

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

UNDOCKETED

IN RE: INTERCONNECTION OF SMALL PHOTOVOLTAIC SYSTEMS; NET-METERING
OF CUSTOMER-OWNED RENEWABLE RESOURCES AND INTERCONNECTION OF
CUSTOMER-OWNED RENEWABLE RESOURCES

NOTICE OF PROPOSED RULE DEVELOPMENT

TO: ALL INTERESTED PERSONS

ISSUED: August 15, 2007

NOTICE is hereby given pursuant to Section 120.54, Florida Statutes, that the Florida Public Service Commission staff has initiated the amendment to Rule 25-25-6.065 and to develop Rules 25-6.066 and 25-6.067, Florida Administrative Code, relating to the interconnection of small photovoltaic systems and the net-metering and interconnection of customer-owned renewable resources.

The attached Notice of Proposed Rule Development appeared in the August 10, 2007, edition of the Florida Administrative Weekly. A rule development workshop will be held at the following time and place:

Florida Public Service Commission
Thursday, August 30, 2007 – 9:30 a.m.
Betty Easley Conference Center
Room 148, 4075 Esplanade Way
Tallahassee, Florida 32399-0850

Any person requiring some accommodation at this workshop because of a physical impairment should call the Office of Commission Clerk at (850) 413-6770 at least 48 hours prior to the hearing. Any person who is hearing or speech impaired should contact the Florida Public Service Commission using the Florida Relay Service, which can be reached at: 1-800-955-8771 (TDD).

By Direction of the Florida Public Service Commission, this 15th day of August, 2007.



ANN COLE
Commission Clerk

(S E A L)

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DOCUMENT NUMBER-DATE

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NOTICE OF PROPOSED RULE DEVELOPMENT
UNDOCKETED
PAGE 2

Notice of Development of Rulemaking

PUBLIC SERVICE COMMISSION

RULE NO: RULE TITLE

25-6.065: Interconnection of Small Photovoltaic Systems

25-6.066: Net-Metering of Customer-Owned Renewable Resources

25-6.067: Interconnection of Customer-Owned Renewable Resources

PURPOSE AND EFFECT: To amend Rule 25-6.065 to encourage further development of renewable resources within the state and to develop Rules 25-6.066 and 25-6.067 on net-metering and expedited interconnection standards for customer-owned renewable generating resources. Undocketed.

SUBJECT AREA TO BE ADDRESSED: The rules will address issues associated with expedited interconnection with host utilities by customer-owned renewable generating resources and net-metering of those systems.

SPECIFIC AUTHORITY: 350.127(2), 366.051, FS

LAW IMPLEMENTED: 366.04(2)(c), (5), (6), 366.041, 366.05(1), 366.81, 366.91, FS

A RULE DEVELOPMENT WORKSHOP WILL BE HELD AT THE DATE, TIME AND PLACE SHOWN BELOW:

DATE AND TIME: Thursday, August 30, 2007 - 9:30 a.m.

PLACE: Betty Easley Conference Center, Room 148, 4075 Esplanade Way, Tallahassee, FL

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 48 hours before the workshop/meeting by contacting: Office of Commission Clerk, 2540 Shumard Oak Blvd., Tallahassee, FL 32399-0850, (850) 413-6770. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800)955-8771 (TDD) or 1(800)955-8770 (Voice).

THE PERSON TO BE CONTACTED REGARDING THE PROPOSED RULE DEVELOPMENT AND A COPY OF THE PRELIMINARY DRAFT, IF AVAILABLE, IS: Mark Futrell, Division of Economic Regulation, Florida Public Service Commission, 2540 Shumard Oak Blvd., Tallahassee, FL 32399-0850, (850) 413-6692, e-mail address: mfutrell@psc.state.fl.us.

THE PRELIMINARY TEXT OF THE PROPOSED RULE DEVELOPMENT IS NOT AVAILABLE.

1 **25-6.065 Interconnection of Customer-Owned Renewable Generation and Net Energy**

2 **Metering**

3 (1) Application and Scope. The purpose of this rule is to promote the development of small
4 customer-owned renewable generation, particularly photovoltaic and wind systems; diversify the
5 types of fuel used to generate electricity in Florida; lessen Florida's dependence on fossil fuels
6 for the production of electricity; minimize the volatility of fuel costs; encourage investment in
7 the state; improve environmental conditions; and, at the same time, minimize costs of power
8 supply to electric utilities and their customers. This rule applies to all electric utilities as defined
9 in Section 366.02(2), Florida Statutes

10 (2) Definitions. As used in this rule, the term

11 (a) "Customer-owned renewable generation" means an electric generating system located on a
12 customer's premises that is primarily intended to offset part or all of the customer's electricity
13 requirements with renewable energy.

