commercial, Residential | Photovoltaics, Wind | 500 kW peak aggregate | Credited to customer's next bill; granted to utility after January billing cycle | (Utility guidelines) | Tucson Electric Power |
| Arkansas | 25 kW for residential systems; 300 kW for non-residential systems | Solar, Wind, Biomass, Hydro, Geothermal, Fuel Cells, Microturbines | None | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | All utilities |
| California | 1 MW (10 MW for as many as three biogas digesters) / Commercial, Industrial, Residential | Photovoltaics, Landfill Gas, Wind, Anaerobic Digestion, Fuel Cells | 2.5% of utility's peak demand, 50 MW for biogas | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | All utilities |
| Colorado | IOUs: 2 MW Electric cooperatives and municipal utilities: 10 kW for residential; 25 kW for commercial and industrial | Wind, Biomass, Geothermal Electric, Solar, Recycled Energy, Small Hydroelectric, Fuel Cells | None | Credited to customer's next bill; IOU's: at end of each calendar year, customer reimbursed for NEG at utility's average hourly incremental cost for the prior 12-month period; Co-ops and Munis: annual reconciliation at a rate deemed appropriate by the utility. | Yes | All IOUs and co-ops; munis with more than 5,000 customers |
| Connecticut | 2 MW / All customers | Solar, Landfill Gas, Wind, Biomass, Fuel Cells, Municipal Solid Waste, Small Hydro, Tidal Energy, Wave Energy, Ocean Thermal | None | Credited to customer's next bill at retail rate; purchased by utility at avoided-cost rate at end of 12-month billing cycle | Yes | Investor-owned utilities |

* In California, all utilities – with the exception of Los Angeles Department of Water & Power (LADWP) – must offer net metering to customers with PV and wind-energy systems. (LADWP offers net metering voluntarily.) In addition, investor-owned utilities must offer net metering to customers with fuel cells and biomass-energy systems.

Sources: IREC "Connecting to the Grid" Project (www.irecusa.org/index.php?id=31) and the Database of State Incentives for Renewables and Efficiency (DSIRE) (www.dsireusa.org). Both projects are managed by the N.C. Solar Center at N.C. State University. Additional information, including statutory and regulatory authority citations, is available on the projects' web sites.



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|---|--|--|---|---|--|---|
| Delaware | 25 kW for residential systems; 2 MW for non-residential customers of DP&L; 500 kW for non-residential customers of DEC and municipal utilities | Solar, Wind, Biomass, Hydro, Fuel Cells | 1% (utilities may allow a higher limit or no limit) | Credited to customer's next bill at retail rate; at end of 12-month period, any remaining NEG is granted at the utility's avoided-cost rate to Delaware's Green Energy Fund | Yes (under revision) | All utilities (applies to cooperatives only if they choose to compete outside their limits) |
| District of Columbia | 1 MW (pending PSC rules) Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Tidal, Fuel Cells, CHP, Microturbines | None | Credited at retail rate to customer's next bill | Yes | All utilities |
| Florida | 2 MW / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydroelectric, Geothermal Electric, CHP/Cogeneration, Hydrogen, Tidal Energy, Wave Energy, Ocean Thermal | None | Credited to customer's next bill at retail rate; purchased by utility at avoided-cost rate at end of 12-month billing cycle | Yes | Investor-owned utilities |
| Florida - CHELCO | 10 kW / Commercial, Residential | Solar, Wind | None | Carried forward indefinitely as a kWh credit. Unused credit granted to utility if/when the customer discontinues net metering. | Yes | CHELCO |
| Florida - Orlando Utilities Commission | 20 kW Residential 1 MW Non Residential | Solar | | | | |
| Florida - Florida Keys Electric Cooperative | 10 kW / Residential | Photovoltaics | None | Credited at retail rate to customer's next bill; purchased by utility at retail rate at end of 12-month period | Yes | Florida Keys Electric Cooperative |
| Florida - JEA | 10 kW / Residential | Photovoltaics, Wind | None | Credited at retail rate to customer's next bill | (Utility guidelines) | JEA |
| Florida - Lakeland Electric | 500 kW for commercial systems; 10 kW for residential systems | Photovoltaics | None | Credited at retail rate to customer's next bill; indefinite carryover | (Utility guidelines) | Lakeland Electric |
| Florida - New Smyrna Beach Utilities | 10 kW / Commercial, Industrial, Residential | Photovoltaics | None | Credited at retail rate to customer's next bill | (Utility guidelines) | New Smyrna Beach Utilities |

