TAYLOR ELECTRIC COOPERATIVE, INC.

Distributed Generation Procedures & Guidelines Manual for Members

TABLE OF CONTENTS

GENE	FRAL	. 4
I. DG	FACILITY CATEGORIZATION AND SIZING	. 5
1)	Connection Level Category	. 5
2)	Contact Persons	. 5
3)	Ownership of Facilities	. 5
4)	Power Export Category	. 5
5)	Qualifying or Non-Qualifying Category	. 6
6 <u>)</u>	Size Requirements	. 6
II. ŚA	LES TO AND PURCHASES FROM A PARALLEL DG FACILITY	. 7
1)	QF Where the Member Desires to Export Power	. 7
2)	NQF Where the Member Desires to Export Power	
III. ÓF	PERATION OF A PARALLEL DG FACILITY	. 7
1)	General Interconnection and Protection Requirements	
2)	Manual Disconnect	. 8
3)	Prevention of Interference	
4)	Protective Function Requirements	
5)	Facilities not identified	
6)	Access	
7)	Liability for Injury and Damages	
8)	Liability Insurance	
9)	Metering/Monitoring	
10)	Notice of Change in Installation	
11)	Testing and Record Keeping	
12)	Disconnection and Reconnection of Service	
,	EMBER'S INITIAL REQUIREMENTS	
1)	Notification	
2)	Application Request	
3)	Submit a DG Plan	
	OOPERATIVE AND POWER SUPPLIER REVIEW PROCESS	
1)	Pre-Interconnection Studies for Interconnection of DG	_
2)	Line Extension and Modifications to Cooperative Facilities	
3)	Communications	
4)	Review Liability	
5)	Non-discrimination	
VI. ME	EMBER'S RESPONSIBILITY PRIOR TO OPERATION	
1)	Applicable Regulations	
2)	Member Application and DG Plan Approval	
3)	Contracts	
4)	Fees	
5)	Warranty	
6)	Inspection and start-up	
7)	Conditions Preventing Interconnection.	
8)	Refusal to Interconnect Service or Disconnection of Service	

Distributed Generation Procedures and Guidelines Manual for Members

Page 3
AGREEMENT FOR INTERCONNECTION AND PARALLEL OPERATION OF DISTRIBUTED GENERATION
FACILITIES SCHEDULE NO
APPLICATION FOR OPERATION OF MEMBER OWNED GENERATION 30

GENERAL

In order to receive service from the Cooperative, a person must join or become a "Member" of Taylor Electric Cooperative, Inc. Throughout this manual, members will be referred to as "Members." For more Information about the Cooperative membership application process, including any applicable membership fees or deposits. Contact the Cooperative to request new member information.

It is the intent of the Cooperative to allow Members to install qualifying Distributed Generation (DG), provided the Member's DG facility does not adversely affect the Cooperative, and meets the requirements of I. 6) "Size Requirements" in this document. It is necessary that the member contact the Cooperative to determine the maximum permitted size for their DG facility prior to purchase to avoid refusal of their interconnection. The member must conduct his/her own analysis to determine the economic benefit of DG operation.

A DG facility that is not connected to the Cooperative's system in any way is known as "stand-alone" or "isolated" DG. The member may operate a DG facility in stand-alone or isolated fashion as long as such DG facility does not adversely affect the Cooperative's system. A DG facility connected in any way to the Cooperative's system shall be considered as in "parallel." For purposes of this Manual, a DG facility is considered operating in "parallel" anytime it is connected to the Cooperative's system in any way, even if the member does not intend to export power. All provisions of this Manual shall apply to parallel operation of DG facilities as so defined.

This Manual is not a complete description or listing of all laws, ordinances, rules and regulations, nor is this Manual intended to be an installation or safety manual. The member requesting to interconnect a DG facility to the Cooperative's system is responsible for and must follow, the provisions of section V. 6) "Applicable Regulations" prior to, and for the duration of, interconnection of the DG facility to the Cooperative's system.

A Member may serve all load behind the meter at the location serving the DG facility but will not be allowed to serve multiple meters, multiple consuming facilities or multiple Members with a single DG facility or under a single DG application without prior approval by the Cooperative.