14 (b) "Gross power rating" means the total maximum generating capacity of on-site customer-
15 owned renewable generation interconnected to the electric utility's distribution facilities.

16 (c) "Net metering" means a metering and billing methodology whereby customer-owned
17 renewable generation is allowed to offset the customer's electricity consumption on-site and
18 where (1) net customer usage is billed under the electric utility's otherwise applicable rate
19 schedule, and (2) excess customer-owned renewable generation delivered to the electric utility is
20 accumulated and paid for at the end of each calendar year at a rate equal to the electric utility's
21 non-fuel energy charge plus recovery clauses.

22 (d) "Renewable energy," is as defined in Section 377.803, Florida Statutes.

23 (3) Standard Interconnection Agreements. Each electric utility shall, within 30 days of the
24 CODING: Words underlined are additions; words in ~~struck-through~~ type are deletions from existing
25 law.

NOTICE OF PROPOSED RULE DEVELOPMENT
UNDOCKETED
PAGE 4

1 effective date of this rule, file for Commission approval a Standard Interconnection Agreement
2 for expedited interconnection of customer-owned renewable generation, up to 1 MW, that
3 complies with the following:

4 (a) Each customer-owned renewable generation facility and interconnection shall comply with
5 the following standards, as applicable:

6 1. IEEE 1547 (2003) Standard Interconnecting Distributed Resources with Electric Power

7 Systems; and

8 2. UL 1741 (2001) Inverters, Converters, and Controllers for Use in Independent Power Systems.

9 A copy of IEEE 1547 (2003), ISBN number 0-7381-3720-0, may be obtained from the Institute
10 of Electric and Electronic Engineers, Inc. (IEEE), 3 Park Avenue, New York, NY, 10016-5997.

11 A copy of UL 1741 (2001) may be obtained from COMM 2000, 1414 Brook Drive, Downers
12 Grove, IL 60515.

13 (b) Customer-owned renewable generation shall be considered certified for interconnected
14 operation if it has been submitted by a manufacturer to a nationally recognized testing and
15 certification laboratory, and has been tested and listed by the laboratory for continuous
16 interactive operation with an electric distribution system in compliance with the applicable codes
17 and standards listed in subsection (a).

18 (c) If the equipment package has been tested and listed in accordance with this section as an
19 integrated package, which includes a generator or other electric source, the equipment package
20 shall be deemed certified, and the electric utility shall not require further design review, testing,
21 or additional equipment other than that provided for in section (5).

22 (4) Customer Qualifications and Fees. Regardless of customer load, to qualify for expedited
23 interconnection under this rule, customer-owned renewable generation must have a gross power

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25 law.

1 rating that falls within one of the following ranges:

2 1. Tier 1 - 25 kW or less

3 2. Tier 2 – greater than 25 kW and less than or equal to 100 kW

4 3. Tier 3 – greater than 100 kW and less than or equal to 1 MW.

5 (a) Tier 1 customers who request interconnection of customer-owned renewable generation shall
6 not be charged fees in addition to those charged to other retail customers without self-generation,
7 including application fees.

8 (b) Along with the Standard Interconnection Agreement filed pursuant to section (3), each
9 electric utility may propose for Commission approval a standard application fee for Tiers 2 and
10 3, including an itemized accounting of each cost contained within the fee.

11 (c) The electric utility may also propose for Commission approval an Interconnection Study
12 Charge for Tier 3.

13 (d) The electric utility shall show that their fees and charges are cost-based and reasonable. No
14 fees or charges shall be assessed for interconnecting customer-owned renewable generation
15 without prior Commission approval.

16 (5) Contents of Standard Interconnection Agreement.

17 (a) Each electric utility’s customer-owned renewable generation Standard Interconnection
18 Agreement shall, at a minimum, contain the following:

19 1. A requirement that customer-owned renewable generation must be inspected and approved by
20 local code officials prior to its operation in parallel with an electric utility to ensure compliance
21 with applicable local codes.

22 2. Provisions that permit the electric utility to inspect customer-owned renewable generation and
23 its component equipment, and the documents necessary to ensure compliance with sections (2)

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25 law.

1 through (4). The electric utility shall have the right to have personnel present at the initial testing
2 of customer equipment and protective apparatus.

