

State of Florida



Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: August 21, 2008

TO: Office of Commission Clerk (Cole)

FROM: Office of Strategic Analysis and Governmental Affairs (Chase, Clemence, Crawford, Webb)
Division of Economic Regulation (Kummer)
Office of the General Counsel (Brown, Sayler)

RE: Docket No. 080255-EI – Petition for approval of standard interconnection agreements for expedited interconnection of customer-owned renewable generation and associated net metering tariff, by Tampa Electric Company.
Docket No. 080257-EI – Petition for approval of net metering tariff, new interconnection agreements, and modification of various related tariff sheets, by Progress Energy Florida, Inc.
Docket No. 080260-EI – Petition for approval of standard interconnection agreements for Tier 1 through Tier 3 customer-owned renewable generation systems and revisions to tariff sheets iv, 4.2, 4.16, and 9.1, by Gulf Power Company.
Docket No. 080265-EI – Petition for approval of net metering tariff and standard interconnection agreements, by Florida Power & Light Company.
Docket No. 080294-EI – Petition for approval of standard interconnection agreements for customer-owned renewable generation systems by Florida Public Utilities Company.

AGENDA: 09/04/08 – Regular Agenda – Tariff Filing – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Administrative

CRITICAL DATES: 01/07/09 (8 month effective date); FPUC – 01/28/09

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\SGA\WP\080255.RCM.DOC

Case Background

On April 7, 2008, Commission amendments to Rule 25-6.065, Florida Administrative Code, relating to interconnection and net metering of customer-owned renewable generation became effective.¹ The purpose of the rule is to promote the development of customer-owned renewable generation up to 2 Megawatts in size, by expediting the interconnection of such generation and by minimizing costs that customers might experience when attempting to interconnect to a utility system. In addition, the rule permits customers to offset electric consumption through net metering, further mitigating costs associated with self-generation.

The new rule requires each investor-owned utility (IOU) to file standard interconnection agreements and tariffs for Commission approval. These interconnection agreements and tariffs must specify: (1) the national safety standards for interconnection; (2) customer qualifications and fees; (3) contents of the standard interconnection agreements; (4) provisions for the manual disconnect switch; (5) administrative requirements; and (6) net metering provisions. On May 7, 2008, Florida Power & Light Company (FPL), Progress Energy Florida, Inc. (PEF), Tampa Electric Company (TECO), and Gulf Power Company (Gulf) filed tariffs as required by the rule. On May 30, 2008, Florida Public Utilities Company (FPUC) filed its tariff. By Order No. PSC-08-0468-PCO-EI, issued July 21, 2008, the Commission suspended the tariffs filed by the IOUs. This memorandum is staff's recommendation regarding approval of those interconnection agreements and the associated tariff revisions.

The Commission has jurisdiction over this matter pursuant to Sections 366.04, 366.05, 366.81, 366.82, 366.91, and 366.92, Florida Statutes.

¹ See Order No. PSC-08-0161-FOF-EI, issued March 19, 2008, Docket No. 070674-EI, In re: Interconnection and Net Metering of Customer-Owned Renewable Generation.

Discussion of Issues

Issue 1: Should the standard interconnection agreements and related revisions to the tariffs filed by Florida Power & Light Company (FPL), Progress Energy Florida, Inc. (PEF), Tampa Electric Company (TECO), Gulf Power Company (Gulf) and Florida Public Utilities Company (FPUC) be approved?

Recommendation: Yes, the amended tariffs, including the standard interconnection agreements, are in compliance with Rule 25-6.065, Florida Administrative Code, and should be approved. (Chase, Clemence, Crawford, Webb)

Staff Analysis: As mentioned in the Case Background, the investor-owned utilities (IOUs) have filed tariffs, including standard interconnection agreements as required by Rule 25-6.065, Florida Administrative Code. This rule details the standards and qualifications for customer-owned renewable generation, the minimum contents of the standard interconnection agreement, and the administrative requirements to expedite the interconnection of customer-owned renewable generation. In reviewing the IOUs' filings, staff analyzed each utility's proposed standard interconnection agreement for conformance with the rule, and compared similarities and differences among the IOUs' filings. In the review process, staff requested additional information and met several times with each utility to clarify the proposed agreements and gain as much uniformity in approach among utilities as practical. As a result, while each IOU's standard agreements are somewhat different, the contents are substantially the same and all are in compliance with the rule. The major difference among the IOUs' filings is in the amount and applicability of the proposed fees, which are discussed below.