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|--|--|--|--|--|--|--------------------------------------|
| Florida - Tallahassee Electric Utility | 10 kW / Commercial, Residential | Photovoltaics | None | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | (Utility guidelines) | Tallahassee Electric Utility |
| Georgia | 100 kW for commercial systems; 10 kW for residential systems | Photovoltaics, Wind, Fuel Cells | 0.2% of a utility's annual peak demand | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | All utilities |
| Hawaii | KIUC - 50 kW / HECO, HELCO, MECO - 100 kW / Commercial, Residential, Government | Photovoltaics, Wind, Biomass, Hydro | 1.0% of a utility's annual peak demand | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | All utilities |
| Idaho - Idaho Power | 100 kW for large commercial and agricultural; 25 kW for residential and small commercial | Solar, Wind, Biomass, Hydro, Fuel Cells | 0.1% of utility's 2000 peak demand (in Idaho) | Credited to customer's next bill at utility's retail rate for residential and small commercial customers; credited at 85% of utility's avoided-cost rate for large commercial and agricultural customers | (Utility guidelines) | Idaho Power |
| Idaho - Rocky Mountain Power | 100 kW for large commercial and agricultural; 25 kW for residential and small commercial | Solar, Wind, Biomass, Hydro, Fuel Cells | 0.1% of utility's 2002 peak demand (in Idaho) | Credited to customer's next bill at utility's retail rate for residential and small commercial customers; credited at 85% of utility's avoided-cost rate for all other customers | (Utility guidelines) | Rocky Mountain Power |
| Idaho - Avista Utilities | 25 kW / Commercial, Residential, Agricultural | Solar, Wind, Biomass, Hydro, Fuel Cells | 0.1% of utility's 1996 peak demand (in Idaho) | Credited to customer's next bill at utility's retail rate; granted to utility at beginning of calendar year with no compensation to customer | (Utility guidelines) | Avista Utilities |
| Illinois | 40 kW / All customers (Dual Metering allowed for customers with systems up to 2 MW) | Solar, wind, crops, anaerobic digestion of livestock or food processing waste, fuel cells, microturbines that use renewable fuels, hydro | 1% of utility's previous peak year demand (includes net-metered systems and dual-metered systems up to 2 MW) | 40 kW or less, 1:1 ratio 40kW to 2 MW, credited at provider's avoided cost of supply, or as negotiated within a power-purchase agreement. Excess credits expire after 1 year. | (Utility guidelines) | All utilities except munis and coops |
| Indiana | 10 kW / Residential, Schools | Photovoltaics, Wind, Small Hydro | 0.1% of a utility's most recent peak summer load | Credited at retail rate to customer's next bill | Yes | Investor-owned utilities |

Sources: IREC "Connecting to the Grid" Project (www.irecusa.org/index.php?id=31) and the Database of State Incentives for Renewables and Efficiency (DSIRE) (www.dsireusa.org). Both projects are managed by the N.C. Solar Center at N.C. State University. Additional information, including statutory and regulatory authority citations, is available on the projects' web sites.



