Entergy

Entergy Arkansas, Inc.
Regulatory Affairs
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February 5, 2008

Ms. Pat Murphy, Manager
Energy and Water Utility Division
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0505

Re: Tennessee Regulatory Authority Docket No. 08-00022
Entergy Arkansas, Inc. Proposed Revision to Net Metering Tariff, Standard Interconnection Agreement, and Safety And Performance Standards

Dear Ms. Murphy:

On December 20, 2007, Entergy Arkansas, Inc. (EAI) filed with the Arkansas Public Service Commission (APSC) in Docket No. 07-159-TF its proposed revision to Rate Schedule No. 3, Optional Net Metering Service (NM), the Standard Interconnection Agreement for Net Metering Facilities in Policy Schedule No. 13, Section 13.16, the Safety and Performance Standards for Net Metering Facilities in Policy Schedule No. 14, and Table of Contents Sheet No. TC-3. This compliance filing was made pursuant to Order No. 9 in APSC Docket No. 06-105-U which directed all Arkansas electric utilities to file revised Net Metering tariffs in accordance with the revised Net Metering Rules approved in that docket.

On January 17, 2008, APSC Staff witness Regina L. Butler filed Compliance Testimony recommending approval of EAI's revised tariffs filed December 20. The APSC issued Order No. 1 on January 18, 2008, approving EAI's requested revisions to these tariffs.

An original and 13 copies of each of these filings are attached along with copies of the revised tariffs.

The purpose of this letter is to file these revisions with the Tennessee Regulatory Authority for its acknowledgement and approval. All other existing Rate Schedules remain in effect without change. Attached is a check for $25.00 for EAI's filing fee.

Should you have any questions concerning this filing, please call me at (501) 377-4338.

Sincerely,

David E. Hunt

David E. Hunt
Manager, Regulatory Affairs

Attachments

3.0. NET METERING

3.1. REGULATORY AUTHORITY

The Arkansas Legislature has delegated authority to the Arkansas Public Service Commission ("APSC" or the "Commission") to regulate public utilities in the State of Arkansas, including Entergy Arkansas, Inc. ("EAI" or the "Company"). The APSC's regulatory authority over the provision of electric service applies not only in the Distribution Service area allocated to EAI by the APSC but also extends to service to customers who have been released to EAI by other electric distribution utilities, when such release for service has been approved by the Commission pursuant to Rule 7.04.(b) of the Commission's Rules of Practice and Procedure. Similarly, the Tennessee Regulatory Authority exercises such authority delegated to it by the Tennessee legislature in areas of the State of Tennessee served by EAI.

3.2. AVAILABILITY

3.2.1. To any customer who takes service under one of the following standard rate schedules, (CT)
General Purpose Residential Service (RS), Optional Residential Time-Of-Use (RT), Small General Service (SGS), Nonresidential General Farm Service (GFS), Large General Service (LGS), Large General Service Time-Of-Use (GST), Large Power Service (LPS) or Large Power Service Time-Of-Use (PST) who has installed a net metering facility and signed a Standard Interconnection Agreement for Net Metering Facilities with the Company. Such facilities must be located on the customer's premise and intended primarily to offset some or all of the customer's energy usage at that location. The (AT)
generating capacity of net metering facilities may not exceed twenty-five kilowatts (25 kW) for residential use or three hundred kilowatts (300 kW) for non-residential use.

The provisions of the customer's standard rate schedule are modified as specified herein.

3.2.2. Customers may not take service under this tariff and simultaneously take service under the provisions of any other alternative source generation or co-generation tariff.

3.3. MONTHLY BILLING

3.3.1. On a monthly basis, the net metering customer shall be billed charges applicable under the currently effective standard rate schedule and any appropriate rider schedules. Under net metering, only the kilowatthour (kWh) units of a customer's bill are affected.

3.3.2. If the electricity supplied by the Company exceeds the electricity generated by the net metering customer and fed back to the Company during the billing period, the net metering customer shall be billed for the net billable kWhs supplied by the Company in accordance with the rates and charges under the Company's standard rate schedule applicable to the customer.

3.3.3. If the electricity generated by the net metering customer and fed back to the Company during the billing period exceeds the electricity supplied by the Company, such net excess generation shall be accumulated and credited to the customer's account in subsequent billing periods in the calendar year through December or until such accumulated balance has been fully depleted. Any accumulated net excess generation credit balance shall expire at the end of each calendar year. (CT,AT)

3.3.4. Any renewable energy credit created as the result of electricity supplied by a net-metering customer is the property of the net-metering customer that generated the renewable credit. (AT)

13.16. STANDARD INTERCONNECTION AGREEMENT FOR NET METERING FACILITIES

I. STANDARD INFORMATION

Section 1. Customer Information

Name:_____

Mailing Address:_____

City:_____ State:_____ Zip Code:_____

Facility Location (if different from above):_____

Daytime Phone:_____ Evening Phone:_____

Is the unit able to run when Entergy electricity is unavailable? Yes ___ No___ (AT)

Company Customer Account (from electric bill):_____

Section 2. Generation Facility Information

System Type: Solar Wind Hydro Geothermal Biomass Fuel Cell Micro turbine

Generator Rating (kW):_____ AC or DC (circle one)

Describe Location of Accessible and Lockable Disconnect:_____

Inverter Manufacturer:_____ Inverter Model:_____

Inverter Location:_____ Inverter Power Rating:_____

Section 3. Installation Information

Attach a detailed electrical diagram of the net metering facility.

Installed by:_____ Qualifications/Credentials:_____

Mailing Address:_____

City:_____ State:_____ Zip Code:_____

Daytime Phone:_____ Installation Date:_____

Section 4. Certification

1. The system has been installed in compliance with the local Building/Electrical Code of _____ _____ (City/County).

Signed (Inspector):

_____Date:_____

(In lieu of signature of inspector, a copy of the final inspection certificate may be attached.)

2. The system has been installed to my satisfaction and I have been given system warranty information and an operation manual, and have been instructed in the operation of the system.
Signed (Owner): _____ Date: _____

Section 5. Company Verification and Approval

1. Facility Interconnection

Approved:_____Date:_____

Metering Facility Verification by:_____Verification

Date:_____

II. INTERCONNECTION AGREEMENT TERMS AND CONDITIONS

This Interconnection Agreement for Net Metering Facilities ("Agreement") is made and entered into this _____ day of _____, 20___, by and between Entergy Arkansas, Inc. ("EAI" or the "Company") and _____("Customer"), a _____ (specify whether corporation or other), each hereinafter sometimes referred to individually as "Party" or collectively as the "Parties". In consideration of the mutual covenants set forth herein, the Parties agree as follows:

Section 1. The Metering Facility

The Net Metering Facility meets the requirements of Arkansas Code Ann. § 23-18-603(6) and the Arkansas Public Service Commission's Net Metering Rules. (CT)

Section 2. Governing Provisions

The parties shall be subject to the provisions of Arkansas Code Ann. § 23-18-604 and the terms and conditions set forth in this Agreement, the Net Metering Rules, and the Company's applicable tariffs.

Section 3. Interruption or Reduction of Deliveries

The Company shall not be obligated to accept and may require Customer to interrupt or reduce deliveries when necessary in order to construct, install, repair, replace, removed, investigate, or inspect any of its equipment or part of its system; or if it reasonably determines that curtailment, interruption, or reduction is necessary because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices. Whenever possible, the Company shall give the Customer reasonable notice of the possibility that interruption or reduction of deliveries may be required. Notwithstanding any other provision of this Agreement, if at any time the Company reasonably determines that either the facility may endanger the Company's personnel or other persons or property, or the continued operation of the Customer's facility may endanger the integrity or safety of the Company's electric system, the Company shall have the right to disconnect and lock out the Customer's facility from the Company's electric system. The Customer's facility shall remain disconnected until such time as the Company is reasonably satisfied that the conditions referenced in this Section have been corrected.

Section 4. Interconnection

Customer shall deliver the as-available energy to the Company at the Company's meter.

Company shall furnish and install a meter standard for the type of service. If the application requires other than such standard meter, the additional metering requirements will be installed at the customer's expense. Customer shall provide and install a meter socket for the Company's meter and any related interconnection equipment per the Company's technical requirements, including safety and performance standards. (RT,AT) (AT)

The customer shall submit a Standard Interconnection agreement to the Company at least thirty (30) days prior to the date the customer intends to interconnect the net metering facilities to the Company's facilities. Part I, Standard Information, Sections 1 through 4 of the Standard Interconnection Agreement must be completed for the notification to be valid. The customer shall have all equipment necessary to complete the interconnection prior to such notification. If mailed, the date of notification shall be the third day following the mailing of the Standard Interconnection Agreement. The Company shall provide a copy of the Standard Interconnection Agreement to the customer upon request.

Following notification by the customer as specified in Rule 3.01.C, the Company shall review the plans of the facility and provide the results of its review to the customer within 30 calendar days. Any items that would prevent parallel operation due to violation of applicable safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violations.

To prevent a net metering customer from back-feeding a de-energized line, the customer shall install a manual disconnect switch with lockout capability that is accessible to Company personnel at all hours. This requirement for a manual disconnect switch will be waived if the following three conditions are met: 1) The inverter equipment must be designed to shut down or disconnect and cannot be manually overridden by the customer upon loss of Company service; 2) The inverter must be warranted by the manufacturer to shut down or disconnect upon loss of Company service; and 3) The inverter must be properly installed and operated, and inspected and/or tested by Company personnel.

Customer, at his own expense, shall meet all safety and performance standards established by local and national electrical codes including the National Electrical Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the National Electrical Safety Code (NESC), and Underwriters Laboratories (UL).

Customer, at his own expense, shall meet all safety and performance standards adopted by the Company and filed with and approved by the Commission pursuant to Rule 3.01.F that are necessary to assure safe and reliable operation of the net metering facility to the Company's system.

Customer shall not commence parallel operation of the net metering facility until the net metering facility has been inspected and approved by the Company. Such approval shall not be unreasonably withheld or delayed. Notwithstanding the foregoing, the Company's approval to operate the Customer's net metering facility in parallel with the Company's electrical system should not be construed as an endorsement, confirmation, warranty, guarantee, or representation concerning the safety, operating characteristics, durability, or reliability of the Customer's net metering facility.

Modifications or changes made to a net metering facility shall be evaluated by the Company prior to being made. The Customer shall provide detailed information describing the modifications or changes to the Company in writing prior to making the modification to the net metering facility. The Company shall review the proposed changes to the facility and provide the results of its evaluation to the Customer within thirty (30) calendar days of receipt of the Customer's proposal. Any items that would prevent parallel operation due to violation of applicable safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violations.

Section 5. Maintenance and Permits

The customer shall obtain any governmental authorizations and permits required for the construction and operation of the net metering facility and interconnection facilities. The Customer shall maintain the net metering facility and interconnection facilities in a safe and reliable manner and in conformance with all applicable laws and regulations.

Section 6. Access to Premises

The Company may enter the Customer's premises to inspect the Customer's protective devices and read or test the meter. The Company may disconnect the interconnection facilities without notice if the Company reasonably believes a hazardous condition exists and such immediate action is necessary to protect persons, or the Company's facilities, or property of others from damage or interference caused by the Customer's facilities, or lack of properly operating protective devices.

Section 7. Indemnity and Liability

Each party shall indemnify the other party, its directors, officers, agents, and employees against all loss, damages expense and liability to third persons for injury to or death of persons or injury to property caused by the indemnifying party's engineering design, construction ownership or operations of, or the making of replacements, additions or betterment to, or by failure of, any of such party's works or facilities used in connection with this Agreement by reason of omission or negligence, whether active or passive. The indemnifying party shall, on the other party's request, defend any suit asserting a claim covered by this indemnity. The indemnifying party shall pay all costs that may be incurred by the other party in enforcing this indemnity. It is the intent of the parties hereto that, where negligence is determined to be contributory, principles of comparative negligence will be followed and each party shall bear the proportionate cost of any loss, damage, expense and liability attributable to the party's negligence.

Nothing in this Agreement shall be construed to create any duty to, any standard of care with reference to or any liability to any person not a party to this Agreement. Neither the Company, its officers, agents or employees shall be liable for any claims, demands, costs, losses, causes of action, or any other liability of any nature or kind, arising out of the engineering, design construction, ownership, maintenance or operation of, or make replacements, additions or betterment to, the Customer's facilities by the Customer or any other person or entity.

Section 8. Notices

All written notices shall be directed as follows:

COMPANY
Attention:
Mr. Mike Glancy
ENTERGY ARKANSAS, INC.
#9 Entergy Court
Little Rock, Arkansas 72211

CUSTOMER
Attention:

Name:_____

Address:_____

City:_____

Customer notices to Company shall refer to the Customer's electric service account number set forth in Section 1 of this Agreement.

Section 9. Term of Agreement

The term of this Agreement shall be the same as the term of the otherwise applicable standard rate schedule. This Agreement shall remain in effect until modified or terminated in accordance with its terms or applicable regulations or laws.

Section 10. Assignment

This Agreement and all provisions hereof shall inure to and be binding upon the respective parties hereto, their personal representatives, heirs, successors, and assigns. The Customer shall not assign this Agreement or any part hereof without the prior written consent of the Company, and such unauthorized assignment may result in termination of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives.

Dated this_____day of_____, 20____.