Staff organized this analysis by describing each major topic contained in the rule and providing a discussion of how the IOUs have incorporated the topic into their proposed standard interconnection agreements and tariffs. For your convenience, we have appended the revised rule to this memorandum as Attachment A.

1. Standards and qualifications for customer-owned renewable generation

Requirements of rule - Rule 25-6.065(3) and (4)(a)- (c), F.A.C.

To qualify for expedited interconnection under this rule, the customer-owned renewable generation must comply with certain interconnection standards set by the Institute of Electric and Electronic Engineers, Inc. (IEEE) and Underwriters Laboratory (UL). The renewable generation must have a gross power rating that does not exceed 90% of the customer's utility distribution service rating and fall within one of the following ranges:

Tier 1 – 10 kW or less;

Tier 2 – greater than 10 kW and less than or equal to 100 kW; or

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

Date: August 21, 2008

Customer-owned renewable generation is considered certified for interconnection if it has been submitted by a manufacturer to a nationally recognized testing and certification laboratory and has been listed by the laboratory for continuous interactive operation with an electric distribution system in compliance with applicable codes and standards. The customer-owned renewable generation must include a utility-interactive inverter, or other device that performs the function of automatically isolating the customer-owned generation equipment from the electric grid in the event the electric grid loses power.

IOU Proposed Standard Interconnection Agreements

The standard interconnection agreements filed by the IOUs incorporate the above standards and qualifications for customer-owned renewable generation.

2. Fees and Charges

Requirements of Rule – Rule 25-6.065(4)(d)-(h), F.A.C.

The rule allows each IOU to propose for Commission approval a standard application fee for Tiers 2 and 3 systems and an Interconnection Study Charge for Tier 3 systems, which are cost-based and reasonable. Customers with Tier 1 systems cannot be charged any fees for interconnection of renewable generation.

IOU Proposed Standard Interconnection Agreements

Consistent with the rule, no IOU proposes a fee applicable to customers with Tier 1 systems. The proposed fees for Tier 2 and 3 systems are shown below:

UTILITY	TIER 2 APPLICATION FEE	TIER 3 APPLICATION FEE	TIER 3 INTERCONNECTION STUDY DEPOSIT/FEE
PEF	\$240	\$750	Included in Tier 3 application fee
FPL	\$400	\$1,000	\$2,000 deposit
Gulf	\$477	\$477	\$2,680 deposit
TECO	\$250	\$500	\$3,000 deposit
FPUC	\$350	\$350	\$2,000 deposit

Tier 2 Application Fees:

As required by the rule, all of the IOUs provided cost justification for the Tier 2 application fees, which are designed to recover the general and administrative, engineering and labor costs associated with the application review, technical analysis and on-site inspection of the customer's renewable system. Staff reviewed the cost data supplied by each IOU and found that they all included basically the same types of costs, although the estimated amount of time for each function varies somewhat. Staff believes the proposed fees for each IOU are reasonable and reflect the differences in the utilities' operations and system costs.

Tier 3 Application Fees:

All of the IOUs provided cost justification for the Tier 3 application fees as required by the rule. As with the Tier 2 application fees, these fees are designed to recover the general and administrative, engineering, and labor costs associated with the application review, technical analysis, and on-site inspection of the customer's renewable system. FPUC and Gulf assumed these costs would be the same as those associated with Tier 2 systems. PEF, TECO and FPL have proposed higher fees for Tier 3 systems to recover estimated additional costs related to more extensive administrative and engineering review of the plans and facilities of these larger systems. In addition, PEF and FPL have included costs in the application fee associated with the interconnection of the Tier 3 systems.

In the case of PEF, the application fee also includes the cost of performing an interconnection study. The rule allows the IOUs to collect an interconnection study charge for Tier 3 systems. PEF plans to conduct such a study on all Tier 3 systems due to the size of the generation and the potential impact to the utility system and other customers in the general area. For ease of administration, PEF designed the Tier 3 application fee to include an average of the costs to conduct an interconnection study, including the plan review, site visits, engineering design and coordination studies.