3 3. A provision that the customer who operates customer-owned renewable generation is
4 responsible for protecting its generating equipment, inverters, protective devices, and other
5 system components from damage from the normal and abnormal conditions and operations that
6 occur on the electric utility system in delivering and restoring power; and is responsible for
7 ensuring that customer-owned renewable generation equipment is inspected, maintained, and
8 tested in accordance with the manufacturer's instructions to ensure that it is operating correctly
9 and safely.

10 4. A requirement for general liability insurance for personal and property damage in the amount
11 of no more than \$100,000 for Tiers 1 and 2, and no more than \$1 million for Tier 3.

12 5. Identification of any fees or charges approved pursuant to section (4).

13 (b) Each electric utility's customer-owned renewable generation Standard Interconnection
14 Agreement may require the customer to:

15 1. Install, at the customer's expense, a manual disconnect switch of the visible load break type to
16 provide a separation point between the AC power output of the customer-owned renewable
17 generation and any customer wiring connected to the electric utility's system. The manual
18 disconnect switch shall be mounted separate from the meter socket and shall be readily
19 accessible to the electric utility and capable of being locked in the open position with an electric
20 utility padlock. The electric utility may open the switch, isolating the customer-owned
21 renewable generation, without prior notice to the customer. To the extent practicable, however,
22 prior notice shall be given.

23 2. Provide a written agreement to hold harmless and indemnify the electric utility from all loss

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1 resulting from the operation of the customer-owned renewable generation, except in those cases
2 where loss occurs due to the negligent actions of the electric utility.

3 (6) Administrative Requirements. Upon request the electric utility shall provide, within 5
4 business days, an application for interconnection detailing the information necessary to execute
5 the Standard Interconnection Agreement. Within 10 business days of receipt of the customer's
6 application, the electric utility shall provide written notice that it has received all documents
7 required by the Standard Interconnection Agreement. The written notice shall also include dates
8 for any physical inspection of the customer-owned renewable generation necessary for the
9 electric utility to confirm compliance with sections (2) through (5). The Standard
10 Interconnection Agreement shall be executed by the electric utility within 30 calendar days of
11 receipt of a completed application for Tiers 1 and 2, and within 60 calendar days for Tier 3 if an
12 interconnection study is necessary. The customer must execute the Standard Interconnection
13 Agreement and return it to the electric utility at least 5 business days prior to beginning parallel
14 operations.

15 (7) Conditions for Disconnect. Any of the following conditions shall be cause for the electric
16 utility to disconnect customer-owned renewable generation from its system:

17 (a) Electric utility system emergencies or maintenance requirements;

18 (b) Hazardous conditions existing on the electric utility system due to the operation of the
19 customer's generating or protective equipment as determined by the electric utility;

20 (c) Adverse electrical effects, such as power quality problems, on the electrical equipment of the
21 electric utility's other electric consumers caused by the customer-owned renewable generation as
22 determined by the electric utility;

23 (e) Failure of the customer to maintain the required insurance coverage.

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1 (8) Net Metering.

2 (a) Each electric utility shall enable each customer-owned renewable generation facility
3 interconnected to the electric utility's electrical grid pursuant to this rule to net meter.

4 (b) Each electric utility shall install, at no additional cost to the customer, metering equipment at
5 the point of delivery capable of measuring the difference between the electricity supplied to the
6 customer from the electric utility and the electricity generated by customer-owned renewable
7 generation, including excess electric energy delivered to the electric utility's electrical grid.

8 (c) Meter readings shall be taken monthly on the same cycle as required under the otherwise
9 applicable rate schedule.

10 (d) The electric utility shall charge for electricity used by the customer in excess of the
11 generation supplied by customer-owned renewable generation in accordance with normal billing
12 practices.

13 (e) During any billing cycle, excess customer-owned renewable generation delivered to the
14 electric utility's electrical grid shall be credited to the customer's energy consumption for the
15 next month's billing cycle.

16 (f) Energy credits produced pursuant to subsection (8)(e) shall accumulate and be used to offset
17 the customer's energy usage in subsequent months for a period of not more than twelve months.

18 At the end of each calendar year, the electric utility shall pay the customer for any unused energy
19 credits at a rate equal to the electric utility's non-fuel energy charge plus recovery clauses under
20 the otherwise applicable rate schedule. Payment for accumulated year-end energy credits shall
21 not include any portion of the applicable customer charge or demand charge.