DG facilities larger than 250 kW and facilities rated to produce an amount of electricity greater than the amount of electricity the member for whom the DG is installed is reasonably expected to consume are not covered by this Manual and will be considered by the Cooperative on a non-discriminatory case-by-case basis.

I. DG FACILITY CATEGORIZATION AND SIZING

1) Connection Level Category

a) Connected to the Cooperative's system.

The Member requests and/or the Member's DG facility requires connection to the Member-Consumer's side of the Cooperative's meter (no connection to the Cooperative's distribution facilities is permitted). All provisions of this manual cover this category.

b) Connected to the Cooperative's Power Supplier's system.

The Member requests and/or the Member's DG facility requires connection to the Cooperative's Power Supplier's system. This manual does NOT cover this category. The member should contact the Cooperative's Power Supplier directly.

2) Contact Persons

a) The Cooperative's contact person for all matters related to DG interconnection shall be:

Name: Kyle Haspel Address: 7966 Hwy 83 Abilene, TX 79602 Phone: 325-793-8582

Email: Solar@taylorelectric.coop

b) The Cooperative's Power Supplier's contact person for all matters related to DG interconnection shall be:

Name: Golden Spread Electric Cooperative

Address: 905 South Fillmore

Amarillo, TX 79101 Phone: 806-374-7766

Email: QualifyingFacility@gsec.coop

3) Ownership of Facilities

The member shall either own and be solely responsible for all expense, installation, maintenance and operation of all facilities, including all power generating facilities at and beyond the point of delivery as defined in the Cooperative's tariffs, or contract with another person to finance, install, or maintain facilities on the member's side of the meter, regardless of whether the member takes ownership of the installed distributed generation.

4) Power Export Category

- a) Parallel no power export
 The member operates a DG facility connected <u>in any way</u> to the Cooperative system but with no intention to export power.
- b) Parallel primarily intended to be less than or equal to consumption.

The member operates a DG facility connected in any way to the Cooperative's system rated to produce an amount of electricity less than or equal to the amount of electricity specified in section I. 6) Size Category.

c) Parallel – other

The member operates a DG facility where either the power generated is intended for export only or where the DG facility is rated to produce an amount of electricity greater than the amount of electricity the member for whom the DG is installed is reasonably expected to consume: This manual does not cover this category. The Cooperative will consider applications for service under this category on a case-by-case basis.

5) Qualifying or Non-Qualifying Category

- a) Qualifying Facilities (QF) are defined by the Public Utility Regulatory Policies Act of 1978 (PURPA). Refer to CFR Title 26, Volume 4, Sec. 292.204.
- b) The distinction between QF and Non-Qualifying Facilities (NQF) mainly deals with fuel use.
 - (1) A QF is defined as electric generation with a capacity of not more than specified in section I. 6) "Size Requirements" provided by renewable energy technology, as defined by PURPA, installed on a retail electric Member's (Member's) side of the meter. In general, this means that the DG must have as its primary energy source biomass, waste, renewable resources, geothermal resources or any combination. See PURPA for a full description.
 - (2) DG facilities not designated as QF under the provisions of PURPA will be considered NQF by the Cooperative.
- c) The Cooperative will provide interconnection for a DG facility to Members, subject to the provisions of this Manual and all other applicable rules and regulations.

6) Size Requirements

To Determine sizing requirements of any proposed DG facility, the requirements listed below must be used and shall be met.

a) The Total Size of member's installation will not exceed 100% of the member's previous 12 months average billed usage. The maximum sizing (kW) is determined by inputting the 12-month kWh average into pvwatts.nrel.gov.

AND

b) The size of the DG facility shall not exceed 80% of the listed transformer size at the member's location.

AND

c) No DG installation will be greater than 250 kW in size.

Note: Should the requesting member have less than 12 months of historical usage, best efforts will be used to estimate the usage based upon similar Member load by square footage and load type.