Customer:	Company:
	ENTERGY ARKANSAS, INC.
_____	_____
By:_____	By:_____
Title:_____	Title:_____
Mailing Address:	Mailing Address:
_____	_____
_____	_____
Email Address:	Email Address: (AT)
_____	_____

14.0. SAFETY AND PERFORMANCE STANDARDS FOR NET METERING FACILITIES

14.1. Table of Contents

1.0 Introduction

1.1 Purpose

The purpose of these safety and performance standards for renewable energy facilities is to describe the requirements and procedures for safe and effective interconnection and operation of renewable energy facilities under the Arkansas Public Service Commission (APSC or Commission) Net Metering Rules (the Rules).

A Net Metering Customer may operate a renewable energy facility at 60 Hertz (Hz), single- or three-phase at voltages up to and including 34.5 kV in parallel with the Company's distribution delivery system pursuant to an interconnection agreement, provided that the equipment meets or exceeds the requirements of this standard.

This standard describes typical interconnection requirements. Some installations, however, may require more extensive interconnection facilities, and will be addressed on a case by case basis. This is most likely to be required when several Net Metering Customers desire to connect renewable energy facilities to the same transformer or on the same distribution feeder.

1.2 Scope

The Rules provide that renewable energy facilities, sized according to the Rules, may be installed within the Company's service area on the Net Metering Customer's side of the meter. These facilities will be connected to the distribution delivery system when the distribution delivery system is operating under normal conditions. Some or all of the Net Metering Customer's load may be supplied with energy by the renewable energy facility. Under the Net Metering Rules, the Company's facilities will be available to handle the Net Metering Customer's entire load as needed.

The Rules provide for a maximum size of renewable energy facilities depending on the Net Metering Customer's revenue class. Residential applications are limited to a maximum of 25 kW and non-residential applications are limited to a maximum of 300 kW. (CT)

The provisions contained in this document are the minimum requirements for safe and effective interconnection and operation of renewable energy facilities operating in parallel with the Company's distribution delivery system pursuant to the Rules.

2.0 Definitions

Abnormal operating conditions – A situation in which the Company is operating the distribution delivery system in a manner inconsistent with normal configuration or under conditions that do not normally exist. Examples of abnormal operating conditions are: (1) times of high usage on the Company's system when Customers are requested to conserve energy or, (2) times when the Company must switch distribution feeder circuits out of use for repairs and switch other alternate feeders into use to deliver energy to Customers.

Company - Entergy Arkansas Inc. (EAI)

Customer - Any entity interconnected to the Company's distribution delivery system who takes electric service under one of EAI's rate schedules.

Displaced load - The Net Metering Customer's entire electrical requirement or a portion of it that, except for the output of the Net Metering Customer's renewable energy facilities, would have been served by the Company.

Distribution delivery system - The Company's wires, equipment, and facilities having a voltage of 34.5 kV or below to which the Net Metering Customer's renewable energy facility is interconnected.

Interconnection - The physical connection of renewable energy facilities and the net metering facilities to the distribution delivery system in accordance with the requirements of this standard so that parallel operation can occur.

Interconnection agreement - The Standard Interconnection Agreement for Net Metering Facilities approved by the Commission in EAI Policy Schedule 13.16.

Interconnection facilities - All facilities installed solely to interconnect the Net Metering Customer's system with that of the Company to facilitate the exchange of power between the Net Metering Customer's renewable energy facilities and the Company's power system including, but not limited to, connection, transmission, distribution, engineering, transformation, switching, metering, and safety equipment. Interconnection facilities shall include any additions and/or modifications to the Company's system deemed by the Company to be necessary.

Network service - Two or more primary distribution feeder sources electrically connected on the secondary (or low voltage) side to form one power source for one or more customers. This configuration is designed to maintain service to the customers even after the loss of one of these primary distribution feeder sources.

Net Metering Customer - Any customer with a renewable energy facility that takes service under EAI's net metering tariff.

Net Metering Facility - The hardware and software installed to measure the energy flow both into and out of the Net Metering Customer's facilities for the purpose of determining the usage for billing, if any.

Parallel operation - The operation of renewable energy facilities by a Net Metering Customer while the Net Metering Customer's facilities are physically and electrically interconnected to the Company's distribution delivery system.

Point of common coupling (PCC) - The point where transfer of any electric power between the customer's facilities and the Company's distribution delivery system takes place, normally at the point of attachment.

Pre-interconnection study - A study or studies that may be conducted by the Company in response to its receipt of a completed interconnection agreement. Pre-interconnection studies may include, but are not limited to:

(a) **Service study** - An on-site analysis used to determine the interconnection requirements and the system voltage for providing parallel service to a Net Metering Customer with a renewable energy facility. All net metering facilities will require this study.

(b) **Coordination study** - An engineering analysis that determines whether the presence of the renewable energy facility would interfere with the protective fusing and relaying on the distribution delivery system. It includes an analysis of the renewable energy facilities' contribution to power flow, available fault current, capacitor bank impact, and effects of voltage under normal and worst case situations. Typically, this would be required when more than one Net Metering Customer is or desires to be attached to the same distribution transformer or feeder circuit.

(c) **Distribution delivery system impact study** - An engineering study that models the distribution delivery system with the proposed renewable energy facilities in place. The modeling must determine whether the distribution delivery system will be able to support the proposed renewable energy facility without reliability problems or interruptions in service to other customers. The study must also include a transient analysis to determine the potential for stability problems. If the model and transient studies indicate that power can flow back to the substation and consequently onto the transmission grid, then similar assessments will be required for the transmission system. This type of study would be required when several Net Metering Customers have renewable energy facilities interconnected on the same feeder circuit and the total output of all interconnected renewable energy facilities on that feeder is 50% or more of the feeder circuit's base load.

(d) **Secondary network study** - An engineering analysis to specifically determine whether a renewable energy facility can be safely added to a secondary network. Typically, this study would be required when a Net Metering Customer's renewable energy facility is proposed for interconnection to a secondary network.

Protective function - A system that uses hardware (including switching devices), relay protection schemes and software that prevents unsafe operating conditions from occurring before, during, and after the interconnection of the renewable energy facility with the distribution delivery system. This system will be designed to isolate the Net Metering Customer's renewable energy facility or to disconnect it from the distribution delivery system under abnormal operating conditions or outages.

Quality of service - An operating state of the distribution delivery system that provides usable power to a customer. This state of usable power includes the parameters specified for power factor (Section 3.9.7), voltage surges and sags (Section 3.9.8), voltage flicker (Section 3.9.9), frequency (Section 3.9.10) and harmonics (Section 3.9.11).

Renewable energy facility - A system of hardware and software by which electric energy is generated using sun, wind, water, or biomass products as the source and as allowed to be interconnected to the Company's distribution system under the Rules.

Stabilized - The distribution delivery system is considered stabilized when, following a disturbance, the system returns to the normal range of voltage and frequency for a duration of five (5) minutes. (CT,AT)

Standard of care - A term defining the level of awareness to maintain workplace and public safety in the design, installation and operation of facilities which generate power.

System protection facilities - The equipment required to protect the Company's system and its other customers' facilities from unsafe operating conditions occurring at the Net Metering Customer's renewable energy facilities. The protection requirements shall be met at the PCC, although the devices and functions providing the protective functions can be located elsewhere.

Unsafe operating conditions - A situation that if left uncorrected would result in: (1) harm to any personnel or damage to any equipment, (2) unacceptable system stability or, (3) operation outside established parameters affecting the quality of service to other customers connected to the distribution delivery system.

3.0 Details

3.1 Available Voltage Systems

The Company's primary distribution delivery systems available for parallel generation operations are of grounded wye or closed delta configurations. Generally, all secondary voltage levels from 120/240 V to 34.5 kV single-phase or three-phase (except open-delta and open-wye) are available for interconnection. Open-delta and open-wye secondary voltage configurations require special evaluation prior to interconnection. The voltage level available for connecting the renewable energy facility in parallel with the system depends on the desired location on the Company's distribution delivery system and the size of the Net Metering Customer's renewable energy facility.

3.2 Reasons for Disconnection from the Distribution Delivery System

The Company may disconnect the Net Metering Customer's renewable energy facility from the distribution delivery system under the following conditions:

(1) Upon expiration or termination of the interconnection agreement;
(2) Non-compliance of the Net Metering Customer's facility with any of the requirements in this document;

(3) System emergency -
- The Company may temporarily disconnect a Net Metering Customer's facility without prior written notice in cases where continued interconnection will endanger persons or property;
- During the forced outage of the distribution delivery system, the Company shall have the right to temporarily disconnect a Net Metering Customer's facility to make immediate repairs on the distribution delivery system;

(4) During routine maintenance, repairs, and modifications to the Company's distribution system;

(5) Lack of approved interconnection agreement -
In order to interconnect the Net Metering Customer's renewable energy facility to the Company's distribution delivery system a Net Metering Customer must first submit to the Company an executed Standard Interconnection Agreement for Net Metering. The Company may refuse to connect or may disconnect the Net Metering Customer's facility if such agreement has not been received and approved.

When possible, the Company will provide the Net Metering Customer with reasonable notice of disconnection and will reconnect the Net Metering Customer as quickly as reasonably practical.

3.3 Pre-Interconnection Studies for Interconnection of Renewable Energy Facilities Under Net Metering Rules

The Company shall conduct one or more pre-interconnection studies prior to interconnection of renewable energy facilities under the Rules.

Secondary network systems are designed such that they do not allow reverse current flow. This and other aspects of secondary network systems create technical difficulties that may make interconnection more costly to implement. The ability of the Company to connect a Net Metering Customer's renewable energy facility in parallel with the system may be limited if a Net Metering Customer who is served from a secondary network system requests interconnection. The Company may conduct pre-interconnection and network studies to determine to what extent the renewable energy facility may be safely added to the network or may be accommodated in some other fashion.

3.4 System Changes

3.4.1 Company Changes to Distribution Delivery System

The distribution delivery system is a dynamic and changing system. If the Company changes the distribution voltage, the Net Metering Customer will be responsible for paying for all modifications to the Net Metering Customer's facilities required for reconnecting to the Company's reconfigured distribution delivery system. The Company will notify the Net Metering Customer of reconfiguration programs.

3.4.2 Net Metering Customer Changes to Interconnection

The Net Metering Customer shall notify the Company to obtain prior approval for any proposed modifications to the interconnecting scheme.

3.5 Allowable Tie Points

Normally, only one tie point between the Net Metering Customer's facilities and the Company's distribution delivery system will be allowed.

3.6 Energy Flow during Emergencies

Power flow from or to a Net Metering Customer's facilities during periods of system emergencies may be discontinued according to the APSC's rules, and the Company's Tariff, rates, riders or contract with the Net Metering Customer.

3.7 Types of Allowed Generators

Single- or three-phase alternating current generating units may be operated in parallel with the distribution delivery system when used as part of a renewable energy facility. They may be synchronous generators, induction generators, or inverter-controlled systems. The total connected capacity shall not exceed 25 kW for residential installations and 300 kW for non-residential installations. Direct-current generation shall not be connected to the Company's alternating-current distribution delivery system. (CT,AT) (AT)

3.7.1 Limits on Three-Phase Generators

If three-phase service is not available in the area or if Company facilities must be upgraded or otherwise modified in order to enable the Net Metering Customer to connect to these facilities, the Net Metering Customer must pay for the additional cost for such service or improvements as determined by the Company. The Company reserves the right to refuse three-phase service under certain circumstances per the Company's extension policy.

3.7.2 Limits on Single-Phase Generators

Where necessary, to avoid the potential for renewable energy facilities to affect the service to other customers, the Company may limit the capacity and operating characteristics of single-phase generators in a manner consistent with its existing limitations for single-phase motors. A single-phase renewable energy facility shall be limited to a capacity of 25 kW or less.

3.8 Explicit Criteria for Parallel Operations

A Net Metering Customer shall be permitted to interconnect and operate a renewable energy facility in parallel with the Company's distribution delivery systems provided that all of the following criteria are met throughout the life of the interconnection.

3.8.1 Safety

In general, the Net Metering Customer's renewable energy facility will be held to the same standard of care as the Company is required to maintain. The safety of the general public and the personnel and equipment of the Company shall in no way be reduced or impaired as a result of the interconnection. Also, two installation criteria must be met:

(1) The Net Metering Customer's renewable energy facility shall be equipped with protective functions designed to prevent the renewable energy facility from being connected to a de-energized circuit owned by the Company. The design of some systems provides this function without adding equipment at the PCC. Each system not providing additional devices at the PCC must be shown to be capable of these functions.

(2) The Net Metering Customer's renewable energy facility shall be equipped with the necessary protective functions designed to prevent connection or parallel operation of the Net Metering Customer's facility with the distribution delivery system unless the distribution delivery system service voltage and frequency are of normal magnitude.

3.8.2 Impact of Interconnection

The quality, reliability and the availability of delivery service to the Company's other customers shall not be diminished or impaired as a result of the interconnection.

3.9 General Interconnection Requirements

The Net Metering Customer's renewable energy facility shall meet the technical requirements as prescribed in this section.

3.9.1 Net Metering Customer's Equipment and Interconnection Standards

The Net Metering Customer's renewable energy facility, net metering facilities and interconnection installation must meet all applicable national, state, and local construction and safety codes.

The Net Metering Customer shall be responsible for the design, installation, operation and maintenance of all equipment and facilities installed or that will be installed on the Net Metering Customer's side of the PCC specified by the parties involved. Such design shall meet the latest standards of Institute of Electrical and Electronic Engineers, National Electric Manufacturers Association, American National Standards Institute, National Electric Code, other national codes and any local codes pertaining to the design and construction of electrical facilities in effect at the time of installation. The facility shall be subject to the requirements of all authorities having jurisdiction and shall comply with all applicable codes and ordinances. A disconnect switch which has a visible opening and is accessible to and lockable by Company personnel at all times and without notice shall be furnished by the customer to the Company's specifications unless waived by Rule 3.01.B of the Commission's Net Metering Rules. (AT)

(MT)

3.9.2 Rating of Net Metering Customer's Equipment

The equipment selected by the Net Metering Customer shall be rated for continuous parallel operation with the Company's system.