The FPL Tier 3 application fee is designed also to cover the cost of the Fast Track Screens, which provide an initial review of the impact on the FPL system of interconnecting the renewable system. These screens are used to determine whether an interconnection study is necessary. If the system passes the screens, no interconnection study is conducted and no further charge is assessed.

Staff has reviewed the cost data provided by each utility and believes that they are based on reasonable estimates of the work that is required. While the fees vary by IOU, they reflect the differences in the utilities' operations and system costs.

Interconnection Study Charge:

As noted above, the rule allows the IOUs to charge an interconnection study charge for Tier 3 systems. The interconnection study entails evaluating the fault current and voltage profile of the renewable system, and analyzing the potential for back feed to the utility's grid. As mentioned above, PEF plans to conduct such a study for all Tier 3 systems and has included the estimated cost in the application fee. FPL, TECO, Gulf, and FPUC plan to conduct a preliminary

Date: August 21, 2008

assessment of the customer's renewable system and its potential impact on the grid in order to determine whether an interconnection study is warranted. In the case of FPL, if the system passes the Fast Track Screens described above, an interconnection study would not be required and no further charge is assessed. TECO, Gulf, and FPUC will collect the deposit shown in the above table only if it is first determined that an interconnection study is necessary. The deposit amounts for FPL, TECO, Gulf and FPUC represent the maximum amount that will be charged for the interconnection study. In all cases, if the actual cost of the study is less than the deposit, the overage will be refunded to the customer upon completion of the study. If the study costs more than the amount of the deposit, there will be no additional charge to the customer.

As required by the rule, the IOUs provided cost data supporting the proposed interconnection study charges. Staff has reviewed the data and met with each utility to discuss the cost justification and the process each utility plans to use. The proposed deposit amounts appear to be based on the functions and the estimated costs to complete an interconnection study. Staff notes that the IOUs do not have significant experience with interconnecting customer-owned renewable generation. As they gain more experience, the costs involved will be more certain and the need for interconnection studies will be more easily identified. The IOUs can request revisions to the tariffs, if needed, based on the actual experience. For these reasons, staff believes the cost data and the approach of each company is reasonable at this time.

3. Contents of Standard Interconnection Agreement

Requirements of Rule – Rule 25-6.065(5), F.A.C.

The standard interconnection agreements filed by the IOUs must contain, at a minimum:

(a) a requirement that customer-owned renewable generation must be inspected and approved by local code officials prior to its operation in parallel with the IOU;

(b) provisions that permit the IOU to inspect customer-owned renewable generation and necessary documents. The customer shall notify the IOU at least 10 days prior to initially placing customer equipment in service and the IOU shall have the right to have personnel present on the in-service date. If the customer subsequently modifies its renewable generation equipment to increase its gross power rating, the customer must notify the IOU by submitting a new application specifying the modifications at least 30 days prior to making the modifications;

(c) a provision that the customer is responsible for protecting the renewable generating equipment and all system components from damage from the normal and abnormal conditions and operations that occur on the IOU system in delivering and restoring power and is responsible for ensuring that customer-owned renewable generation equipment is inspected, maintained and tested to ensure that it is operating correctly and safely;

(d) a provision that the customer shall hold harmless and indemnify the IOU for all loss to third parties resulting from the operation of the customer-owned renewable generation, except where the loss occurs due to the negligent actions of the IOU. Also, a provision that the IOU shall hold the customer harmless under like conditions;

(e) a requirement for general liability insurance or sufficient guarantee and proof of self-insurance, in the amount of no more than \$1 million for Tier 2 systems and no more than \$2 million for Tier 3 systems. The IOU shall not require liability insurance for Tier 1 systems; however, the IOU may include a recommendation in the standard interconnection agreement that customers of Tier 1 systems carry an appropriate level of liability insurance; and

(f) Identification of any fees or charges approved by the Commission.

IOU Proposed Standard Interconnection Agreements

The standard interconnection agreements filed by each IOU contain provisions consistent with the above requirements in the rule. The amount of the fees and charges were discussed previously.

4. Manual Disconnect Switch

Requirements of Rule – Rule 25-6.065(6)(a), F.A.C.