II. SALES TO AND PURCHASES FROM A PARALLEL DG FACILITY

1) QF Where the Member Desires to Export Power

a) Sales to, and purchases from, a DG facility shall be accomplished as described in the Cooperative's "Tariffs for Electric Service section 202.14 Renewable Resource Generation equal to 250 kW or less" and in accordance with the Cooperative's service rules and regulations. A copy of any applicable portion of the tariff will be provided on request.

2) NQF Where the Member Desires to Export Power

a) The Cooperative may choose to provide interconnection and may choose to purchase power from a Member with a DG facility that is an NQF at the sole discretion of the Cooperative as determined on a non-discriminatory case-bycase basis.

III. OPERATION OF A PARALLEL DG FACILITY

1) General Interconnection and Protection Requirements

- a) The member may operate a 60 Hertz (Hz) three-phase or single-phase DG facility, in parallel with the Cooperative system pursuant to an approved interconnection agreement, provided that the equipment meets or exceeds the requirements of this manual.
- b) This manual describes typical interconnection requirements. Certain specific interconnection locations and conditions may require the installation and use of more sophisticated protective devices and operating schemes, especially when the facility is exporting power to the Cooperative system.
- c) The DG shall be equipped with protective hardware and software designed to prevent the DG from being connected to a de-energized circuit owned by the Cooperative.
- d) The DG shall be equipped with the necessary protective hardware and software designed to prevent connection or parallel operation of the DG with the Cooperative system unless the Cooperative system voltage and frequency are of normal magnitude.
- e) The member will be responsible for protecting his or her DG in such a manner that Cooperative system outages, short circuits, or other disturbances including zero sequence currents and Ferro resonant over-voltages do not damage the

f) Member's DG. The members' protective equipment shall also prevent unnecessary tripping of the Cooperative system breakers that would affect the Cooperative system's capability of providing reliable service to other members. Circuit breakers or other interrupting devices at the point of common coupling must be capable of interrupting maximum available fault current.

2) Manual Disconnect

- a) The member will furnish and install a manual disconnect device that has a visual break that is appropriate to the voltage level (a disconnect switch, a draw-out breaker, or fuse block), and is accessible to the Cooperative personnel, and capable of being locked in the open position by a Cooperative padlock. The member shall follow the Cooperative's switching, clearance, tagging, and locking procedures, which the Cooperative shall provide for the member. The Cooperative shall have the right to lock the switch open whenever, in the judgment of the Cooperative.
 - i) it is necessary to maintain safe electrical operating or maintenance conditions,
 - ii) the Producer's power generating installation adversely affects the Cooperative's electric distribution system, or
 - iii) there is a system emergency or other abnormal operating condition which warrants disconnection.
- b) The Cooperative reserves the right to operate the disconnect for the protection of the Cooperative's system even if it affects Producer's power generating installation. In the event the Cooperative opens and closes the disconnect switch it shall not be responsible for energizing or restoration of parallel operation of the generating installation. The Cooperative will make reasonable efforts to notify the Producer in the event the disconnect switch has been operated. The Producer will not bypass the disconnect switch at any time for any reason.

3) Prevention of Interference

a) Voltage

The member will operate its DG in such a manner that the voltage levels on the Cooperative system are in the same range as if the DG were not connected to the Cooperative system. The member shall provide an automatic method of disconnecting the DG from the Cooperative system if a sustained voltage deviation in excess of +5% or -10% from normal Voltage persists for more than 30 seconds, or a deviation in excess of +10% or -30% from normal Voltage persists for more than 10 cycles. The member may reconnect when the Cooperative system voltage and frequency return to normal range and the system is stabilized.

b) Power Factor

The producer shall generate at a power factor that is as near one hundred percent (100%) as is practicable. If the power factor is less than ninety percent (90%) lagging or leading, the Producer will provide proper power factor correction or reimburse the Cooperative for the cost of any necessary correction.

c) Flicker

The member's equipment shall not cause excessive voltage flicker on the Cooperative's system. This flicker shall not exceed 3% voltage dip, in accordance with the IEEE Standard 519 as measured at the point of common coupling.