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|---------------------------------|--|--|--|--|--|--|
| Iowa | 500 kW / Commercial, Industrial, Residential | Photovoltaics, Wind, Biomass, Hydro, Municipal Solid Waste | None | Credited at retail rate to customer's next bill | No | Investor-owned utilities |
| Kentucky | 30 kW / All customers | Photovoltaics | 1.0% of a utility's single-hour peak load during the previous year | Credited at retail rate to customer's next bill; indefinite carryover | Yes | Investor-owned utilities, cooperatives |
| Louisiana | 300 kW for commercial and agricultural systems; 25 kW for residential systems | Photovoltaics, Wind, Biomass, Hydro, Geothermal, Fuel Cells (Renewable Fuels), Microturbines (Renewable Fuels) | None | Credited at retail rate to customer's next bill; indefinite carryover | Yes | All utilities |
| Louisiana - City of New Orleans | 300 kW for commercial systems (Pending City Council approval); 25 kW for residential systems | Photovoltaics, Wind, Biomass, Hydro, Geothermal, Fuel Cells (Renewable Fuels), Microturbines (Renewable Fuels) | None | Credited at retail rate to customer's next bill; indefinite carryover | Yes | Entergy New Orleans (and any other jurisdictional utilities) |
| Maine | 100 kW / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Fuel Cells, Municipal Solid Waste, CHP, Tidal Energy | None | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | No | All utilities |
| Maryland | 2 MW / Commercial, Residential, Schools, Government | Photovoltaics, Wind, Biomass, Anaerobic Digestion | 1,500 MW | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | All utilities |
| Massachusetts | "Class I" facilities: 60 kW "Class II" facilities: 1 MW "Class III" facilities: 2 MW / All Customers | Solar, Wind, Biomass, Hydro, CHP, Fuel Cells, Municipal Solid Waste, Anaerobic Digestion | 1% of each utility's peak load | Varies by system type and customer class | Yes | Investor-owned utilities |
| Michigan ¹ | 30 kW / Commercial, Industrial, Residential, Nonprofit, Schools, Government, Agricultural, Institutional | Solar, Wind, Biomass, Hydro, Geothermal, Municipal Solid Waste | 0.1% of a utility's peak load or 100 kW (whichever is greater) | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | Various utilities (voluntary participation) |

¹ In early October Michigan enacted net metering legislation for renewable energy systems up to 20 kW. This table does not yet reflect the new law.

Sources: IREC "Connecting to the Grid" Project (www.irecusa.org/index.php?id=31) and the Database of State Incentives for Renewables and Efficiency (DSIRE) (www.dsireusa.org). Both projects are managed by the N.C. Solar Center at N.C. State University. Additional information, including statutory and regulatory authority citations, is available on the projects' web sites.



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|--|---|---|--|---|--|--------------------------|
| Minnesota | 40 kW / Commercial, Industrial, Residential | Photovoltaics, Wind, Biomass, Hydro, Municipal Solid Waste, CHP | None | Customer receives a check for NEG at the end of each month, calculated at the "average retail utility energy rate" | Yes | All utilities |
| Missouri | 100 kW / All customers | Solar, Wind, Hydro | 5% of a utility's single-hour peak load during the previous year | Credited at avoided-cost rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | All utilities |
| Montana | 50 kW / Commercial, Industrial, Residential | Photovoltaics, Wind, Hydro | None | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | Investor-owned utilities |
| Montana - Montana Electric Cooperatives | 10 kW / Commercial, Residential | Photovoltaics, Wind, Geothermal, Fuel Cells, Small Hydro | None | Granted to the utility, no carryover. | Yes | Most of MEC's 26 members |
| Nebraska - Nebraska Public Power District | 25 kW / All retail customers | Photovoltaics, Wind, Biomass, Hydroelectric, Municipal Solid Waste, CHP/Cogeneration, Anaerobic Digestion, Other Distributed Generation Technologies | 1% of peak annual demand of retail customers | Carried over monthly at varying rates depending on season and technology; accumulated NEG credits paid to customer at the end of the calendar year. | No, general NPPD DG Standards apply | NPPD |
| Nevada | 1 MW [†] / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Geothermal Electric | 1% of a utility's peak capacity | Credited at retail rate to customer's next bill; indefinite carryover | Yes | Investor-owned utilities |
| New Hampshire | 100 kW / Commercial, Industrial, Residential | Photovoltaics, Wind, Hydroelectric | 1% of a utility's annual peak demand | Credited at retail rate to customer's next bill; indefinite carryover | Yes | All utilities |

[†] In Nevada, utilities are permitted to charge certain fees on systems greater than 100 kW.