Renewable energy facilities that are designed to be used as stand-by or emergency power facilities shall not be interconnected to the Company's distribution delivery system for parallel operations under the Rules. Such an emergency power facility must not be interconnected to the Company's system. The customer's facilities shall be disconnected from the Company's system prior to the customer's use of stand-by or emergency facilities.

Net Metering systems that are intended to provide the customer with power during periods when the Company's facilities are unavailable shall be equipped with a transfer switch to prevent energizing a non-energized Company circuit consistent with Sections 3.13.3.3 and 3.8.1 of this policy.

3.9.3 Protection of Net Metering Customer's Equipment

The Net Metering Customer will be responsible for protecting its facilities in such a manner that distribution delivery system outages, short circuits or other disturbances, including zero sequence currents and ferroresonant over-voltages, do not damage the Net Metering Customer's facilities.

The Net Metering Customer's protective equipment shall be installed to prevent the renewable energy facility from causing unnecessary tripping of the distribution delivery system breakers that would affect the distribution delivery system's ability to provide reliable service to other customers.

3.9.4 Required Drawings

Adequate drawings of the Net Metering Customer's proposed renewable energy facility, which will include a one line diagram and proposed relay systems, must be submitted to the Company for review during the planning stage. Additional drawings may be required on a case by case basis.

3.9.5 Changes to Company Facilities

The total cost of any additional equipment that must be installed by the Company on its distribution delivery system to allow parallel operation must be paid for by the Net Metering Customer, including the transformers and any facilities which must be added due to increased fault current or special operating conditions.

3.9.6 Reactive Power Requirements (MT)

The Net Metering Customer's renewable energy facility shall normally be responsible for supplying the facility's own reactive power as required by the load to which it supplies power.

3.9.7 Power Factor

The power factor of the renewable energy facility at the PCC shall be according to the appropriate rate schedule for this installation. The presence of the renewable energy facility shall not cause the power factor to be lower than it was prior to installation and operation of the renewable energy facility.

3.9.8 Voltage Surges or Sags

The Net Metering Customer will operate its renewable energy facility in such a manner that the voltage levels on the distribution delivery system are in the same range (+5.0 % or –5% from nominal voltage) as if the facilities were not connected to the Company's system. The Net Metering Customer shall be responsible for any damages to the Net Metering Customer's facilities, and shall be liable for any damages to the Company's facilities or the facilities of other customers due to any under voltage or over voltage contribution from the renewable energy facility.

3.9.9 Voltage Flicker

The renewable energy facility shall not create objectionable flicker for the Company's other customers. As a guide to identifying objectionable flicker the "Border Line of Irritation" curve is included in Section 5.1. The creation of objectionable flicker shall result in disconnection by the Company until such time that all objectionable flicker problems are corrected.

3.9.10 Frequency (CT,AT)

When the operating frequency of the Net Metering Customer's Net Metering Facility deviates from the 60 Hz base, the Net Metering Customer shall automatically disconnect the Net Metering Facility from the distribution delivery system in accordance with the table below.

(AT)

Generator Size	Frequency Range (Hz)	Seconds from start of event
30 kW or less	Greater than 60.5 Hz	0.16
30 kW or less	Less than 59.3 Hz	0.16
Greater than 30 kW	Greater than 60.5 Hz	0.16
Greater than 30 kW	Less than 59.8 Hz to 57 Hz	Adjustable 0.16 to 300 [(1)]
Greater than 30 kW	Less than 57 Hz	0.16

[(1)] Consult the Company (AT)

The Company may require the Net Metering Customer to wait up to five (5) minutes to reconnect Net Metering Facility after the distribution delivery system voltage and frequency have returned to normal range and the system has been stabilized. Consult the Company for details. (IEEE 1547 4.2.6) (MT,CT,AT)

3.9.11 Harmonics (MT)
In accordance with IEEE 519 the total harmonic distortion (THD) voltage shall not exceed 5.0% of the fundamental 60 Hz frequency nor 3.0% of the fundamental frequency for any individual harmonic when measured at the PCC.

3.10 Inspection Prior to Operations and Additional Requirements
The Company reserves the right to impose any herein described but unmet requirements and to make subsequent final inspection before the renewable energy facility operates to verify that all such unmet requirements have been satisfied. However, the Company has no actual or implied responsibility in this regard. The Net Metering Customer shall be responsible for making necessary changes, at the Net Metering Customer's expense, to the facility should such changes be required.

Inspection by the Company of the Net Metering Customer's equipment and interconnection facilities shall not constitute a determination by the Company of the continuing suitability of such equipment and interconnection. An inspection by the Company shall in no way constitute a warranty or representation by the Company against future negligence, misuse, faulty repairs, or subsequently developing defects, and the Company assumes no responsibility or liability therefor.

3.11 Responsibility for Net Metering Customer's Operations
The Company is not responsible for proper operations of the Net Metering Customer's renewable energy facility upon and after interconnection to the Company's distribution delivery system.

3.12 Responsibility for Net Metering Customer's Annual Maintenance
Annual maintenance of the Net Metering Customer's facility is the Net Metering Customer's sole responsibility. The Net Metering Customer shall maintain records of such maintenance activities, which the Company may review at reasonable times. Such maintenance records shall be made available for the Company's inspection upon request. The Company reserves the right to inspect the records, but has no responsibilities for maintenance either actual or implied.

3.13 Protection/Interface Requirements
Protecting both the Net Metering Customer's facilities and the Company's system are of great importance. Proper protective systems shall be established in the design phase and confirmed prior to start-up of the Net Metering Customer's renewable energy facility. An interconnection between the Company and the Net Metering Customer will not be allowed prior to the proper coordination of protective devices. The Net Metering Customer shall be responsible for providing to the Company the necessary documentation certifying that maintenance and testing have been satisfactorily performed.

3.13.1 Changes to Company Fault Interruption Equipment (MT)

Renewable energy facilities that are installed on the Company's distribution delivery system will provide additional fault current to the distribution delivery system. Thus, it is possible that the added facilities will necessitate the modification of the existing fault interrupting devices on the distribution feeder. The Net Metering Customer will be responsible for paying the cost of these changes to the Company's system.

It is also possible that the added facilities will increase the available fault current on the distribution delivery system beyond the interrupting capability of the existing devices on the distribution delivery system. The Net Metering Customer may be required to limit the fault current contribution from the renewable energy facility. Should the Company also be required to make changes, the Net Metering Customer shall pay the cost of the required changes. The issues will be examined on a case-by-case basis.

3.13.2 Tests of the Net Metering Customer's Equipment

The Company reserves the right, but has no responsibility either actual or implied, to observe the Net Metering Customer's tests and/or inspection of any of the Net Metering Customer's protective equipment that is essential to the interconnection, including relays, circuit breakers, protective devices and related equipment. Inspection may include simulated test tripping of the Net Metering Customer's interconnection breakers by the protective relays to verify all protective set points and relay/breaker trip timing prior to interconnection to the Company system.

Inspection by the Company of the Net Metering Customer's equipment and interconnection facilities shall not constitute a determination by the Company of the continuing suitability of such equipment and interconnection. An inspection by the Company shall in no way constitute a warranty or representation by the Company against future negligence, misuse, faulty repairs, or subsequently developing defects, and the Company assumes no responsibility or liability therefor.

The Net Metering Customer shall provide the Company with notice at least two weeks before the initial energizing and start-up testing of the Net Metering Customer's facilities so that the Company may witness the testing of any equipment and protective systems associated with the interconnection.

If upon connecting to the Company's system a system emergency develops, safety issues arise, or the quality of service to other Net Metering Customers is affected, the Company may then require additional inspections or tests of the Net Metering Customer's protective equipment. The Company may then require additional inspections or tests of the Net Metering Customer's protective equipment in accordance with then current IEEE 1547 and IEEE 1427.1. (AT)

3.13.3 Specifying Protective Equipment (MT)

The Company will have the right to specify certain protective devices, including relays and circuit breakers that the Net Metering Customer must install. The Company will specify all relay settings on the inter-tie. Settings of interconnection protective devices on the Net Metering Customer's system will be specified by the Net Metering Customer, but will be checked, coordinated with, and reviewed by the Company before application and after subsequent modification.

3.13.3.1 Service Interruption Equipment

The Net Metering Customer shall provide an automatic method of disconnecting the renewable energy facility from the distribution delivery system when either of the following conditions occurs. The renewable energy facility shall be automatically disconnected from the Company's distribution delivery system if (1) a sustained voltage deviation in excess of +5.0 % or –10% from nominal voltage persists for more than 30 seconds, or (2) a deviation in excess of +10% or –30% from nominal voltage persists for more than ten cycles. The Net Metering Customer may reconnect no sooner than five (5) minutes after the distribution (CT,AT) delivery system voltage and frequency have returned to normal range and the system has been stabilized. The design of some systems provides this function without adding equipment at the PCC. Each system not providing additional devices at the PCC must be shown to be capable of these functions.

3.13.3.2 Fault Interrupting Device

The Net Metering Customer shall install a fault-interrupting device between the Company and the renewable energy facility. Circuit breakers or other interrupting devices shall be capable of interrupting maximum available fault current at the PCC. The Company will approve such fault-interrupting device, which is likely to vary in design depending on location, available fault current, and size of the Net Metering Customer's facility.

Since most short circuits on overhead lines are of a temporary nature, it is the Company's normal practice to automatically reclose the substation circuit breaker on overhead lines after an automatic trip. Instantaneous reclosing (10-15 cycles) of circuit breakers and line reclosers may also be used. The Net Metering Customer shall be responsible for automatically disconnecting its facilities from the Company's distribution system prior to the automatic or instantaneous reclosing of a Company's substation circuit breaker or line recloser. The Net Metering Customer's disconnecting device shall not automatically or manually reclose sooner than five (5) minutes after the return of the Company's service (CT,AT) voltage to normal magnitude and phase sequence following a recloser operation.

For renewable energy facilities using an inverter system, no other fault-interrupting device is required. The inverter interrupts the fault.

(MT)

3.13.3.3 Equipment to Block Energizing Dead Circuits

Under no condition will the Net Metering Customer be permitted to energize a non-energized Company distribution circuit. The Net Metering Customer shall install equipment to effectively block the renewable energy facility from energizing a non-energized Company circuit. The design of some systems provides this function without adding equipment at the PCC. Each system not providing additional devices at the PCC must be shown to be capable of these functions.

3.13.3.4 Control, Protection and Safety Equipment Requirements For Specific Technologies

Various technologies require unique control, protection, and safety equipment to be installed. The specifications in this section list those requirements unique to the technologies.

3.13.3.4.1 Synchronous Generators

For a Net Metering Customer's synchronous generator, circuit breakers shall be three-phase devices with electronic or electro-mechanical control. The Net Metering Customer is solely responsible for properly synchronizing its generator with the Company's distribution delivery system. The excitation system response ratio shall be 0.5 or greater. The generator's excitation system(s) shall conform, as near as reasonably achievable, to the field voltage versus time criteria specified in American National Standards Institute Standard C50.13-1989 in order to permit adequate field forcing during transient conditions.

3.13.3.4.2 Induction Generators and Inverter Systems

Induction generation may be connected and brought up to synchronous speed (as an induction motor) if it can be demonstrated that the initial voltage drop measured on the distribution delivery system side of the PCC is within the allowable visible flicker standard in Section 5.1. Otherwise, the Net Metering Customer may be required to install hardware or employ other techniques to bring voltage fluctuations to acceptable levels.

Self-commutated inverters whether of the utility-interactive type or stand-alone type shall be used in parallel with the distribution delivery system only with synchronizing equipment. Line-commutated inverters do not require synchronizing equipment.

3.14 Susceptibility to Transmission Faults

Faults, single-phasing events or other abnormal operating conditions occurring on the Company's transmission system could affect a Net Metering Customer's facilities connected to the Company's distribution delivery system. It is the Net Metering Customer's responsibility to protect the Net Metering Customer's facilities from these conditions. (MT)

3.15 Synchronizing Requirements

The Net Metering Customer shall be solely responsible for synchronizing and properly connecting and disconnecting its electrical system relative to parallel operation with the Company's system. The Net Metering Customer shall provide an automatic synchronizing scheme to prevent the closing of its circuit breaker when the two electrical systems are out of synchronism.

The Net Metering Customer's renewable energy facility shall be automatically disconnected if its frequency should deviate more than +0.5 Hz or –0.7 Hz from the 60 Hz base. (See Section 3.9.10 Frequency.)

The synchronizing system of the Net Metering Customer must allow the Net Metering Customer's facilities to be operated in parallel only when the Company's distribution system is energized from the Company's system at the PCC.

3.16 Metering Requirements

The metering equipment is usually installed on the Net Metering Customer's premises (on Net Metering Customer owned building, pole or structure) as part of the service entrance equipment. Therefore provisions must be made for it in the Net Metering Customer's installation. Based on the applicable rate schedule and the Company's standard practices, the Net Metering Customer will provide the meter socket and the Company will supply the appropriate meter, standard for the type of service, that will measure the bi-directional energy flow. If the application requires other than the standard meter for the type of service, the additional metering requirements will be installed at the customer's expense. (AT)

The Net Metering Customer will be required to provide the Company with information regarding the total connected load. The Net Metering Customer may be required to provide and / or install the meter socket, metering transformer enclosure, and adequate attachments or devices for attaching Company's metering facilities to the building. For additional information see the Company's Customer Installation Standards for Electric Service.