For Tier 2 and Tier 3 systems, each IOU may require the installation, at the customer's expense, of a manual disconnect switch to provide a separation point between the customer-owned renewable generation equipment and any customer wiring connected to the IOU's system. Tier 1 systems are exempt from this requirement unless the IOU elects to pay for the installation of the switch.

IOU Proposed Standard Interconnection Agreements

The standard interconnection agreements for each IOU address the requirement for installation of a manual disconnect switch for Tier 2 and 3 systems. The agreements also specify that if the IOU elects to install a manual disconnect switch for Tier 1 systems, it shall be at its own expense. In its standard interconnection agreement, TECO requires that all Tier 1 systems have a manual disconnect switch, to be installed at TECO's expense. The other IOUs have not required that manual disconnect switches be installed for Tier 1 systems. For customers of Tier 1 systems who elect not to install a manual disconnect switch, if a cause for disconnection occurs, the IOU may have to pull the customer's meter.

5. Cause for Disconnecting Customer-Owned Renewable Generation

Requirements of Rule – Rule 25-6.065(6)(c), F.A.C.

The rule indicates that the following conditions shall be cause for the IOU to disconnect customer-owned renewable generation from its system:

(a) emergencies or maintenance requirements on the IOU's electric system;

(b) hazardous conditions existing on the IOU system due to the operation of the customer's equipment as determined by the IOU;

Date: August 21, 2008

(c) adverse electrical effects, such as power quality problems, on the electrical equipment of the IOU's other electric consumers caused by the customer-owned renewable generation as determined by the IOU; and

(d) failure of the customer of a Tier 2 or Tier 3 system to maintain the required insurance coverage.

IOU Proposed Standard Interconnection Agreements

In the initial filings, all of the IOUs' standard interconnection agreements listed the above reasons for disconnection as "typical" reasons or "examples" of reasons for disconnection. Staff believes the interconnection agreements should limit the reasons for disconnection to only those stated in the rule. We believe the reasons provided in the rule are general enough in nature to encompass virtually every event that would warrant disconnection. We brought our concern to the attention of each IOU and they all willingly revised their standard interconnection agreements to comport with staff's understanding of the language in the rule.

6. Notice of Disconnecting Customer-Owned Renewable Generation

Requirements of Rule – Rule 25-6.065(6)(b), F.A.C.

The IOU may disconnect the customer-owned renewable generation pursuant to the above conditions without prior notice to the customer. However, prior notice shall be given to the extent practicable. If prior notice is not given, the IOU shall leave a door hanger notifying the customer of the action and an explanation of the condition necessitating such action. Reconnection of the customer-owned renewable generation shall be accomplished as soon as the condition necessitating disconnection is remedied.

IOU Proposed Standard Interconnection Agreements

The standard interconnection agreements filed by each IOU contain provisions consistent with the rule requirement on notice of disconnection of the customer's renewable generation system. In the event of emergency or hazardous conditions, all of the standard agreements filed by the IOUs contain language that permits access by the utility at any time, without notice, in order to operate a manual disconnect switch. In the case of a Tier 1 system which does not have a manual disconnect switch, the IOUs propose to disconnect the meter. If the customer's renewable generation is disconnected, even temporarily, the IOU will leave a door hanger notifying the customer of the disconnection and providing an explanation of the conditions requiring such action. This access without notice is very limited. Staff believes this is a reasonable provision and is consistent with the intent of the rule, which provides that the customer is responsible for protecting its renewable generating equipment and all system components, and for ensuring that the equipment is operating correctly and safely.

7. Inspections

Requirements of Rule – Rule 25-6.065(5)(b), F.A.C.

As mentioned previously, the rule permits the IOUs to inspect customer-owned renewable generation at the time of initial installation, and in the event the equipment is subsequently modified to increase its power rating. The rule does not specifically address or prevent inspections by the IOUs at other times. However, this subject was discussed at the December 18, 2007 Agenda Conference, and it was decided that staff would work with the IOUs on tariff provisions that allow for reasonable inspections.