Sources: IREC "Connecting to the Grid" Project (www.irecusa.org/index.php?id=31) and the Database of State Incentives for Renewables and Efficiency (DSIRE) (www.dsireusa.org). Both projects are managed by the N.C. Solar Center at N.C. State University. Additional information, including statutory and regulatory authority citations, is available on the projects' web sites.

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| Program | System Size Limit / Customer Classes Eligible | Eligible Technologies | Limit on Total Capacity | Treatment of Net Excess Generation (NEG) | Interconnection Standards for Net Metering | Utilities Involved |
|---|--|---|--|---|--|--|
| New Jersey | 2 MW / Commercial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Fuel Cells (Renewable Fuels), Tidal Energy, Wave Energy, Anaerobic Digestion | No firm limit, but BPU has authority to limit capacity to 2.5% of peak demand | Several options exist according to customer preference. Generally, NEG will be credited to customer's next bill at retail rate with next excess purchased by the utility at the avoided cost rate at the end of an annualized period. | Yes | Investor-owned utilities |
| New Mexico | 80 MW / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Fuel Cells, Municipal Solid Waste, CHP, Microturbines | None | Credited to customer's next bill at utility's avoided-cost rate or purchased by utility at avoided-cost rate monthly | Yes | Investor-owned utilities, cooperatives |
| New Mexico -- Farmington Electric Municipal Utility | 10 kW / Residential | Solar, Wind, Hydro, Distributed Generation Technologies | None stated | Carried over to next bill at utility's retail rate; either purchased by utility at end of 12-month period or carried forward indefinitely | Yes | Farmington |
| New York | Solar: 25 kW for residential, 2 MW or peak load for non-residential; Wind: 25 kW for residential, 500 kW for farm-based, and 2 MW or peak load for non-residential; Biogas: 500 kW (farm-based only) | Photovoltaics, Biomass, Wind, Anaerobic Digestion | 1.0% of 2005 demand for each IOU for solar and on-farm biogas systems; 0.3% of 2005 demand for each IOU for wind | Monthly NEG credited to customer's next bill at utility's retail rate with accounts generally reconciled annually at the avoided-cost rate; annual NEG compensation for non-residential customers is not addressed | Yes | All major investor-owned utilities |
| North Carolina | 100 kW for non-residential systems; 20 kW for residential systems | Photovoltaics, Wind, Biomass, Hydro | 0.2% of a utility's North Carolina retail peak load for the previous year | Credited to customer's next bill at retail rate; granted to utility annually at beginning of each summer season ⁵ | Yes | Investor-owned utilities |
| North Dakota | 100 kW / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Municipal Solid Waste, CHP | None | Purchased by utility at avoided-cost rate | No | Investor-owned utilities |

⁵ In North Carolina, customers are required to switch to a time-of-use tariff in order to net meter. This arrangement includes the separate carryover of on-peak NEG and off-peak NEG.

Sources: IREC "Connecting to the Grid" Project (www.irecusa.org/index.php?id=31) and the Database of State Incentives for Renewables and Efficiency (DSIRE) (www.dsireusa.org). Both projects are managed by the N.C. Solar Center at N.C. State University. Additional information, including statutory and regulatory authority citations, is available on the projects' web sites.



Interstate Renewable Energy Council (IREC) "Connecting to the Grid" Project
State and Utility Net-Metering Rules, Regulations and Programs
 (Updated October 2008)