3.17 Standard Interconnection Agreement Requirements (MT)

A written agreement will be required between the Company and the Net Metering Customer specifying the liability provisions, indemnities, terms of payment of cost to modify distribution delivery system (if not paid in advance), and other items affecting service under this document. This agreement will explain in detail the authority or responsibilities of the parties involved. **An interconnection between the Company's distribution delivery system and a Net Metering Customer's renewable energy facility will not be allowed prior to the execution of a written Standard Interconnection Agreement for Net Metering Facilities.**

4.0 References

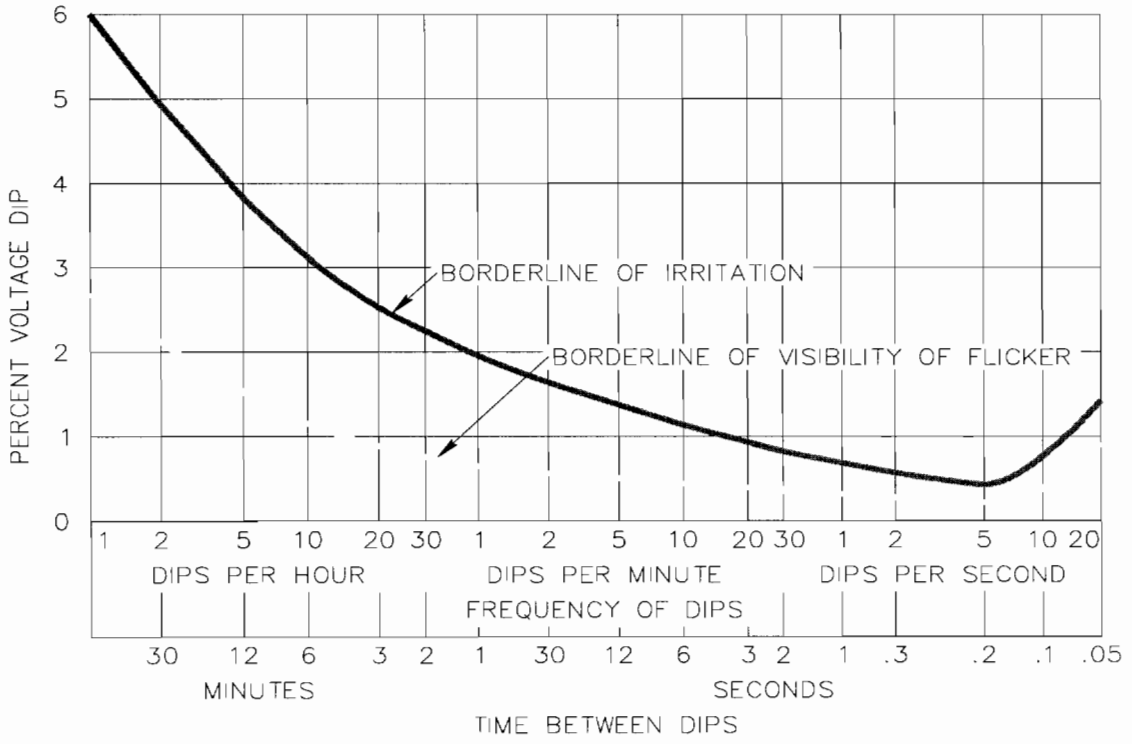
IEEE Guide for Protective Relaying of Utility-Consumer Interconnection C37.95 (Latest revision)
IEEE Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, 519-1992
IEEE Recommended Practice for Electric Power Distribution for Industrial Plants, 141-1993
IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems 1547 (AT)
IEEE Standard Conformance for Test Procedures for Interconnecting Distributed Resources with Electric Power Systems 1547.1

(MT)

5.0 Attachments

5.1 Flicker Chart
5.2 Net Metering Technical Requirements Compliance Checklist
5.3 Process Flowchart

5.1 Flicker Chart



Flicker Curve. Source: IEEE Std. 141-1993

5.2 Net Metering Technical Requirements Compliance Checklist (MT)

This checklist is a summary of the requirements that can be found in detail in this document (Section numbers are provided after each requirement.) Two objectives must be met to arrive at compliance by the proposed installation:

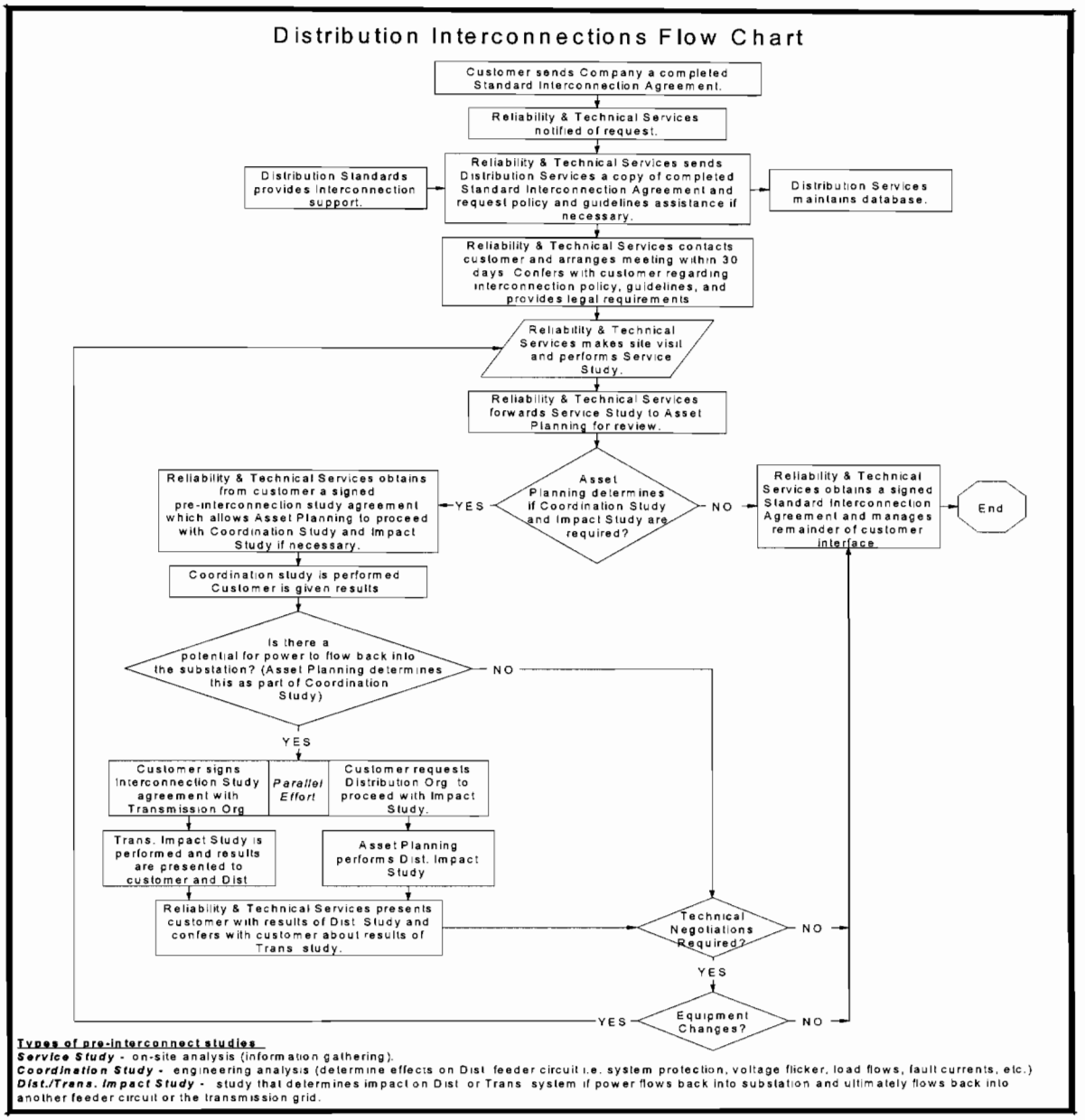
1. **Safety**: The Net Metering Customer's renewable energy facility will be held to the same standard of care, as the Company is required to maintain. In addition, the safety of the general public and the personnel and equipment of the Company shall in no way be reduced or impaired as a result of the interconnection.
2. **Customer Impact**: The quality, reliability and the availability of service to the Company's other customers shall not be diminished or impaired as a result of the interconnection.

This checklist is part of the Application and shall be completed by the Net Metering Customer and reviewed by Company's Design Engineering personnel or jurisdictional designee. The Customer's equipment vendor may be of assistance in completing the Application. (AT)

Customer Name
Date
Location
Renewable Source
Type of Process
ENTERGY REQUIREMENTS – Required for all Residential and Non-Residential Applicants. (MT,CT)
1. Accessible and Lockable Disconnect: (3.9.1) (AT)
Description of proposed compliance (MT)
Comment (MT,RT)
2. Disconnect inter-tie within 10 cycles of a service interruption or fault. (3.13.3.1 & 3.13.3.2)
Description of proposed compliance
Comment
3. Block generator from energizing dead circuits. (3.13.3.3)
Description of proposed compliance
Comment

Net Metering Interconnection Application Page 4 of 4 **Must be completed by all Non-Residential Applicants**	(AT)
Customer Name	
Date	
4. Supply reactive power. (3.9.6)	(MT,CT)
Description of Proposed Compliance:	
Comment:	
5. Identify power factor. (3.9.7)	
Description of Proposed Compliance:	
Comment:	
6. Limit voltage surges and sags. (3.9.8)	
Description of Proposed Compliance:	
Comment:	
7. Limit voltage flicker. (3.9.9)	
Description of Proposed Compliance:	
Comment:	
8. Limit harmonic voltage and current. (3.9.11)	
Description of Proposed Compliance:	
Comment:	
9. Specify protective devices and settings. (3.13.3.4)	
Description of Proposed Compliance:	
Comment:	
10. Automatic Synchronization with Company System within ½ cycle or disconnect. (3.9.10 & 3.15)	(AT)
Description of Proposed Compliance:	
Comment:	

5.3 Process Flowchart (MT)



EAI'S 12-20-07 FILING OF NET METERING TARIFF CORRECTIONS
WITH THE ARKANSAS PUBLIC SERVICE COMMISSION
IN APSC DOCKET NO. 07-159-TF

COMPLIANCE TESTIMONY OF APSC WITNESS REGINA L. BUTLER
FILED 1-17-08 IN APSC DOCKET NO. 07-159-TF

APSC ORDER NO. 1 ISSUED 1-18-08
IN APSC DOCKET NO. 07-159-TF
APPROVING NET METERING TARIFF CORRECTIONS

Entergy

Entergy Arkansas, Inc.

Steven K. Strickland

December 20, 2007

Ms. Diana Wilson, Secretary
Arkansas Public Service Commission
P. O. Box 400
1000 Center Street
Little Rock, AR 72203

Re: In the Matter of Entergy Arkansas, Inc.'s Net Metering Compliance Tariff, Standard Interconnection Agreement, and Safety and Performance Standards 07-159-TF

Dear Ms. Wilson:

In compliance with Order No. 9 issued on November 29, 2007 by the Arkansas Public Service Commission (APSC) in Docket No. 06-105-R, attached are the original and 13 copies of Entergy Arkansas, Inc.'s revised Rate Schedule No. 3, Optional Net Metering Service (NM), the Standard Interconnection Agreement for Net Metering Facilities in Policy Schedule No. 13, Section 13.16, the Safety and Performance Standards for Net Metering Facilities in Policy Schedule No.14, and Table of Contents Sheet No. TC-3.

EAI's compliance filing is consistent with the revised Net Metering Rules approved by the Commission in Order No. 12 issued on December 19, 2007. The revised Safety and Performance Standards also include updates to reflect changes to the Company's current practices.

The Company requests APSC approval of the compliance tariff, interconnection agreement, Safety and Performance Standards, and revised Table of Contents Sheet TC-3. If you have any questions, please call me at 501-377-4457 or Susan Davidson at 501-377-5720.

Sincerely,

Steven K. Strickland

SKS/sd
Attachments

ARKANSAS PUBLIC SERVICE COMMISSION

2nd Revised	Sheet No. 3.1	Schedule Sheet 1 of 2
Replacing: 1st Revised	Sheet No. 3.1	

Entergy Arkansas, Inc.
Name of Company

Kind of Service: Electric Class of Service: As Applicable

Docket No.: (CT)
Order No.:
Effective:

Part III. Rate Schedule No. 3

Title: Optional Net Metering Service (NM)

PSC File Mark Only

3.0. NET METERING

3.1. REGULATORY AUTHORITY

The Arkansas Legislature has delegated authority to the Arkansas Public Service Commission ("APSC" or the "Commission") to regulate public utilities in the State of Arkansas, including Entergy Arkansas, Inc. ("EAI" or the "Company"). The APSC's regulatory authority over the provision of electric service applies not only in the Distribution Service area allocated to EAI by the APSC but also extends to service to customers who have been released to EAI by other electric distribution utilities, when such release for service has been approved by the Commission pursuant to Rule 7.04.(b) of the Commission's Rules of Practice and Procedure. Similarly, the Tennessee Regulatory Authority exercises such authority delegated to it by the Tennessee legislature in areas of the State of Tennessee served by EAI.