22 (g) When a customer leaves the system, that customer's unused credits for excess kWh generated
23 shall be paid to the customer at a rate equal to the electric utility's non-fuel energy charge plus
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1 recovery clauses under the otherwise applicable rate schedule.

2 (9) Reporting Requirements. Each electric utility shall report the following, by April 1 of each
3 year:

4 (a) Total number of customer-owned renewable generation interconnections;

5 (b) Total kW capacity of customer-owned renewable generation interconnected;

6 (c) Total kWh received by interconnected customers from the electric utility, by month and by
7 year for the previous calendar year;

8 (d) Total kWh customer-owned renewable generation delivered to the electric utility, by month
9 and by year for the previous calendar year; and

10 (e) Total energy payments made to interconnected customers for customer-owned renewable
11 generation delivered to the electric utility.

12 (f) For each individual customer-owned renewable generation interconnection:

13 1. Renewable technology utilized;

14 2. Gross power rating;

15 3. Geographic location by county;

16 4. Date interconnected.

17 (10) Dispute Resolution.

18 (a) When an electric utility refuses to interconnect with customer-owned renewable generation or
19 provide net metering, or attempts to impose unreasonable standards or conditions, the customer

20 may petition the Commission for relief. The electric utility shall have the burden of

21 demonstrating to the Commission why interconnection with the customer-owned renewable
22 generation should not be required or why net metering should not be provided, or that the

23 standards or conditions the electric utility seeks to impose on the customer-owned renewable

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1 generation are reasonable..

2 (b) The Commission will resolve each issue set forth in the petition in an expedited manner.

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4 Specific Authority 350.127(2), 366.05(1), FS. Law Implemented 366.02(2), 366.04(2)(c), (5), (6), 366.041,

5 366.05(1), 366.81, 366.82(1),(2), 366.91(2), FS. History--New 8-15-07.

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7 ~~25-6.065 Interconnection of Small Photovoltaic Systems.~~

8 ~~(1) A small photovoltaic system (SPS) is a solar powered generating system that uses an inverter~~
9 ~~rated at no more than 10 kW alternating current (AC) power output and is primarily intended to~~
10 ~~offset part or all of a customer's current electricity requirements.~~

11 ~~(2) Each investor owned electric utility (utility), within 30 days of the effective date of this rule,~~
12 ~~shall file for Commission approval a Standard Interconnection Agreement for interconnecting an~~
13 ~~SPS. Where a utility refuses to interconnect with an SPS or attempts to impose unreasonable~~
14 ~~standards or conditions, the SPS customer may petition the Commission for relief. The utility~~
15 ~~shall have the burden of demonstrating to the Commission why interconnection with the SPS~~
16 ~~should not be required or that the standards or conditions the utility seeks to impose on the SPS~~
17 ~~are reasonable. The SPS Standard Interconnection Agreement shall, at a minimum, contain the~~
18 ~~following:~~

19 ~~(a) A list of standards approved by nationally recognized professional organizations that address~~
20 ~~the design, installation, and operation of the SPS. It is the customer's responsibility to ensure~~
21 ~~compliance with such standards.~~

22 ~~(b) A requirement that the SPS must be inspected and approved by local code officials prior to its~~
23 ~~operation in parallel with an investor owned electric utility to ensure compliance with applicable~~
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1 ~~local codes.~~

2 ~~(e) A requirement for general liability insurance for personal and property damage in the amount~~
3 ~~of no more than \$100,000. A homeowner's policy that furnishes at least this level of liability~~
4 ~~coverage will meet the requirement for insurance.~~

5 ~~(d) Identification of a reasonable charge for processing the application for interconnection.~~

6 ~~(e) Provisions that permit the utility to inspect the SPS and its component equipment, and the~~
7 ~~documents necessary to ensure compliance with paragraphs (a) through (d). The utility has the~~
8 ~~right to have personnel present at the initial testing of customer equipment and protective~~
9 ~~apparatus.~~

10 ~~(f) A provision that the customer who operates an SPS is responsible for protecting its generating~~
11 ~~equipment, inverters, protection devices, and other system components from damage from the~~
12 ~~normal and abnormal conditions and operations that occur on the utility system in delivering and~~
13 ~~restoring system power; and is responsible for ensuring that the SPS equipment is inspected,~~
14 ~~maintained, and tested in accordance with the manufacturer's instructions to ensure that it is~~
15 ~~operating correctly and safely.~~