| Program | System Size Limit / Customer Classes Eligible | Eligible Technologies | Limit on Total Capacity | Treatment of Net Excess Generation (NEG) | Interconnection Standards for Net Metering | Utilities Involved |
|---------------------------------|--|---|-------------------------------|--|--|---|
| Ohio | No limit specified (must be sized to match some or all of customer's load) / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Fuel Cells, Microturbines | 1% of a utility's peak demand | Credited at utility's unbundled generation rate to customer's next bill; customer may request refund of NEG credits accumulated over a 12-month period | Yes | All electric distribution utilities and competitive retail electric service providers |
| Ohio - Yellow Springs Utilities | 25 kW / Commercial, Residential | Photovoltaics, Wind | None | Not addressed | (Utility guidelines) | Yellow Springs Utilities |
| Oklahoma | 100 kW or 25,000 kWh/year (whichever is less) / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Municipal Solid Waste, CHP | None | Granted to utility monthly or credited to customer's next bill at utility's avoided-cost rate (varies by utility) | No | Investor-owned utilities, cooperatives regulated by OCC |
| Oregon | 2 MW for Non-residential customers of PGE and PacifiCorp; 25 kW for residential systems; 25 kW for non-residential customers of municipal utilities, electric cooperatives, people's utility districts | Solar, Wind, Biomass, Hydro, Fuel Cells, Anaerobic Digestion | None | PGE and PacifiCorp: no limit Municipal utilities, electric cooperatives, people's utility districts: 0.5% of a utility's historic single-hour peak load | Yes | Investor-owned utilities (PGE and PacifiCorp only) |
| Oregon - Ashland Electric | None / Commercial, Residential | Photovoltaics, Wind | None | Purchased by utility monthly at retail rate (1,000 kWh/month maximum) | (Utility guidelines) | Ashland Electric |
| Pennsylvania | 5 MW for systems connected to microgrids or available for emergencies; 3 MW for nonresidential systems; 50 kW for residential systems | Solar, Wind, Biomass, Hydro, Fuel Cells, Municipal Solid Waste, CHP, Waste Coal, Other DG | None | Credited to customer's next bill at retail rate; PUC to address treatment of NEG remaining at end of 12-month period | Yes | Investor-owned utilities |

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|----------------------------------|---|---|--|--|--|--|
| Puerto Rico | 25 kW / Residential 1MW / Non-residential | Photovoltaics, Wind, "Other Sources" of Renewable Energy | None | Credited to customer's next bill at utility's retail rate (with certain limitations); at end of 12-month billing cycle, utility purchases 75% of outstanding NEG credits at a minimum rate of \$0.10/kWh, and the remaining 25% of credits are donated to public schools | No | Puerto Rico Electric Power Authority (PREPA) |
| Rhode Island | 3.5 MW for systems owned by cities, towns or the Narragansett Bay Commission; 2.25 MW for systems developed but not owned by cities and towns, sited on land owned by the city or town, and providing power solely to the city or town; 1.65 MW for other customers | Solar Thermal Electric, Photovoltaics, Wind, CHP/Cogeneration | 2% of utility's peak load (1 MW of this limit is reserved for systems under 25 kW) | Credited at a rate slightly less than utility's retail rate and carried forward for a 12-month period. NEG remaining at the end of a 12-month period is transferred to the Rhode Island Renewable Energy Low-Income Fund. | (Utility guidelines) | National Grid |
| South Carolina – Progress Energy | 20 kW / Residential 100 kW / Non-residential | Solar, Wind, Biomass, Small Hydro | 0.2% of Progress Energy's South Carolina retail peak load for the prior calendar year | Credited to customer's next bill at applicable time-of-use rate or less; granted to utility (annually) at beginning of each summer | Yes | Progress Energy South Carolina |
| South Carolina – Duke Energy | 20 kW / Residential 100 kW / Non-residential | Solar, Wind, Biomass, Small Hydro | 0.2% of Duke's South Carolina jurisdictional retail peak demand for the previous calendar year | Credited to customer's next bill at applicable time-of-use rate or less; granted to utility (annually) at beginning of each summer | Yes | Duke Energy South Carolina |
| Texas | 50 kW / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Fuel Cells, Tidal Energy, Wave Energy, Microturbines | None | Purchased by utility for a given billing period at avoided-cost rate | Yes | Integrated IOUs that have not unbundled |