IOU Proposed Standard Interconnection Agreements

The inspection language in the IOUs' standard interconnection agreements complies with the broad requirements of the rule. The IOUs have reserved the right to inspect the customer-owned renewable generation system: (1) at the time of in-service; (2) in the event the equipment is subsequently modified to increase its power rating; and (3) after providing the customer reasonable notice, for the limited purpose to inspect the system for on-going compliance or safety concerns. All of the IOUs' standard interconnection agreements contain similar language to allow access to the customer's systems for inspection purposes with as much notice as reasonably possible. None of the IOUs stated that they intend to perform regular inspections, but anticipate the need to inspect a customer's facilities in the event that there was some sort of disturbance or abnormality in the power quality that might be associated with the interconnected generator, or to meet its legal obligation to provide service to its customers. Staff believes this is a reasonable provision and is consistent with the intent of the rule.

8. Net Metering

Requirements of Rule – Rule 25-6.065(8), F.A.C.

The rule requires each IOU to enable an interconnected customer-owned renewable generation facility to net meter. Each IOU shall install, at no additional cost to the customer, metering equipment at the point of delivery capable of measuring the difference between the electricity supplied to the customer from the IOU and the electricity generated by the customer and delivered to the IOU's electric grid. The rule also details the net metering billing process.

IOU Proposed Standard Interconnection Agreements and Tariff Provisions

All of the standard interconnection agreements filed by the IOUs contain a provision allowing customers with interconnected renewable generation to net meter. In FPUC's case, the agreements contain all of the details of the net metering billing process. The agreements filed by PEF, Gulf, TECO, and FPL advise the customer of the availability of net metering and refer the customer to the net metering tariff for the details of the billing process.

In addition to filing tariff revisions to incorporate the proposed standard interconnection agreements, the IOUs filed related tariff revisions to incorporate the net metering billing provisions and eliminate the existing standard interconnection agreement for small photovoltaic systems. These tariff revisions are consistent with the rule and should be approved.

9. Renewable Energy Certificates

Requirements of Rule – Rule 25-6.065(9), F.A.C.

A Renewable Energy Certificate (REC) is a financial instrument that represents the unbundled, separable attribute of renewable energy and is equivalent to one megawatt-hour of electricity generated by a source of renewable energy. The rule provides that the customer shall retain any RECs associated with the electricity produced by their customer-owned renewable generation equipment. Any additional meters necessary for measuring the total renewable electricity generated for the purposes of receiving RECs shall be installed at the customer's expense, unless otherwise determined during negotiations for the sale of the customer's RECs to the IOU.

IOU Proposed Standard Interconnection Agreements

The standard interconnection agreements filed by the IOUs contain provisions consistent with the rule requirement above.

In conclusion, based on the analysis above, staff believes that the revised tariffs incorporating the standard interconnection agreements and net metering provisions filed by each of the IOUs are in compliance with Rule 25-6.065, Florida Administrative Code, and should be approved. Since the rule requirements represent a new process for the interconnection of customer-owned renewable generation, the IOUs did not have a significant amount of actual experience in order to determine the appropriate fees. As the IOUs gain experience they can request tariff revisions if necessary. In addition, pursuant to the rule, staff will be receiving reports from the IOUs, as well as the municipal and cooperative utilities, detailing the activity in this area. Through that process, we can also monitor the fees charged by the IOUs.

Issue 2: Should this docket be closed?

Recommendation: Yes, if Issue 1 is approved, these tariff revisions should become effective on October 1, 2008, and remain in effect, with revenues subject to refund, pending the outcome of any protest. If a protest to the approval of any one of the utility's tariff filings is filed within 21 days of the issuance of the order, it should not prevent the order from becoming final at the end of the protest period as to any IOU that is not the subject of a protest. (Brown, Sayler)

Staff Analysis: If Issue 1 is approved, the tariff revisions for all of the IOUs should become effective on October 1, 2008, and remain in effect, with revenues subject to refund, pending the outcome of any protest. The tariff approvals are intended to apply separately to each IOU. Accordingly, if a protest is filed to the approval of any one of the utility's tariff filings within 21 days of the issuance of the order, it should not prevent the order from becoming final at the end of the protest period as to any IOU that is not the subject of a protest.

25-6.065 Interconnection and Net Metering of Customer-Owned Renewable Generation.