d) Frequency

The operating frequency of the Member's DG shall not deviate more than +0.5 Hz or -0.7 Hz from a 60 Hz base. The member shall automatically disconnect the DG from the Cooperative system within 15 cycles if this frequency tolerance cannot be maintained. The member may reconnect when the Cooperative system voltage and frequency return to normal range and the system is stabilized.

e) Harmonics

In accordance with IEEE Standard 519 the total harmonic distortion (THD) Voltage shall not exceed 5% of the fundamental 60 Hz frequency nor 3% of the fundamental frequency for any individual harmonic when measuring at the point of common coupling with the utility system.

f) Fault and Line Clearing

The member shall automatically disconnect from the Cooperative system within 10 cycles if the Voltage on one or more phases falls below -30% of nominal Voltage on the Cooperative system serving the Member premises. This disconnect timing also ensures that the DG is disconnected from the Cooperative system prior to automatic re-close of breakers. The member may reconnect when the Cooperative system voltage and frequency return to normal range and the system is stabilized. To enhance reliability and safety and with the Cooperative's approval, the member may employ a modified relay scheme with

delayed tripping or blocking using communications equipment between the member and the Cooperative.

4) Protective Function Requirements

a) Facilities Rated 15 kW or less.

Must have an interconnect disconnect device, a generator disconnect device, an over-voltage trip, an under-voltage trip, an over/under frequency trip, and a manual or automatic synchronizing check (for facilities with stand-alone capability).

b) Facilities Rated in Excess of 15 kW but Not More Than 250 kW.

Must have an interconnect disconnect device, a generator disconnect device, an over-voltage trip, and under-voltage trip, and over/under frequency trip, a manual or automatic synchronizing check (for facilities with standalone capability), either a ground over-voltage trip or a ground over-current trip depending on the ground system if required by the Cooperative, and a reverse power sensing if the facility is not exporting (unless the generator is less than the minimum load of the member).

c) <u>Control, protection and safety equipment requirements specific to three-phase</u> synchronous generators, induction generators, and inverter systems

i) Three phase synchronous generators

The Member's DG circuit breakers shall be three-phase devices with electronic or electromechanical control. The member is solely responsible for properly synchronizing its generator with the Cooperative. The excitation system response ratio shall not be less than 0.5. The generator's excitation system(s) shall conform, as near as reasonably achievable, to the field voltage versus time criteria specified in the ANSI Standard C50.13-1989 in order to permit adequate field forcing during transient conditions.

ii) Three phase 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 utility system at the point of common coupling is within the visible flicker stated in this manual. Otherwise, the member may be required to install hardware or employ other techniques to bring voltage fluctuations to acceptable levels. Line-commutated inverters do not require synchronizing equipment. Self-commutated inverters whether of the utility-interactive type or stand-alone type shall be used in parallel with the utility system only with synchronizing equipment. Direct-current generation shall not operate in parallel with the utility system.

5) Facilities not identified.

a) In the event the standards for a specific unit or facility are not set out in this manual, the Cooperative and the Member may interconnect a facility using mutually agreed upon technical standards.

6) Access

- a) Persons authorized by the Cooperative will have the right to enter the member's property for purposes of testing, operating the disconnect switch, reading or testing the metering equipment, maintaining right-of-way or other DG facility equipment and/or Cooperative service requirement. Such entry onto the member's property may be without notice.
- b) If the member erects or maintains locked gates or other barriers, the member will furnish the Cooperative with convenient means to circumvent the barrier for full access for the above-mentioned reasons.