3.2. AVAILABILITY

3.2.1. To any customer who takes service under one of the following standard rate schedules, (CT)
General Purpose Residential Service (RS), Optional Residential Time-Of-Use (RT), Small General Service (SGS), Nonresidential General Farm Service (GFS), Large General Service (LGS), Large General Service Time-Of-Use (GST), Large Power Service (LPS) or Large Power Service Time-Of-Use (PST) who has installed a net metering facility and signed a Standard Interconnection Agreement for Net Metering Facilities with the Company. Such facilities must be located on the customer's premise and intended primarily to offset some or all of the customer's energy usage at that location. The (AT)
generating capacity of net metering facilities may not exceed twenty-five kilowatts (25 kW) for residential use or three hundred kilowatts (300 kW) for non-residential use.

The provisions of the customer's standard rate schedule are modified as specified herein.

3.2.2. Customers may not take service under this tariff and simultaneously take service under the provisions of any other alternative source generation or co-generation tariff.

3.3. MONTHLY BILLING

3.3.1. On a monthly basis, the net metering customer shall be billed charges applicable under the currently effective standard rate schedule and any appropriate rider schedules. Under net metering, only the kilowatthour (kWh) units of a customer's bill are affected.

3.3.2. If the electricity supplied by the Company exceeds the electricity generated by the net metering customer and fed back to the Company during the billing period, the net metering customer shall be billed for the net billable kWhs supplied by the Company in accordance with the rates and charges under the Company's standard rate schedule applicable to the customer.

3.3.3. If the electricity generated by the net metering customer and fed back to the Company during the billing period exceeds the electricity supplied by the Company, such net excess generation shall be accumulated and credited to the customer's account in subsequent billing periods in the calendar year through December or until such accumulated balance has been fully depleted. Any accumulated net excess generation credit balance shall expire at the end of each calendar year. (CT,AT)

3.3.4. Any renewable energy credit created as the result of electricity supplied by a net-metering customer is the property of the net-metering customer that generated the renewable credit. (AT)

13.16. STANDARD INTERCONNECTION AGREEMENT FOR NET METERING FACILITIES

I. STANDARD INFORMATION

Section 1. Customer Information

Name:_____

Mailing Address:_____

City:_____ State:_____ Zip Code:_____

Facility Location (if different from above):_____

Daytime Phone:_____ Evening Phone:_____

Is the unit able to run when Entergy electricity is unavailable? Yes ___ No___ (AT)

Company Customer Account (from electric bill):_____

Section 2. Generation Facility Information

System Type: Solar Wind Hydro Geothermal Biomass Fuel Cell Micro turbine

Generator Rating (kW):_____ AC or DC (circle one)

Describe Location of Accessible and Lockable Disconnect:_____

Inverter Manufacturer:_____ Inverter Model:_____

Inverter Location:_____ Inverter Power Rating:_____

Section 3. Installation Information

Attach a detailed electrical diagram of the net metering facility.

Installed by:_____ Qualifications/Credentials:_____

Mailing Address:_____

City:_____ State:_____ Zip Code:_____

Daytime Phone:_____ Installation Date:_____

Section 4. Certification

1. The system has been installed in compliance with the local Building/Electrical Code of _____ _____ (City/County).

Signed (Inspector):

_____Date:_____

(In lieu of signature of inspector, a copy of the final inspection certificate may be attached.)

2. The system has been installed to my satisfaction and I have been given system warranty information and an operation manual, and have been instructed in the operation of the system.

Signed (Owner): _____ Date: _____

Section 5. Company Verification and Approval

1. Facility Interconnection

Approved:_____Date:_____

Metering Facility Verification by:_____Verification Date:_____

II. INTERCONNECTION AGREEMENT TERMS AND CONDITIONS

This Interconnection Agreement for Net Metering Facilities ("Agreement") is made and entered into this _____ day of _____, 20___, by and between Entergy Arkansas, Inc. ("EAI" or the "Company") and _____("Customer"), a _____ (specify whether corporation or other), each hereinafter sometimes referred to individually as "Party" or collectively as the "Parties". In consideration of the mutual covenants set forth herein, the Parties agree as follows:

Section 1. The Metering Facility
The Net Metering Facility meets the requirements of Arkansas Code Ann. § 23-18-603(6) and the Arkansas Public Service Commission's Net Metering Rules. (CT)

Section 2. Governing Provisions
The parties shall be subject to the provisions of Arkansas Code Ann. § 23-18-604 and the terms and conditions set forth in this Agreement, the Net Metering Rules, and the Company's applicable tariffs.

Section 3. Interruption or Reduction of Deliveries
The Company shall not be obligated to accept and may require Customer to interrupt or reduce deliveries when necessary in order to construct, install, repair, replace, removed, investigate, or inspect any of its equipment or part of its system; or if it reasonably determines that curtailment, interruption, or reduction is necessary because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices. Whenever possible, the Company shall give the Customer reasonable notice of the possibility that interruption or reduction of deliveries may be required. Notwithstanding any other provision of this Agreement, if at any time the Company reasonably determines that either the facility may endanger the Company's personnel or other persons or property, or the continued operation of the Customer's facility may endanger the integrity or safety of the Company's electric system, the Company shall have the right to disconnect and lock out the Customer's facility from the Company's electric system. The Customer's facility shall remain disconnected until such time as the Company is reasonably satisfied that the conditions referenced in this Section have been corrected.

Section 4. Interconnection

Customer shall deliver the as-available energy to the Company at the Company's meter.

Company shall furnish and install a meter standard for the type of service. If the application requires other than such standard meter, the additional metering requirements will be installed at the customer's expense. Customer shall provide and install a meter socket for the Company's meter and any related interconnection equipment per the Company's technical requirements, including safety and performance standards. (RT,AT) (AT)

The customer shall submit a Standard Interconnection agreement to the Company at least thirty (30) days prior to the date the customer intends to interconnect the net metering facilities to the Company's facilities. Part I, Standard Information, Sections 1 through 4 of the Standard Interconnection Agreement must be completed for the notification to be valid. The customer shall have all equipment necessary to complete the interconnection prior to such notification. If mailed, the date of notification shall be the third day following the mailing of the Standard Interconnection Agreement. The Company shall provide a copy of the Standard Interconnection Agreement to the customer upon request.

Following notification by the customer as specified in Rule 3.01.C, the Company shall review the plans of the facility and provide the results of its review to the customer within 30 calendar days. Any items that would prevent parallel operation due to violation of applicable safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violations.

To prevent a net metering customer from back-feeding a de-energized line, the customer shall install a manual disconnect switch with lockout capability that is accessible to Company personnel at all hours. This requirement for a manual disconnect switch will be waived if the following three conditions are met: 1) The inverter equipment must be designed to shut down or disconnect and cannot be manually overridden by the customer upon loss of Company service; 2) The inverter must be warranted by the manufacturer to shut down or disconnect upon loss of Company service; and 3) The inverter must be properly installed and operated, and inspected and/or tested by Company personnel.

Customer, at his own expense, shall meet all safety and performance standards established by local and national electrical codes including the National Electrical Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the National Electrical Safety Code (NESC), and Underwriters Laboratories (UL).

Customer, at his own expense, shall meet all safety and performance standards adopted by the Company and filed with and approved by the Commission pursuant to Rule 3.01.F that are necessary to assure safe and reliable operation of the net metering facility to the Company's system.

Customer shall not commence parallel operation of the net metering facility until the net metering facility has been inspected and approved by the Company. Such approval shall not be unreasonably withheld or delayed. Notwithstanding the foregoing, the Company's approval to operate the Customer's net metering facility in parallel with the Company's electrical system should not be construed as an endorsement, confirmation, warranty, guarantee, or representation concerning the safety, operating characteristics, durability, or reliability of the Customer's net metering facility.

Modifications or changes made to a net metering facility shall be evaluated by the Company prior to being made. The Customer shall provide detailed information describing the modifications or changes to the Company in writing prior to making the modification to the net metering facility. The Company shall review the proposed changes to the facility and provide the results of its evaluation to the Customer within thirty (30) calendar days of receipt of the Customer's proposal. Any items that would prevent parallel operation due to violation of applicable safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy the violations.

Section 5. Maintenance and Permits

The customer shall obtain any governmental authorizations and permits required for the construction and operation of the net metering facility and interconnection facilities. The Customer shall maintain the net metering facility and interconnection facilities in a safe and reliable manner and in conformance with all applicable laws and regulations.

Section 6. Access to Premises

The Company may enter the Customer's premises to inspect the Customer's protective devices and read or test the meter. The Company may disconnect the interconnection facilities without notice if the Company reasonably believes a hazardous condition exists and such immediate action is necessary to protect persons, or the Company's facilities, or property of others from damage or interference caused by the Customer's facilities, or lack of properly operating protective devices.

Section 7. Indemnity and Liability

Each party shall indemnify the other party, its directors, officers, agents, and employees against all loss, damages expense and liability to third persons for injury to or death of persons or injury to property caused by the indemnifying party's engineering design, construction ownership or operations of, or the making of replacements, additions or betterment to, or by failure of, any of such party's works or facilities used in connection with this Agreement by reason of omission or negligence, whether active or passive. The indemnifying party shall, on the other party's request, defend any suit asserting a claim covered by this indemnity. The indemnifying party shall pay all costs that may be incurred by the other party in enforcing this indemnity. It is the intent of the parties hereto that, where negligence is determined to be contributory, principles of comparative negligence will be followed and each party shall bear the proportionate cost of any loss, damage, expense and liability attributable to the party's negligence.

Nothing in this Agreement shall be construed to create any duty to, any standard of care with reference to or any liability to any person not a party to this Agreement. Neither the Company, its officers, agents or employees shall be liable for any claims, demands, costs, losses, causes of action, or any other liability of any nature or kind, arising out of the engineering, design construction, ownership, maintenance or operation of, or make replacements, additions or betterment to, the Customer's facilities by the Customer or any other person or entity.

Section 8. Notices

All written notices shall be directed as follows:

COMPANY
Attention:
Mr. Mike Glancy
ENTERGY ARKANSAS, INC.
#9 Entergy Court
Little Rock, Arkansas 72211

CUSTOMER
Attention:

Name:_____

Address:_____

City:_____

Customer notices to Company shall refer to the Customer's electric service account number set forth in Section 1 of this Agreement.

Section 9. Term of Agreement

The term of this Agreement shall be the same as the term of the otherwise applicable standard rate schedule. This Agreement shall remain in effect until modified or terminated in accordance with its terms or applicable regulations or laws.

Section 10. Assignment

This Agreement and all provisions hereof shall inure to and be binding upon the respective parties hereto, their personal representatives, heirs, successors, and assigns. The Customer shall not assign this Agreement or any part hereof without the prior written consent of the Company, and such unauthorized assignment may result in termination of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives.

Dated this_____day of_____, 20____.

Customer:	Company:
	ENTERGY ARKANSAS, INC.
_____	_____
By:_____	By:_____
Title:_____	Title:_____
Mailing Address:	Mailing Address:
_____	_____
_____	_____
Email Address:	Email Address: (AT)
_____	_____

14.0. SAFETY AND PERFORMANCE STANDARDS FOR NET METERING FACILITIES

14.1. Table of Contents

1.0 Introduction

1.1 Purpose

The purpose of these safety and performance standards for renewable energy facilities is to describe the requirements and procedures for safe and effective interconnection and operation of renewable energy facilities under the Arkansas Public Service Commission (APSC or Commission) Net Metering Rules (the Rules).

A Net Metering Customer may operate a renewable energy facility at 60 Hertz (Hz), single- or three-phase at voltages up to and including 34.5 kV in parallel with the Company's distribution delivery system pursuant to an interconnection agreement, provided that the equipment meets or exceeds the requirements of this standard.

This standard describes typical interconnection requirements. Some installations, however, may require more extensive interconnection facilities, and will be addressed on a case by case basis. This is most likely to be required when several Net Metering Customers desire to connect renewable energy facilities to the same transformer or on the same distribution feeder.

1.2 Scope

The Rules provide that renewable energy facilities, sized according to the Rules, may be installed within the Company's service area on the Net Metering Customer's side of the meter. These facilities will be connected to the distribution delivery system when the distribution delivery system is operating under normal conditions. Some or all of the Net Metering Customer's load may be supplied with energy by the renewable energy facility. Under the Net Metering Rules, the Company's facilities will be available to handle the Net Metering Customer's entire load as needed.

The Rules provide for a maximum size of renewable energy facilities depending on the Net Metering Customer's revenue class. Residential applications are limited to a maximum of 25 kW and non-residential applications are limited to a maximum of 300 kW. (CT)

The provisions contained in this document are the minimum requirements for safe and effective interconnection and operation of renewable energy facilities operating in parallel with the Company's distribution delivery system pursuant to the Rules.

2.0 Definitions

Abnormal operating conditions – A situation in which the Company is operating the distribution delivery system in a manner inconsistent with normal configuration or under conditions that do not normally exist. Examples of abnormal operating conditions are: (1) times of high usage on the Company's system when Customers are requested to conserve energy or, (2) times when the Company must switch distribution feeder circuits out of use for repairs and switch other alternate feeders into use to deliver energy to Customers.

Company - Entergy Arkansas Inc. (EAI)

Customer - Any entity interconnected to the Company's distribution delivery system who takes electric service under one of EAI's rate schedules.

Displaced load - The Net Metering Customer's entire electrical requirement or a portion of it that, except for the output of the Net Metering Customer's renewable energy facilities, would have been served by the Company.

Distribution delivery system - The Company's wires, equipment, and facilities having a voltage of 34.5 kV or below to which the Net Metering Customer's renewable energy facility is interconnected.

Interconnection - The physical connection of renewable energy facilities and the net metering facilities to the distribution delivery system in accordance with the requirements of this standard so that parallel operation can occur.

Interconnection agreement - The Standard Interconnection Agreement for Net Metering Facilities approved by the Commission in EAI Policy Schedule 13.16.