16 ~~(3) The SPS Interconnection Agreement may require the customer to:~~

17 ~~(a) Install, at the customer's expense, a manual disconnect switch of the visible load break type~~
18 ~~to provide a separation point between the AC power output of the SPS and any customer wiring~~
19 ~~connected to the utility's system. The manual disconnect switch shall be mounted separate from~~
20 ~~the meter socket and shall be readily accessible to the utility and capable of being locked in the~~
21 ~~open position with a utility padlock. The utility may open the switch, isolating the SPS, without~~
22 ~~prior notice to the customer. To the extent practicable, however, prior notice shall be given.~~

23 ~~(b) Provide a written agreement to hold harmless and indemnify the utility from all loss resulting~~
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25 ~~law.~~

1 ~~from the operation of the SPS, except in those cases where loss occurs due to the negligent~~
2 ~~actions of the utility.~~

3 ~~(4) The utility shall provide the customer with written notice that it has received the documents~~
4 ~~required by the Standard Interconnection Agreement within 10 business days of receipt. The~~
5 ~~customer shall not begin parallel operations until the customer has received this written notice.~~

6 ~~(5) Any of the following conditions shall be cause for the utility to disconnect the SPS from its~~
7 ~~system:~~

8 ~~(a) Utility system emergencies or maintenance requirements;~~

9 ~~(b) Hazardous conditions existing on the utility system due to the operation of the customer's~~
10 ~~SPS generating or protective equipment as determined by the utility;~~

11 ~~(c) Adverse electrical effects (such as power quality problems) on the electrical equipment of the~~
12 ~~utility's other electric consumers caused by the SPS as determined by the utility; or~~

13 ~~(d) Failure of the customer to maintain the required insurance. The SPS shall be reconnected to~~
14 ~~the utility grid as soon as practical once the conditions causing the disconnection cease to exist.~~

15 ~~(6) The utility may install an additional meter or metering equipment on the customer's premises~~
16 ~~capable of measuring any excess kilowatt hours produced by the SPS and delivered back to the~~
17 ~~utility. The cost of the meter, installation, maintenance, and any recurring or non-recurring costs~~
18 ~~for reading and billing for this second meter shall be borne by the utility. The value of such~~

19 ~~excess generation shall be credited to the customer's bill based on the host utility's COG-1 tariff,~~
20 ~~or by other applicable tariffs approved by the Florida Public Service Commission. If the utility~~
21 ~~does not install such a meter or metering equipment, the utility shall permit the customer to net~~
22 ~~meter any excess power delivered to the utility by use of a single standard watt-hour meter~~

23 ~~capable of reversing directions to offset recorded consumption by the customer. If the kilowatt-~~
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NOTICE OF PROPOSED RULE DEVELOPMENT
UNDOCKETED
PAGE 13

1 ~~hour of energy produced by the SPS exceeds the customer's kilowatt-hour consumption for any~~
2 ~~billing period, such that when the meter is read the value displayed on the register is less than the~~
3 ~~value displayed on the register when it was read at the end of the previous billing period, the~~
4 ~~utility shall carry forward credit for the excess energy to the next billing period. Credits may~~
5 ~~accumulate and be carried forward for a 12-month period specified by the utility in the SPS~~
6 ~~Interconnection Agreement. In no event shall the customer be paid for excess energy delivered to~~
7 ~~the utility at the end of the 12-month period.~~

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9 Specific Authority 350.127(2), 366.05(1) FS. Law Implemented 366.04(2)(c), (5), (6), 366.041,
10 366.05(1), 366.81 FS. History—New 2-11-02.

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AGENDA
Rule Development Workshop: Interconnection and Net Metering from
Customer-Owned Renewable Generation

August 30, 2007

- A. **Opening Remarks and Welcome - Chairman Lisa Edgar
Presentations
9:30 a.m. – 10:30 a.m.**
- B. **Explanation and Discussion of Proposed Rule on Interconnection of Customer-
Owned Renewable Generation and Net Metering – Staff
10:30 a.m. – 11:00 a.m.**
- C. **Questions and Comments on *Net Metering* by Commissioners and Interested
Persons
11:00 a.m. – 12:30 p.m.**
- D. **12:30 p.m. – 1:30 p.m.: Lunch**
- E. **Questions and Comments on *Net Metering* (continued)
1:30 p.m. – 2:30 p.m.**
- F. **Questions and Comments on *Interconnection* by Commissioners and Interested
Persons
2:30 p.m. – 4:30 p.m.**
- G. **Public Comment**
- H. **Schedule for Filing Written Comments – Staff**
- I. **Adjourn**