(1) Application and Scope. The purpose of this rule is to promote the development of small customer-owned renewable generation, particularly solar and wind energy systems; diversify the types of fuel used to generate electricity in Florida; lessen Florida's dependence on fossil fuels for the production of electricity; minimize the volatility of fuel costs; encourage investment in the state; improve environmental conditions; and, at the same time, minimize costs of power supply to investor-owned utilities and their customers. This rule applies to all investor-owned utilities, except as otherwise stated in subsection (10).

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

(a) "Customer-owned renewable generation" means an electric generating system located on a customer's premises that is primarily intended to offset part or all of the customer's electricity requirements with renewable energy. The term "customer-owned renewable generation" does not preclude the customer of record from contracting for the purchase, lease, operation, or maintenance of an on-site renewable generation system with a third-party under terms and conditions that do not include the retail purchase of electricity from the third party.

(b) "Gross power rating" means the total manufacturer's AC nameplate generating capacity of an on-site customer-owned renewable generation system that will be interconnected to and operate in parallel with the investor-owned utility's distribution facilities. For inverter-based systems, the AC nameplate generating capacity shall be calculated by multiplying the total installed DC nameplate generating capacity by .85 in order to account for losses during the conversion from DC to AC.

(c) "Net metering" means a metering and billing methodology whereby customer-owned renewable generation is allowed to offset the customer's electricity consumption on-site.

(d) "Renewable energy," as defined in Section 377.803, F.S., means electrical, mechanical, or thermal energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat, or hydroelectric power.

(3) Standard Interconnection Agreements. Each investor-owned utility shall, within 30 days of the effective date of this rule, file for Commission approval a Standard Interconnection Agreement for expedited interconnection of customer-owned renewable generation, up to 2 MW, that complies with the following standards:

(a) IEEE 1547 (2003) Standard for Interconnecting Distributed Resources with Electric Power Systems;

(b) IEEE 1547.1 (2005) Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems; and

(c) UL 1741 (2005) Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources.

(d) A copy of IEEE 1547 (2003), ISBN number 0-7381-3720-0, and IEEE 1547.1 (2005), ISBN number 0-7381-4737-0, may be obtained from the Institute of Electric and Electronic Engineers, Inc. (IEEE), 3 Park Avenue, New York, NY, 10016-5997. A copy of UL 1741 (2005) may be obtained from COMM 2000, 1414 Brook Drive, Downers Grove, IL 60515.

(4) Customer Qualifications and Fees.

(a) To qualify for expedited interconnection under this rule, customer-owned renewable generation must have a gross power rating that:

1. Does not exceed 90% of the customer's utility distribution service rating; and

2. Falls within one of the following ranges:

Tier 1 - 10 kW or less;

Tier 2 – greater than 10 kW and less than or equal to 100 kW; or

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

(b) Customer-owned renewable generation shall be considered certified for interconnected operation if it has been submitted by a manufacturer to a nationally recognized testing and certification laboratory, and has been tested and listed by the laboratory for continuous interactive operation with an electric distribution system in compliance with the applicable codes and standards listed in subsection (3).

(c) Customer-owned renewable generation shall include a utility-interactive inverter, or other device certified pursuant to paragraph (4)(b) that performs the function of automatically isolating the customer-owned generation equipment from the electric grid in the event the electric grid loses power.

(d) For Tiers 1 and 2, provided the customer-owned renewable generation equipment complies with paragraphs (4)(a) and (b), the investor-owned utility shall not require further design review, testing, or additional equipment other than that provided for in

subsection (6). For Tier 3, if an interconnection study is necessary, further design review, testing and additional equipment as identified in the study may be required.

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

(f) Along with the Standard Interconnection Agreement filed pursuant to subsection (3), each investor-owned utility may propose for Commission approval a standard application fee for Tiers 2 and 3, including itemized cost support for each cost contained within the fee.

(g) Each investor-owned utility may also propose for Commission approval an Interconnection Study Charge for Tier 3.

(h) Each investor-owned utility shall show that their fees and charges are cost-based and reasonable. No fees or charges shall be assessed for interconnecting customer-owned renewable generation without prior Commission approval.

(5) Contents of Standard Interconnection Agreement. Each investor-owned utility's customer-owned renewable generation Standard Interconnection Agreement shall, at a minimum, contain the following:

(a) A requirement that customer-owned renewable generation must be inspected and approved by local code officials prior to its operation in parallel with the investor-owned utility to ensure compliance with applicable local codes.