7) Liability for Injury and Damages

- a) The member assumes full responsibility for electric energy furnished at and past the point of delivery and shall indemnify the Cooperative and/or its Power Supplier against and hold the Cooperative and/or its Power Supplier harmless from all claims for both injuries to persons, including death resulting therefrom, and damages to property occurring upon the premises owned or operated by member arising from electric power and energy delivered by the Cooperative or in any way arising directly or indirectly from the Member's DG facility.
- b) The Cooperative and/or its Power Supplier shall not be liable for either direct or consequential damages resulting from failures, interruptions, or voltage and waveform fluctuations occasioned by causes reasonably beyond the control of the Cooperative and/or its Power Supplier including, but not limited to, acts of God or public enemy, sabotage and/or vandalism, accidents, fire, explosion, labor troubles, strikes, order of any court or judge granted in any bona fide adverse legal proceeding or action, or any order of any commission, tribunal or governmental authority having jurisdiction. ALL **PROVISIONS** NOTWITHSTANDING, IN NO EVENT SHALL THE COOPERATIVE BE LIABLE TO THE MEMBER FOR ANY INTEREST, LOSS OF ANTICIPATED REVENUE, EARNINGS, PROFITS, OR INCREASED EXPENSE OF OPERATIONS, LOSS BY REASON OF SHUTDOWN OR NON-OPERATION OF MEMBER'S PREMISES OR FACILITIES FOR ANY INDIRECT, INCIDENTAL, OR CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF OR RELATED, IN WHOLE OR PART, TO THIS AGREEMENT. The Cooperative shall not be liable in any event for consequential damages.
- c) The member is solely responsible for insuring his/her facility complies with all applicable regulations including, but not limited to, laws, regulations, ordinances, Cooperative and Cooperative Power Supplier tariffs, policies and directives, and ERCOT rules, policies and directives.

8) Liability Insurance

a) A Member meeting the standards of this manual shall not be required to purchase any amount, type or classification of liability insurance the member would not have in the absence of the DG. The Cooperative recommends; however, the member obtain liability insurance including contractual liability insurance covering indemnity agreements which insures the member against all claims for property damage and for personal injury or death arising out of, resulting from or in any manner connected with the installation, operation and maintenance of the member's generating equipment.

9) Metering/Monitoring

- a) The Cooperative may supply, own and maintain all necessary meters and associated equipment to record energy purchases by the member and energy exports to the Cooperative system.
- b) The member shall supply at no cost to the Cooperative a suitable location on his or her premises for the installation of the Cooperative's meters and other equipment.
- c) The meter(s) shall be read at a time or times of month determined by the Cooperative's for acquiring metering data.
- d) Meter testing shall follow the Cooperative's standard policy on metering testing and accuracy.
- e) At its sole discretion, the Cooperative may meter the facility at primary or secondary level.

10) Notice of Change in Installation

- a) The member will notify the Cooperative in writing thirty (30) days in advance of making any change affecting the characteristics, performance, or protection of the DG facility.
- b) If any modification undertaken by the member will create or has created conditions which may be unsafe or adversely affect the Cooperative system, the member shall immediately correct such conditions or be subject to immediate disconnection from the Cooperative system.

11) Testing and Record Keeping

a) The Cooperative shall maintain records concerning applications received for interconnection and parallel operation of DG facilities. Such records will include the Date each application is received, documents generated while processing each application, correspondence regarding each application, and the final disposition of each application.

- b) The member will test all aspects of the protection systems up to and including tripping of the generator and interconnection point at start-up and thereafter as required. Testing will verify all protective set points and relay/breaker trip timing and shall include procedures to functionally test all protective elements of the system. The Cooperative may witness the testing.
- c) The member will maintain records of all maintenance activities, which the Cooperative may review at reasonable times.

12) Disconnection and Reconnection of Service

- a) The Cooperative may disconnect a DG facility under the following conditions:
 - i) Expiration or termination of the interconnection agreement
 Upon expiration or termination of the interconnection agreement with a
 Member, in accordance with the terms of the agreement, the Cooperative
 may disconnect the DG facilities.
 - ii) Non-compliance with technical requirements

 The Cooperative may disconnect from DG

The Cooperative may disconnect from DG facility, if the facility is not in compliance with the technical requirements specified in this manual. Within two business days from the time the member notifies the Cooperative that the DG facility has been restored to compliance with the technical requirements of this manual, the Cooperative shall verify such compliance. Upon such verification, the member in coordination with the Cooperative may reconnect the DG facility.

iii) System emergency

The Cooperative may temporarily disconnect a Member and/or a DG facility without prior written notice in cases where continued interconnection will endanger persons or property. During the forced outage of the Cooperative system, the Cooperative shall have the right to temporarily disconnect a Member and/or a DG facility to make immediate repairs to the Cooperative system. When possible, the Cooperative shall provide the member with reasonable notice and reconnect the member as quickly as reasonably practical.

iv) Routine maintenance, repairs and modifications

The Cooperative may disconnect a member and/or a DG facility for routine maintenance, repairs and Cooperative system modifications. The Cooperative shall reconnect the member as quickly as reasonably possible following such service interruption.

v) <u>Lack of approved application and interconnection agreement</u>
The Cooperative may refuse to connect or may disconnect a DG facility if the application has not been received and approved.