Interconnection facilities - All facilities installed solely to interconnect the Net Metering Customer's system with that of the Company to facilitate the exchange of power between the Net Metering Customer's renewable energy facilities and the Company's power system including, but not limited to, connection, transmission, distribution, engineering, transformation, switching, metering, and safety equipment. Interconnection facilities shall include any additions and/or modifications to the Company's system deemed by the Company to be necessary.

Network service - Two or more primary distribution feeder sources electrically connected on the secondary (or low voltage) side to form one power source for one or more customers. This configuration is designed to maintain service to the customers even after the loss of one of these primary distribution feeder sources.

Net Metering Customer - Any customer with a renewable energy facility that takes service under EAI's net metering tariff.

Net Metering Facility - The hardware and software installed to measure the energy flow both into and out of the Net Metering Customer's facilities for the purpose of determining the usage for billing, if any.

Parallel operation - The operation of renewable energy facilities by a Net Metering Customer while the Net Metering Customer's facilities are physically and electrically interconnected to the Company's distribution delivery system.

Point of common coupling (PCC) - The point where transfer of any electric power between the customer's facilities and the Company's distribution delivery system takes place, normally at the point of attachment.

Pre-interconnection study - A study or studies that may be conducted by the Company in response to its receipt of a completed interconnection agreement. Pre-interconnection studies may include, but are not limited to:

(a) **Service study** - An on-site analysis used to determine the interconnection requirements and the system voltage for providing parallel service to a Net Metering Customer with a renewable energy facility. All net metering facilities will require this study.

(b) **Coordination study** - An engineering analysis that determines whether the presence of the renewable energy facility would interfere with the protective fusing and relaying on the distribution delivery system. It includes an analysis of the renewable energy facilities' contribution to power flow, available fault current, capacitor bank impact, and effects of voltage under normal and worst case situations. Typically, this would be required when more than one Net Metering Customer is or desires to be attached to the same distribution transformer or feeder circuit.

(c) **Distribution delivery system impact study** - An engineering study that models the distribution delivery system with the proposed renewable energy facilities in place. The modeling must determine whether the distribution delivery system will be able to support the proposed renewable energy facility without reliability problems or interruptions in service to other customers. The study must also include a transient analysis to determine the potential for stability problems. If the model and transient studies indicate that power can flow back to the substation and consequently onto the transmission grid, then similar assessments will be required for the transmission system. This type of study would be required when several Net Metering Customers have renewable energy facilities interconnected on the same feeder circuit and the total output of all interconnected renewable energy facilities on that feeder is 50% or more of the feeder circuit's base load.

(d) **Secondary network study** - An engineering analysis to specifically determine whether a renewable energy facility can be safely added to a secondary network. Typically, this study would be required when a Net Metering Customer's renewable energy facility is proposed for interconnection to a secondary network.

Protective function - A system that uses hardware (including switching devices), relay protection schemes and software that prevents unsafe operating conditions from occurring before, during, and after the interconnection of the renewable energy facility with the distribution delivery system. This system will be designed to isolate the Net Metering Customer's renewable energy facility or to disconnect it from the distribution delivery system under abnormal operating conditions or outages.

Quality of service - An operating state of the distribution delivery system that provides usable power to a customer. This state of usable power includes the parameters specified for power factor (Section 3.9.7), voltage surges and sags (Section 3.9.8), voltage flicker (Section 3.9.9), frequency (Section 3.9.10) and harmonics (Section 3.9.11).

Renewable energy facility - A system of hardware and software by which electric energy is generated using sun, wind, water, or biomass products as the source and as allowed to be interconnected to the Company's distribution system under the Rules.

Stabilized - The distribution delivery system is considered stabilized when, following a disturbance, the system returns to the normal range of voltage and frequency for a duration of five (5) minutes. (CT,AT)

Standard of care - A term defining the level of awareness to maintain workplace and public safety in the design, installation and operation of facilities which generate power.

System protection facilities - The equipment required to protect the Company's system and its other customers' facilities from unsafe operating conditions occurring at the Net Metering Customer's renewable energy facilities. The protection requirements shall be met at the PCC, although the devices and functions providing the protective functions can be located elsewhere.

Unsafe operating conditions - A situation that if left uncorrected would result in: (1) harm to any personnel or damage to any equipment, (2) unacceptable system stability or, (3) operation outside established parameters affecting the quality of service to other customers connected to the distribution delivery system.

3.0 Details

3.1 Available Voltage Systems

The Company's primary distribution delivery systems available for parallel generation operations are of grounded wye or closed delta configurations. Generally, all secondary voltage levels from 120/240 V to 34.5 kV single-phase or three-phase (except open-delta and open-wye) are available for interconnection. Open-delta and open-wye secondary voltage configurations require special evaluation prior to interconnection. The voltage level available for connecting the renewable energy facility in parallel with the system depends on the desired location on the Company's distribution delivery system and the size of the Net Metering Customer's renewable energy facility.

3.2 Reasons for Disconnection from the Distribution Delivery System

The Company may disconnect the Net Metering Customer's renewable energy facility from the distribution delivery system under the following conditions:

(1) Upon expiration or termination of the interconnection agreement;
(2) Non-compliance of the Net Metering Customer's facility with any of the requirements in this document;

(3) System emergency -
- The Company may temporarily disconnect a Net Metering Customer's facility without prior written notice in cases where continued interconnection will endanger persons or property;
- During the forced outage of the distribution delivery system, the Company shall have the right to temporarily disconnect a Net Metering Customer's facility to make immediate repairs on the distribution delivery system;

(4) During routine maintenance, repairs, and modifications to the Company's distribution system;

(5) Lack of approved interconnection agreement -
In order to interconnect the Net Metering Customer's renewable energy facility to the Company's distribution delivery system a Net Metering Customer must first submit to the Company an executed Standard Interconnection Agreement for Net Metering. The Company may refuse to connect or may disconnect the Net Metering Customer's facility if such agreement has not been received and approved.

When possible, the Company will provide the Net Metering Customer with reasonable notice of disconnection and will reconnect the Net Metering Customer as quickly as reasonably practical.

3.3 Pre-Interconnection Studies for Interconnection of Renewable Energy Facilities Under Net Metering Rules

The Company shall conduct one or more pre-interconnection studies prior to interconnection of renewable energy facilities under the Rules.

Secondary network systems are designed such that they do not allow reverse current flow. This and other aspects of secondary network systems create technical difficulties that may make interconnection more costly to implement. The ability of the Company to connect a Net Metering Customer's renewable energy facility in parallel with the system may be limited if a Net Metering Customer who is served from a secondary network system requests interconnection. The Company may conduct pre-interconnection and network studies to determine to what extent the renewable energy facility may be safely added to the network or may be accommodated in some other fashion.

3.4 System Changes

3.4.1 Company Changes to Distribution Delivery System

The distribution delivery system is a dynamic and changing system. If the Company changes the distribution voltage, the Net Metering Customer will be responsible for paying for all modifications to the Net Metering Customer's facilities required for reconnecting to the Company's reconfigured distribution delivery system. The Company will notify the Net Metering Customer of reconfiguration programs.

3.4.2 Net Metering Customer Changes to Interconnection

The Net Metering Customer shall notify the Company to obtain prior approval for any proposed modifications to the interconnecting scheme.

3.5 Allowable Tie Points

Normally, only one tie point between the Net Metering Customer's facilities and the Company's distribution delivery system will be allowed.

3.6 Energy Flow during Emergencies

Power flow from or to a Net Metering Customer's facilities during periods of system emergencies may be discontinued according to the APSC's rules, and the Company's Tariff, rates, riders or contract with the Net Metering Customer.

3.7 Types of Allowed Generators

Single- or three-phase alternating current generating units may be operated in parallel with the distribution delivery system when used as part of a renewable energy facility. They may be synchronous generators, induction generators, or inverter-controlled systems. The total connected capacity shall not exceed 25 kW for residential installations and 300 kW for non-residential installations. Direct-current generation shall not be connected to the Company's alternating-current distribution delivery system. (CT,AT) (AT)

3.7.1 Limits on Three-Phase Generators

If three-phase service is not available in the area or if Company facilities must be upgraded or otherwise modified in order to enable the Net Metering Customer to connect to these facilities, the Net Metering Customer must pay for the additional cost for such service or improvements as determined by the Company. The Company reserves the right to refuse three-phase service under certain circumstances per the Company's extension policy.

3.7.2 Limits on Single-Phase Generators

Where necessary, to avoid the potential for renewable energy facilities to affect the service to other customers, the Company may limit the capacity and operating characteristics of single-phase generators in a manner consistent with its existing limitations for single-phase motors. A single-phase renewable energy facility shall be limited to a capacity of 25 kW or less.

3.8 Explicit Criteria for Parallel Operations

A Net Metering Customer shall be permitted to interconnect and operate a renewable energy facility in parallel with the Company's distribution delivery systems provided that all of the following criteria are met throughout the life of the interconnection.

3.8.1 Safety

In general, the Net Metering Customer's renewable energy facility will be held to the same standard of care as the Company is required to maintain. The safety of the general public and the personnel and equipment of the Company shall in no way be reduced or impaired as a result of the interconnection. Also, two installation criteria must be met:

(1) The Net Metering Customer's renewable energy facility shall be equipped with protective functions designed to prevent the renewable energy facility from being connected to a de-energized circuit owned by the Company. The design of some systems provides this function without adding equipment at the PCC. Each system not providing additional devices at the PCC must be shown to be capable of these functions.

(2) The Net Metering Customer's renewable energy facility shall be equipped with the necessary protective functions designed to prevent connection or parallel operation of the Net Metering Customer's facility with the distribution delivery system unless the distribution delivery system service voltage and frequency are of normal magnitude.

3.8.2 Impact of Interconnection

The quality, reliability and the availability of delivery service to the Company's other customers shall not be diminished or impaired as a result of the interconnection.

3.9 General Interconnection Requirements

The Net Metering Customer's renewable energy facility shall meet the technical requirements as prescribed in this section.

3.9.1 Net Metering Customer's Equipment and Interconnection Standards

The Net Metering Customer's renewable energy facility, net metering facilities and interconnection installation must meet all applicable national, state, and local construction and safety codes.

The Net Metering Customer shall be responsible for the design, installation, operation and maintenance of all equipment and facilities installed or that will be installed on the Net Metering Customer's side of the PCC specified by the parties involved. Such design shall meet the latest standards of Institute of Electrical and Electronic Engineers, National Electric Manufacturers Association, American National Standards Institute, National Electric Code, other national codes and any local codes pertaining to the design and construction of electrical facilities in effect at the time of installation. The facility shall be subject to the requirements of all authorities having jurisdiction and shall comply with all applicable codes and ordinances. A disconnect switch which has a visible opening and is accessible to and lockable by Company personnel at all times and without notice shall be furnished by the customer to the Company's specifications unless waived by Rule 3.01.B of the Commission's Net Metering Rules. (AT)

(MT)

3.9.2 Rating of Net Metering Customer's Equipment
The equipment selected by the Net Metering Customer shall be rated for continuous parallel operation with the Company's system.

Renewable energy facilities that are designed to be used as stand-by or emergency power facilities shall not be interconnected to the Company's distribution delivery system for parallel operations under the Rules. Such an emergency power facility must not be interconnected to the Company's system. The customer's facilities shall be disconnected from the Company's system prior to the customer's use of stand-by or emergency facilities.

Net Metering systems that are intended to provide the customer with power during periods when the Company's facilities are unavailable shall be equipped with a transfer switch to prevent energizing a non-energized Company circuit consistent with Sections 3.13.3.3 and 3.8.1 of this policy.

3.9.3 Protection of Net Metering Customer's Equipment
The Net Metering Customer will be responsible for protecting its facilities in such a manner that distribution delivery system outages, short circuits or other disturbances, including zero sequence currents and ferroresonant over-voltages, do not damage the Net Metering Customer's facilities.

The Net Metering Customer's protective equipment shall be installed to prevent the renewable energy facility from causing unnecessary tripping of the distribution delivery system breakers that would affect the distribution delivery system's ability to provide reliable service to other customers.

3.9.4 Required Drawings
Adequate drawings of the Net Metering Customer's proposed renewable energy facility, which will include a one line diagram and proposed relay systems, must be submitted to the Company for review during the planning stage. Additional drawings may be required on a case by case basis.

3.9.5 Changes to Company Facilities
The total cost of any additional equipment that must be installed by the Company on its distribution delivery system to allow parallel operation must be paid for by the Net Metering Customer, including the transformers and any facilities which must be added due to increased fault current or special operating conditions.

3.9.6 Reactive Power Requirements (MT)

The Net Metering Customer's renewable energy facility shall normally be responsible for supplying the facility's own reactive power as required by the load to which it supplies power.

3.9.7 Power Factor

The power factor of the renewable energy facility at the PCC shall be according to the appropriate rate schedule for this installation. The presence of the renewable energy facility shall not cause the power factor to be lower than it was prior to installation and operation of the renewable energy facility.

3.9.8 Voltage Surges or Sags

The Net Metering Customer will operate its renewable energy facility in such a manner that the voltage levels on the distribution delivery system are in the same range (+5.0 % or –5% from nominal voltage) as if the facilities were not connected to the Company's system. The Net Metering Customer shall be responsible for any damages to the Net Metering Customer's facilities, and shall be liable for any damages to the Company's facilities or the facilities of other customers due to any under voltage or over voltage contribution from the renewable energy facility.