(b) Provisions that permit the investor-owned utility to inspect customer-owned renewable generation and its component equipment, and the documents necessary to ensure compliance with subsections (2) through (4). The customer shall notify the investor-owned utility at least 10 days prior to initially placing customer equipment and protective apparatus in service, and the investor-owned utility shall have the right to have personnel present on the in-service date. If the customer-owned renewable generation system is subsequently modified in order to increase its gross power rating, the customer must notify the investor-owned utility by submitting a new application specifying the modifications at least 30 days prior to making the modifications.

(c) A provision that the customer is responsible for protecting the renewable generating equipment, inverters, protective devices, and other system components from damage from the normal and abnormal conditions and operations that occur on the investor-owned utility system in delivering and restoring power; and is responsible for ensuring that customer-owned renewable generation equipment is inspected, maintained, and tested in accordance with the manufacturer's instructions to ensure that it is operating correctly and safely.

(d) A provision that the customer shall hold harmless and indemnify the investor-owned utility for all loss to third parties resulting from the operation of the customer-owned renewable generation, except when the loss occurs due to the negligent actions of the investor-owned utility. A provision that the investor-owned utility shall hold harmless and indemnify the customer for all loss to third parties resulting from the operation of the investor-owned utility's system, except when the loss occurs due to the negligent actions of the customer.

(e) A requirement for general liability insurance for personal and property damage, or sufficient guarantee and proof of self-insurance, in the amount of no more than \$1 million for Tier 2, and no more than \$2 million for Tier 3. The investor-owned utility shall not require liability insurance for Tier 1. The investor-owned utility may include in the Interconnection Agreement a recommendation that Tier 1 customers carry an appropriate level of liability insurance.

(f) Identification of any fees or charges approved pursuant to subsection (4).

(6) Manual Disconnect Switch.

(a) Each investor-owned utility's customer-owned renewable generation Standard Interconnection Agreement may require customers to install, at the customer's expense, a manual disconnect switch of the visible load break type to provide a separation point between the AC power output of the customer-owned renewable generation and any customer wiring connected to the investor-owned utility's system. Inverter-based Tier 1 customer-owned renewable generation systems shall be exempt from this requirement, unless the manual disconnect switch is installed at the investor-owned utility's expense. The manual disconnect switch shall be mounted separate from, but adjacent to, the meter socket and shall be readily accessible to the investor-owned utility and capable of being locked in the open position with a single investor-owned utility padlock.

(b) The investor-owned utility may open the switch pursuant to the conditions set forth in paragraph (6)(c), isolating the customer-owned renewable generation, without prior notice to the customer. To the extent practicable, however, prior notice shall be given. If prior notice is not given, the utility shall at the time of disconnection leave a door hanger notifying the customer that their customer-owned renewable generation has been disconnected, including an explanation of the condition necessitating such action. The investor-owned utility shall reconnect the customer-owned renewable generation as soon as the condition necessitating disconnection is remedied.

(c) Any of the following conditions shall be cause for the investor-owned utility to disconnect customer-owned renewable generation from its system:

1. Emergencies or maintenance requirements on the investor-owned utility's electric system;
2. Hazardous conditions existing on the investor-owned utility system due to the operation of the customer's generating or protective equipment as determined by the investor-owned utility;
3. Adverse electrical effects, such as power quality problems, on the electrical equipment of the investor-owned utility's other electric consumers caused by the customer-owned renewable generation as determined by the investor-owned utility;
4. Failure of the customer to maintain the required insurance coverage.

(7) Administrative Requirements.

(a) Each investor-owned utility shall maintain on its website a downloadable application for interconnection of customer-owned renewable generation, detailing the information necessary to execute the Standard Interconnection Agreement. Upon request the investor-owned utility shall provide a hard copy of the application within 5 business days.

(b) Within 10 business days of receipt of the customer's application, the investor-owned utility shall provide written notice that it has received all documents required by the Standard Interconnection Agreement or indicate how the application is deficient. Within 10 business days of receipt of a completed application, the utility shall provide written notice verifying receipt of the completed application. The written notice shall also include dates for any physical inspection of the customer-owned renewable generation necessary for the investor-owned utility to confirm compliance with subsections (2) through (6), and confirmation of whether a Tier 3 interconnection study will be necessary.