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|---------------------------|--|---|--|---|--|--|
| Texas - Austin Energy | 20 kW / Commercial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Municipal Solid Waste, Anaerobic Digestion, Tidal, Wave | 1% of utility's load | Tariff will be re-evaluated after 1% of load is served by distributed generation from renewable resources | (Utility guidelines) | Austin Energy |
| Utah | 25 kW / Residential 2 MW / Non-residential | Solar, Wind, Hydro, Fuel Cells, Hydrogen, Anaerobic Digestion, CHP, Biomass | 0.1% of each utility's peak demand in 2007 | Credited to customer's next bill at utility's avoided-cost rate; granted to utility at end of 12-month billing cycle | Yes | Investor-owned utilities and certain cooperatives |
| Utah - City of St. George | 10 kW / All customers | Photovoltaics, Wind | None stated | Credited to customer's next bill at utility's avoided-cost rate; indefinite carryover | (Utility guidelines) | City of St. George |
| Utah - Murray City Power | 10 kW / All customers | Photovoltaics, Wind, Hydro | None stated | Credited to customer's next bill at utility's retail rate; granted to utility each April | (Utility guidelines) | Murray City Power |
| Utah - Washington City | 10 kW / All customers | Photovoltaics, Wind | 1% of utility's most recently measured annual peak load | Credited monthly at utility's avoided cost rate | (Utility guidelines) | Washington City |
| Vermont | 250 kW (farm systems and "group net metering" systems may be larger, but net metering applies only up to 250 kW) | Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, CHP, Anaerobic Digestion, Fuel Cells (Renewable Fuels) | 2% of each utility's 1996 peak demand or peak demand during most recent calendar year (whichever is greater) | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | All utilities |
| Virginia | 500 kW for non-residential; 10 kW for residential | Solar, Wind, Biomass, Hydro, Geothermal, Tidal, Wave, Municipal Solid Waste | 1.0% of adjusted Virginia peak-load forecast for the previous year | Credited to following month at utility's retail rate; either granted to utility annually or credited to following month | Yes | Investor-owned utilities, cooperatives |
| Virgin Islands (U.S.) | 10 kW / Commercial, Residential | Photovoltaics, Wind, or other Renewable Energy | 5 MW on St. Croix; 10 MW on St. Thomas, St. John, Water Island and other territorial islands | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | U.S. Virgin Islands Water and Power Authority (WAPA) |

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|-------------------------------|---|---|--|---|--|---|
| Washington | 100 kW / Commercial, Industrial, Residential | Solar, Wind, Hydro, Biogas, Fuel Cells, CHP | 0.25% of a utility's 1996 peak load | Credited at retail rate to customer's next bill; granted to utility at end of 12-month billing cycle | Yes | All utilities |
| Washington - Grays Harbor PUD | 100 kW / Commercial, Industrial, Residential | Solar, Wind, Hydro, Biogas, Fuel Cells, CHP | 0.25% of utility's 1996 peak load | Credited at retail rate to customer's next bill; purchased by utility at 50% retail rate at end of 12-month billing cycle | Yes | Grays Harbor PUD |
| West Virginia | 25 kW / Commercial, Residential | Photovoltaics, Landfill Gas, Wind, Biomass, Fuel Cells, Hydro | 0.1% of a utility's total load participation | Credited to customer's next bill at utility's retail rate | Yes (utility tariffs only) | All utilities |
| Wisconsin | 20 kW / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro, Geothermal, Municipal Solid Waste, CHP, Other DG | None | Varies by utility. Generally credited at retail rate for renewables; generally credited at avoided cost for non-renewables. | Yes | Investor-owned utilities, municipal utilities |
| Wyoming | 25 kW / Commercial, Industrial, Residential | Solar, Wind, Biomass, Hydro | None | Credited at retail rate to customer's next bill; purchased by utility at avoided-cost rate at end of 12-month billing cycle | Yes | All utilities |

¹ In January 2006, the Wisconsin Public Service Commission approved a proposal by We Energies to offer net metering to customers with wind turbines greater than 20 kW but no greater than 100 kW in capacity. This offer is available to the first 25 eligible applicants.

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