3.9.9 Voltage Flicker

The renewable energy facility shall not create objectionable flicker for the Company's other customers. As a guide to identifying objectionable flicker the "Border Line of Irritation" curve is included in Section 5.1. The creation of objectionable flicker shall result in disconnection by the Company until such time that all objectionable flicker problems are corrected.

3.9.10 Frequency

When the operating frequency of the Net Metering Customer's Net Metering Facility deviates from the 60 Hz base, the Net Metering Customer shall automatically disconnect the Net Metering Facility from the distribution delivery system in accordance with the table below. (CT,AT)

Generator Size	Frequency Range (Hz)	Seconds from start of event
30 kW or less	Greater than 60.5 Hz	0.16
30 kW or less	Less than 59.3 Hz	0.16
Greater than 30 kW	Greater than 60.5 Hz	0.16
Greater than 30 kW	Less than 59.8 Hz to 57 Hz	Adjustable 0.16 to 300 [1]
Greater than 30 kW	Less than 57 Hz	0.16

(AT)

[1] Consult the Company (AT)

The Company may require the Net Metering Customer to wait up to five (5) minutes to reconnect Net Metering Facility after the distribution delivery system voltage and frequency have returned to normal range and the system has been stabilized. Consult the Company for details. (IEEE 1547 4.2.6) (MT,CT,AT)

3.9.11 Harmonics (MT)
In accordance with IEEE 519 the total harmonic distortion (THD) voltage shall not exceed 5.0% of the fundamental 60 Hz frequency nor 3.0% of the fundamental frequency for any individual harmonic when measured at the PCC.

3.10 Inspection Prior to Operations and Additional Requirements
The Company reserves the right to impose any herein described but unmet requirements and to make subsequent final inspection before the renewable energy facility operates to verify that all such unmet requirements have been satisfied. However, the Company has no actual or implied responsibility in this regard. The Net Metering Customer shall be responsible for making necessary changes, at the Net Metering Customer's expense, to the facility should such changes be required.

Inspection by the Company of the Net Metering Customer's equipment and interconnection facilities shall not constitute a determination by the Company of the continuing suitability of such equipment and interconnection. An inspection by the Company shall in no way constitute a warranty or representation by the Company against future negligence, misuse, faulty repairs, or subsequently developing defects, and the Company assumes no responsibility or liability therefor.

3.11 Responsibility for Net Metering Customer's Operations
The Company is not responsible for proper operations of the Net Metering Customer's renewable energy facility upon and after interconnection to the Company's distribution delivery system.

3.12 Responsibility for Net Metering Customer's Annual Maintenance
Annual maintenance of the Net Metering Customer's facility is the Net Metering Customer's sole responsibility. The Net Metering Customer shall maintain records of such maintenance activities, which the Company may review at reasonable times. Such maintenance records shall be made available for the Company's inspection upon request. The Company reserves the right to inspect the records, but has no responsibilities for maintenance either actual or implied.

3.13 Protection/Interface Requirements
Protecting both the Net Metering Customer's facilities and the Company's system are of great importance. Proper protective systems shall be established in the design phase and confirmed prior to start-up of the Net Metering Customer's renewable energy facility. An interconnection between the Company and the Net Metering Customer will not be allowed prior to the proper coordination of protective devices. The Net Metering Customer shall be responsible for providing to the Company the necessary documentation certifying that maintenance and testing have been satisfactorily performed.

3.13.1 Changes to Company Fault Interruption Equipment (MT)

Renewable energy facilities that are installed on the Company's distribution delivery system will provide additional fault current to the distribution delivery system. Thus, it is possible that the added facilities will necessitate the modification of the existing fault interrupting devices on the distribution feeder. The Net Metering Customer will be responsible for paying the cost of these changes to the Company's system.

It is also possible that the added facilities will increase the available fault current on the distribution delivery system beyond the interrupting capability of the existing devices on the distribution delivery system. The Net Metering Customer may be required to limit the fault current contribution from the renewable energy facility. Should the Company also be required to make changes, the Net Metering Customer shall pay the cost of the required changes. The issues will be examined on a case-by-case basis.

3.13.2 Tests of the Net Metering Customer's Equipment

The Company reserves the right, but has no responsibility either actual or implied, to observe the Net Metering Customer's tests and/or inspection of any of the Net Metering Customer's protective equipment that is essential to the interconnection, including relays, circuit breakers, protective devices and related equipment. Inspection may include simulated test tripping of the Net Metering Customer's interconnection breakers by the protective relays to verify all protective set points and relay/breaker trip timing prior to interconnection to the Company system.

Inspection by the Company of the Net Metering Customer's equipment and interconnection facilities shall not constitute a determination by the Company of the continuing suitability of such equipment and interconnection. An inspection by the Company shall in no way constitute a warranty or representation by the Company against future negligence, misuse, faulty repairs, or subsequently developing defects, and the Company assumes no responsibility or liability therefor.

The Net Metering Customer shall provide the Company with notice at least two weeks before the initial energizing and start-up testing of the Net Metering Customer's facilities so that the Company may witness the testing of any equipment and protective systems associated with the interconnection.

If upon connecting to the Company's system a system emergency develops, safety issues arise, or the quality of service to other Net Metering Customers is affected, the Company may then require additional inspections or tests of the Net Metering Customer's protective equipment. The Company may then require additional inspections or tests of the Net Metering Customer's protective equipment in accordance with then current IEEE 1547 and IEEE 1427.1. (AT)

3.13.3 Specifying Protective Equipment (MT)

The Company will have the right to specify certain protective devices, including relays and circuit breakers that the Net Metering Customer must install. The Company will specify all relay settings on the inter-tie. Settings of interconnection protective devices on the Net Metering Customer's system will be specified by the Net Metering Customer, but will be checked, coordinated with, and reviewed by the Company before application and after subsequent modification.

3.13.3.1 Service Interruption Equipment

The Net Metering Customer shall provide an automatic method of disconnecting the renewable energy facility from the distribution delivery system when either of the following conditions occurs. The renewable energy facility shall be automatically disconnected from the Company's distribution delivery system if (1) a sustained voltage deviation in excess of +5.0 % or –10% from nominal voltage persists for more than 30 seconds, or (2) a deviation in excess of +10% or –30% from nominal voltage persists for more than ten cycles. The Net Metering Customer may reconnect no sooner than five (5) minutes after the distribution (CT,AT) delivery system voltage and frequency have returned to normal range and the system has been stabilized. The design of some systems provides this function without adding equipment at the PCC. Each system not providing additional devices at the PCC must be shown to be capable of these functions.

3.13.3.2 Fault Interrupting Device

The Net Metering Customer shall install a fault-interrupting device between the Company and the renewable energy facility. Circuit breakers or other interrupting devices shall be capable of interrupting maximum available fault current at the PCC. The Company will approve such fault-interrupting device, which is likely to vary in design depending on location, available fault current, and size of the Net Metering Customer's facility.

Since most short circuits on overhead lines are of a temporary nature, it is the Company's normal practice to automatically reclose the substation circuit breaker on overhead lines after an automatic trip. Instantaneous reclosing (10-15 cycles) of circuit breakers and line reclosers may also be used. The Net Metering Customer shall be responsible for automatically disconnecting its facilities from the Company's distribution system prior to the automatic or instantaneous reclosing of a Company's substation circuit breaker or line recloser. The Net Metering Customer's disconnecting device shall not automatically or manually reclose sooner than five (5) minutes after the return of the Company's service (CT,AT) voltage to normal magnitude and phase sequence following a recloser operation.

For renewable energy facilities using an inverter system, no other fault-interrupting device is required. The inverter interrupts the fault.

(MT)

3.13.3.3 Equipment to Block Energizing Dead Circuits

Under no condition will the Net Metering Customer be permitted to energize a non-energized Company distribution circuit. The Net Metering Customer shall install equipment to effectively block the renewable energy facility from energizing a non-energized Company circuit. The design of some systems provides this function without adding equipment at the PCC. Each system not providing additional devices at the PCC must be shown to be capable of these functions.

3.13.3.4 Control, Protection and Safety Equipment Requirements For Specific Technologies

Various technologies require unique control, protection, and safety equipment to be installed. The specifications in this section list those requirements unique to the technologies.

3.13.3.4.1 Synchronous Generators

For a Net Metering Customer's synchronous generator, circuit breakers shall be three-phase devices with electronic or electro-mechanical control. The Net Metering Customer is solely responsible for properly synchronizing its generator with the Company's distribution delivery system. The excitation system response ratio shall be 0.5 or greater. The generator's excitation system(s) shall conform, as near as reasonably achievable, to the field voltage versus time criteria specified in American National Standards Institute Standard C50.13-1989 in order to permit adequate field forcing during transient conditions.

3.13.3.4.2 Induction Generators and Inverter Systems

Induction generation may be connected and brought up to synchronous speed (as an induction motor) if it can be demonstrated that the initial voltage drop measured on the distribution delivery system side of the PCC is within the allowable visible flicker standard in Section 5.1. Otherwise, the Net Metering Customer may be required to install hardware or employ other techniques to bring voltage fluctuations to acceptable levels.

Self-commutated inverters whether of the utility-interactive type or stand-alone type shall be used in parallel with the distribution delivery system only with synchronizing equipment. Line-commutated inverters do not require synchronizing equipment.

3.14 Susceptibility to Transmission Faults (MT)

Faults, single-phasing events or other abnormal operating conditions occurring on the Company's transmission system could affect a Net Metering Customer's facilities connected to the Company's distribution delivery system. It is the Net Metering Customer's responsibility to protect the Net Metering Customer's facilities from these conditions.

3.15 Synchronizing Requirements

The Net Metering Customer shall be solely responsible for synchronizing and properly connecting and disconnecting its electrical system relative to parallel operation with the Company's system. The Net Metering Customer shall provide an automatic synchronizing scheme to prevent the closing of its circuit breaker when the two electrical systems are out of synchronism.

The Net Metering Customer's renewable energy facility shall be automatically disconnected if its frequency should deviate more than +0.5 Hz or –0.7 Hz from the 60 Hz base. (See Section 3.9.10 Frequency.)

The synchronizing system of the Net Metering Customer must allow the Net Metering Customer's facilities to be operated in parallel only when the Company's distribution system is energized from the Company's system at the PCC.

3.16 Metering Requirements

The metering equipment is usually installed on the Net Metering Customer's premises (on Net Metering Customer owned building, pole or structure) as part of the service entrance equipment. Therefore provisions must be made for it in the Net Metering Customer's installation. Based on the applicable rate schedule and the Company's standard practices, the Net Metering Customer will provide the meter socket and the Company will supply the appropriate meter, standard for the type of service, that will measure the bi-directional energy flow. If the application requires other than the standard meter for the type of service, the additional metering requirements will be installed at the customer's expense. (AT)

The Net Metering Customer will be required to provide the Company with information regarding the total connected load. The Net Metering Customer may be required to provide and / or install the meter socket, metering transformer enclosure, and adequate attachments or devices for attaching Company's metering facilities to the building. For additional information see the Company's Customer Installation Standards for Electric Service.

3.17 Standard Interconnection Agreement Requirements (MT)

A written agreement will be required between the Company and the Net Metering Customer specifying the liability provisions, indemnities, terms of payment of cost to modify distribution delivery system (if not paid in advance), and other items affecting service under this document. This agreement will explain in detail the authority or responsibilities of the parties involved. **An interconnection between the Company's distribution delivery system and a Net Metering Customer's renewable energy facility will not be allowed prior to the execution of a written Standard Interconnection Agreement for Net Metering Facilities.**

4.0 References

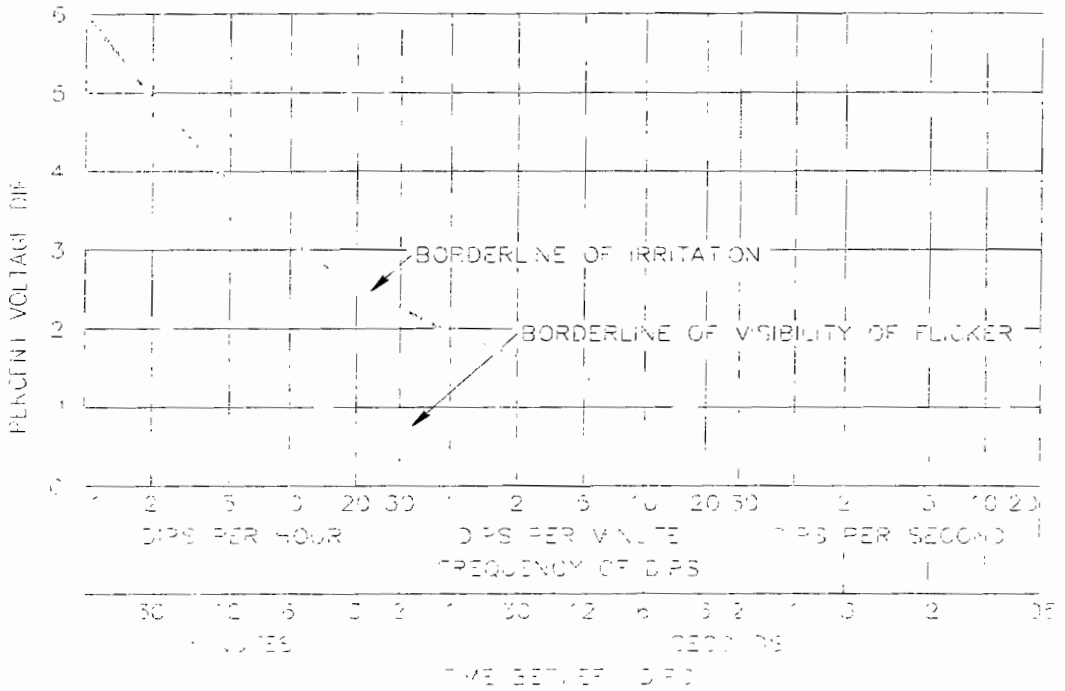
IEEE Guide for Protective Relaying of Utility-Consumer Interconnection C37.95 (Latest revision)
IEEE Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, 519-1992
IEEE Recommended Practice for Electric Power Distribution for Industrial Plants, 141-1993
IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems 1547 (AT)
IEEE Standard Conformance for Test Procedures for Interconnecting Distributed Resources with Electric Power Systems 1547.1

(MT)

5.0 Attachments

5.1 Flicker Chart
5.2 Net Metering Technical Requirements Compliance Checklist
5.3 Process Flowchart

5.1 Flicker Chart



Flicker Curve. Source: IEEE Std. 141-1993

5.2 Net Metering Technical Requirements Compliance Checklist (MT)

This checklist is a summary of the requirements that can be found in detail in this document (Section numbers are provided after each requirement.) Two objectives must be met to arrive at compliance by the proposed installation:

1. **Safety**: The Net Metering Customer's renewable energy facility will be held to the same standard of care, as the Company is required to maintain. In addition, the safety of the general public and the personnel and equipment of the Company shall in no way be reduced or impaired as a result of the interconnection.
2. **Customer Impact**: The quality, reliability and the availability of service to the Company's other customers shall not be diminished or impaired as a result of the interconnection.