(c) The Standard Interconnection Agreement shall be executed by the investor-owned utility within 30 calendar days of receipt of a completed application. If the investor-owned utility determines that an interconnection study is necessary for a Tier 3 customer, the investor-owned utility shall execute the Standard Interconnection Agreement within 90 days of a completed application.

(d) The customer must execute the Standard Interconnection Agreement and return it to the investor-owned utility at least 30 calendar days prior to beginning parallel operations and within one year after the utility executes the Agreement. All physical inspections must be completed by the utility within 30 calendar days of receipt of the customer's executed Standard Interconnection Agreement. If the inspection is delayed at the customer's request, the customer shall contact the utility to reschedule an inspection. The investor-owned utility shall reschedule the inspection within 10 business days of the customer's request.

(8) Net Metering.

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

(b) Each investor-owned utility shall install, at no additional cost to the customer, metering equipment at the point of delivery capable of measuring the difference between the electricity supplied to the customer from the investor-owned utility and the electricity generated by the customer and delivered to the investor-owned utility's electric grid.

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

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

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

(f) Energy credits produced pursuant to paragraph (8)(e) shall accumulate and be used to offset the customer's energy usage in subsequent months for a period of not more than twelve months. At the end of each calendar year, the investor-owned utility shall pay the customer for any unused energy credits at an average annual rate based on the investor-owned utility's COG-1, as-available energy tariff.

(g) When a customer leaves the system, that customer's unused credits for excess kWh generated shall be paid to the customer at an average annual rate based on the investor-owned utility's COG-1, as-available energy tariff.

(h) Regardless of whether excess energy is delivered to the investor-owned utility's electric grid, the customer shall continue to pay the applicable customer charge and applicable demand charge for the maximum measured demand during the billing period. The investor-owned utility shall charge for electricity used by the customer in excess of the generation supplied by customer-owned renewable generation at the investor-owned utility's otherwise applicable rate schedule. The customer may at their sole discretion choose to take service under the investor-owned utility's standby or supplemental service rate, if available.

(9) Renewable Energy Certificates. Customers shall retain any Renewable Energy Certificates associated with the electricity

produced by their customer-owned renewable generation equipment. Any additional meters necessary for measuring the total renewable electricity generated for the purposes of receiving Renewable Energy Certificates shall be installed at the customer's expense, unless otherwise determined during negotiations for the sale of the customer's Renewable Energy Certificates to the investor-owned utility.

(10) Reporting Requirements. Each electric utility, as defined in Section 366.02(2), F.S., shall file with the Commission as part of its tariff a copy of its Standard Interconnection Agreement form for customer-owned renewable generation. In addition, each electric utility shall report the following, by April 1 of each year.

- (a) Total number of customer-owned renewable generation interconnections as of the end of the previous calendar year;
- (b) Total kW capacity of customer-owned renewable generation interconnected as of the end of the previous calendar year;
- (c) Total kWh received by interconnected customers from the electric utility, by month and by year for the previous calendar year;
- (d) Total kWh of customer-owned renewable generation delivered to the electric utility, by month and by year for the previous calendar year; and
- (e) Total energy payments made to interconnected customers for customer-owned renewable generation delivered to the electric utility for the previous calendar year, along with the total payments made since the implementation of this rule.
- (f) For each individual customer-owned renewable generation interconnection:
 - 1. Renewable technology utilized;
 - 2. Gross power rating;
 - 3. Geographic location by county; and
 - 4. Date interconnected.

(11) Dispute Resolution. Parties may seek resolution of disputes arising out of the interpretation of this rule pursuant to Rule 25-22.032, F.A.C, Customer Complaints, or Rule 25-22.036, F.A.C., Initiation of Formal Proceedings.

Specific Authority 350.127(2), 366.05(1), 366.92 FS. Law Implemented 366.02(2), 366.04(2)(c), (5), (6), 366.041, 366.05(1), 366.81, 366.82(1), (2), 366.91(1), (2), 366.92 FS. History—New 2-11-02, Amended 4-7-08.