This checklist is part of the Application and shall be completed by the Net Metering Customer and reviewed by Company's Design Engineering personnel or jurisdictional designee. The Customer's equipment vendor may be of assistance in completing the Application. (AT)

Customer Name
Date
Location
Renewable Source
Type of Process
ENTERGY REQUIREMENTS – Required for all Residential and Non-Residential Applicants. (MT,CT)
1. Accessible and Lockable Disconnect: (3.9.1) (AT)
Description of proposed compliance (MT)
Comment (MT,RT)
2. Disconnect inter-tie within 10 cycles of a service interruption or fault. (3.13.3.1 & 3.13.3.2)
Description of proposed compliance
Comment
3. Block generator from energizing dead circuits. (3.13.3.3)
Description of proposed compliance
Comment

ARKANSAS PUBLIC SERVICE COMMISSION

2nd Revised Sheet No. P14.20 Schedule Sheet 20 of 21

Replacing: 1st Revised Sheet No. P14.20

Entergy Arkansas, Inc.
Name of Company

Kind of Service: Electric Class of Service: As Applicable

Docket No.: (CT)
Order No.:
Effective:

Part IV. Policy Schedule No. 14

Title: Safety and Performance Standards for Net Metering Facilities

PSC File Mark Only

Net Metering Interconnection Application Page 4 of 4 **Must be completed by all Non-Residential Applicants**	(AT)
Customer Name	
Date	
4. Supply reactive power. (3.9.6)	(MT,CT)
Description of Proposed Compliance:	
Comment:	
5. Identify power factor. (3.9.7)	
Description of Proposed Compliance:	
Comment:	
6. Limit voltage surges and sags. (3.9.8)	
Description of Proposed Compliance:	
Comment:	
7. Limit voltage flicker. (3.9.9)	
Description of Proposed Compliance:	
Comment:	
8. Limit harmonic voltage and current. (3.9.11)	
Description of Proposed Compliance:	
Comment:	
9. Specify protective devices and settings. (3.13.3.4)	
Description of Proposed Compliance:	
Comment:	
10. Automatic Synchronization with Company System within ½ cycle or disconnect. (3.9.10 & 3.15)	(AT)
Description of Proposed Compliance:	
Comment:	

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ARKANSAS PUBLIC SERVICE COMMISSION

Original Sheet No. P14.21 Schedule Sheet 21 of 21

Replacing: Sheet No.

Entergy Arkansas, Inc.
Name of Company

Kind of Service: Electric Class of Service: As Applicable

Docket No.:
Order No.:
Effective:

Part IV. Policy Schedule No. 14

Title: Safety and Performance Standards for Net Metering Facilities

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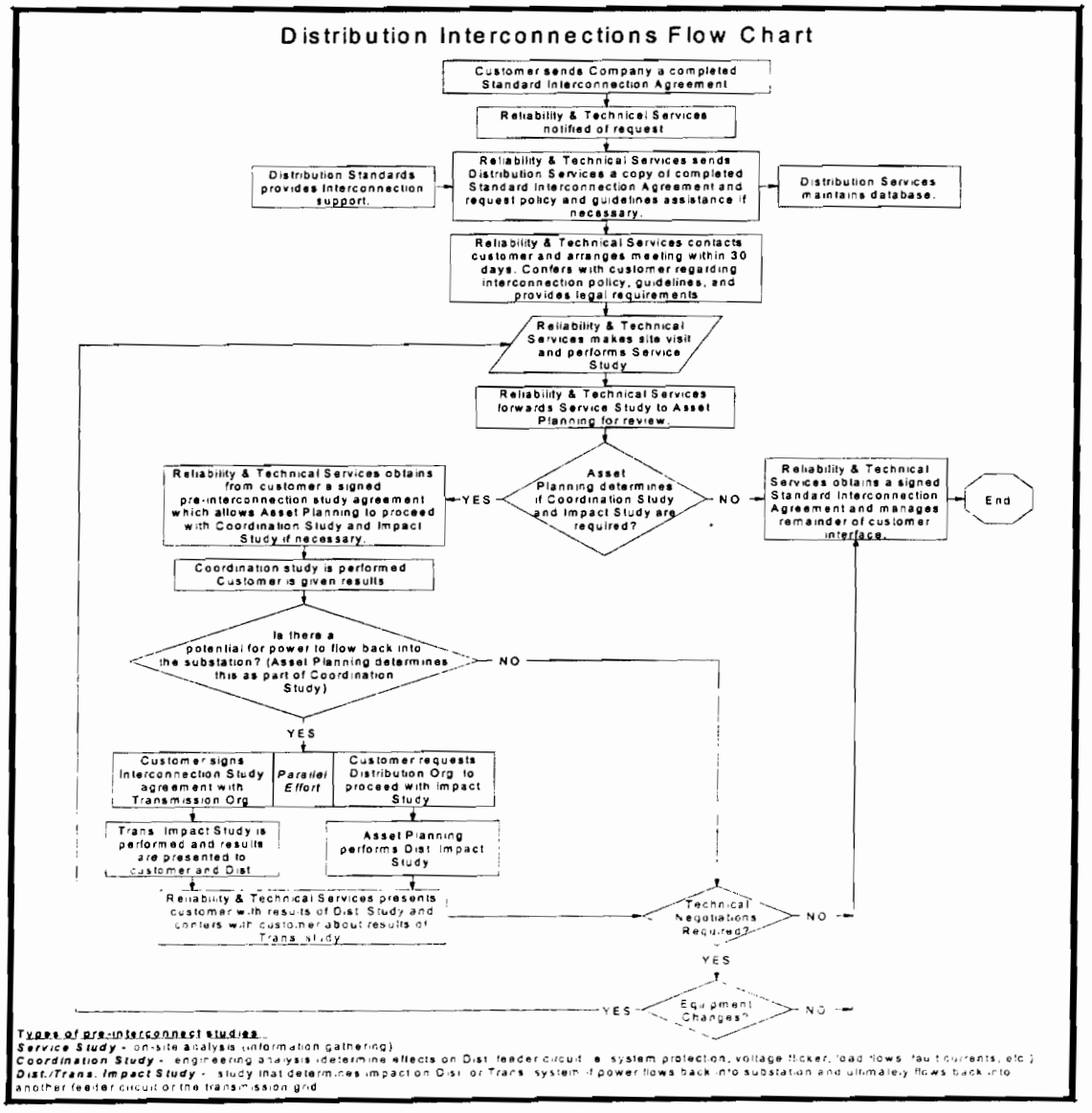
5.3 Process Flowchart (MT)



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ARKANSAS PUBLIC SERVICE COMMISSION

4th Revised	Sheet No. TC-3	Schedule Sheet 3 of 6
Replacing: 3rd Revised	Sheet No. TC-3	
Entergy Arkansas, Inc. Name of Company		
Kind of Service: Electric	Class of Service: All	Docket No.: Order No.: Effective:
TABLE OF CONTENTS		PSC File Mark Only

Part III. Rate Schedules

BEFORE THE
ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF)
ENTERGY ARKANSAS, INC. FOR A PROPOSED) DOCKET NO. 07-159-TF
TARIFF REVISION REGARDING NET METERING)

COMPLIANCE TESTIMONY

OF

REGINA L. BUTLER
AUDIT SUPERVISOR

ON BEHALF OF THE GENERAL STAFF OF THE
ARKANSAS PUBLIC SERVICE COMMISSION

JANUARY 17, 2008

Q. Please state your name and business address.

A. My name is Regina L. Butler and my business address is Arkansas Public Service Commission (Commission or APSC), 1000 Center Street, Little Rock, Arkansas 72201.

Q. By whom are you employed and in what capacity?

A. I am currently employed by the APSC's General Staff (Staff) as an Audit Supervisor in the Electric Section. In that capacity, I analyze utility company filings, identify and evaluate issues, develop positions on those issues and present those positions, when necessary, in written and oral testimony before the Commission.

Q. Please state your qualifications and background.

A. I have more than fourteen years of utility experience—over five years with Entergy Services, Inc. and nine years with Alltel Communications, Inc. I was employed in various capacities with these companies including Accountant in Property Accounting, Supervisor in General Accounting, and Revenue Analyst in Revenue Assurance. I joined Staff in April 2004 as a Rate Analyst. In June 2006, I was promoted to my current position. My educational qualifications include a Bachelor of Business Administration in Accounting from the University of Central Arkansas and a Master of Business Administration from the University of Arkansas at Little Rock. I am a Certified Public Accountant licensed to practice in Arkansas. Since joining Staff, I have received specialized training, including the National Association of Regulatory Utility Commissioners Annual Regulatory Studies Program at Michigan State University. I have previously presented testimony before this Commission.

Q. What is the purpose of your Compliance Testimony?

A. I will address and make a recommendation regarding Entergy Arkansas Inc.'s (EAI) revised Optional Net Metering Service tariff, revised Standard Interconnection Agreement for Net Metering Facilities, revised Safety and Performance Standards for Net Metering Facilities, and revised Table of Contents Sheet No. TC-3 filed on December 20, 2007, in compliance with Order No. 9 in Docket No. 06-105-U. Order No. 9 in Docket No. 06-105-U directed all Arkansas electric utilities to file revised Net Metering tariffs in accordance with the revised Net Metering Rules approved in that docket.

Q. Have you reviewed EAI's filing?

A. Yes. The revisions to the Optional Net Metering Service tariff and Standard Interconnection Agreement for Net Metering Facilities filed by EAI are consistent with the revised Net Metering Rules reflected in Order No. 12 of Docket No. 06-105-U. The Safety and Performance Standards for Net Metering Facilities and Table of Contents Sheet No. TC-3 have also been properly updated to reflect the changes in the Net Metering Rules.

Q. What is your recommendation?

A. I recommend that the revised tariffs filed by EAI on December 20, 2007, be approved.

Q. Does this conclude your testimony?

A. Yes, it does.

CERTIFICATE OF SERVICE

I, Valerie F. Boyce, hereby certify that a copy of the foregoing has been served on all parties of record by electronic mail, hand-delivery, facsimile, or first-class mail, postage prepaid, this 17th day of January, 2008.

Valerie F. Boyce

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...C... ARY ... COMM.
JAN 18
JAN 18 10 59 AM '08

ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF ENTERGY ARKANSAS, INC. FOR A PROPOSED TARIFF REVISION REGARDING NET METERING))))

FILED
DOCKET NO. 07-159-TF
ORDER NO. 1

ORDER

On December 20, 2007, Entergy Arkansas, Inc. (EAI) filed a revised Optional Net Metering Service tariff, revised Standard Interconnection Agreement for Net Metering Facilities, revised Safety and Performance Standards for Net Metering Facilities, and revised Table of Contents Sheet No. TC-3. These filings were made in compliance with Order No. 9 in Docket No. 06-105-U which directed all Arkansas electric utilities to file revised Net Metering tariffs in accordance with the revised Net Metering Rules approved in that docket.

On January 17, 2008, Regina Butler, Audit Supervisor, filed Testimony on behalf of the General Staff recommending that the revised tariffs filed by EAI on December 20, 2007 be approved.

IT IS, THEREFORE, ORDERED that EAI's tariff filed on December 20, 2007 is approved.

There being no further action to be taken in this matter at this time, the Secretary of the Commission is hereby authorized and directed to close this docket.

BY ORDER OF THE PRESIDING OFFICER PURSUANT TO DELEGATION.

This 18th day of January, 2008.

Connie Griffin
Presiding Officer

Jan Sanders (acting)
Diana K. Wilson
Secretary of the Commission

I hereby certify that the ... order issued by the Arkansas Public Service Commission has been served on all parties of record this date by U.S. mail with postage prepaid, using the address of each party as indicated in the official docket file.

Diana K. Wilson
Secretary of the Commission
Date 1-18-08

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ARKANSAS PUBLIC SERVICE COMMISSION

4th Revised	Sheet No. TC-3	Schedule Sheet 3 of 6
Replacing: 3rd Revised	Sheet No. TC-3	
Entergy Arkansas, Inc. Name of Company		
Kind of Service: Electric	Class of Service: All	TRA Docket No.: Order No.: Effective:
TABLE OF CONTENTS		PSC File Mark Only

Part III. Rate Schedules