IV. MEMBER'S INITIAL REQUIREMENTS

1) Notification

- a) The member must meet the requirements of all Cooperative tariffs, conditions of service, membership and other service rules and regulations in addition to the requirements in this Manual.
- b) The rated capacity of the Member's DG must not exceed the requirements set forth in this document.
- c) Anyone owning or operating a DG facility in parallel with the Cooperative's system as defined in this manual must notify the Cooperative of the existence, location and category of the DG facility, whether the member intends to export power to the Cooperative or not.
- d) All DG facilities shall be inspected by a Journeyman, or Master, electrician licensed by the Texas Department of Licensing and Regulation.

2) Application Request

- a) In order to interconnect a DG facility to the Cooperative system, a member must first submit to the Cooperative the "Application for Operation of Member Owned Generation" using the form included in this manual.
- b) A separate form must be submitted for each facility.

3) Submit a DG Plan...

- a) As a part of the application, the member shall submit a plan detailing the electrical design, interconnection requirements, size, functional capacity, and operational plans for the DG facility (the "DG plan"). Either at the time of submission or at any time during the review process, the Cooperative may require additional Information or may require the DG plan to be prepared by a Professional Engineer registered in the state of Texas. Any review or acceptance of such plan by the Cooperative shall not impose any liability on the Cooperative and does not guarantee the adequacy of Producer's equipment to perform its intended function. The Cooperative disclaims any expertise or special knowledge relating to the design or performance of generating installations and does not warrant the efficiency, cost-effectiveness, safety, durability or reliability of generating installations.
- b) Prior to review of the DG plan, and any site inspections, by the Cooperative, the member shall pay a non-refundable \$150.00 application fee. A separate fee must be submitted for each DG facility.
- c) The \$150.00 application fee covers the initial inspection. Should the installation fail the inspection by the Cooperative's licensed electrician, subsequent inspections will be charged at \$75.00 per trip.

V. COOPERATIVE AND POWER SUPPLIER REVIEW PROCESS

1) Pre-Interconnection Studies for Interconnection of DG

a) General

The Cooperative and/ or its Power Supplier, if requested by the Cooperative, may conduct a service study, coordination study and/or utility system impact study prior to interconnection of a DG facility. In instances where the studies are deemed necessary, the scope of such studies shall be based on the characteristics of the particular DG facility to be interconnected and the Cooperative's system at the specific proposed location. By agreement between the Cooperative and the member, studies related to interconnection of a DG facility on the member's premises may be conducted by a qualified third party.

b) Time to complete

The performing of the pre-interconnection studies, including "Application for Member Owned Generation" form approval, will generally take no more than four weeks. The Cooperative will provide an alternative completion date to the member if this timeline is unable to be met.

c) Reporting

The Cooperative shall prepare written reports of the study findings and make them available to the member.

d) Interconnection Study Fees

- i) DG facilities for which no pre-interconnection study fee may be charged. The Cooperative will not charge a member a fee to conduct a pre-interconnection study for single phase pre-certified DG units up to 15 kW that export not more than 15% of the total load on a single radial feeder and contribute not more than 25% of the maximum potential short circuit current on a single radial feeder. All other DG facilities may be charged a fee to offset the costs incurred in a pre-interconnection study.
- ii) DG facilities for which pre-interconnection study fees may be charged. Prior to the interconnection of a DG facility for which a pre-interconnection study fee may be charged, the Cooperative may charge a member a fee to offset its costs incurred in a pre-interconnection study.
 - (1) In the case of DG facilities (1) to be operated in parallel with the Cooperative's system, (2) with no intention to export power to the Cooperative, (3) are single phase voltage, and (4) that are of standard design and intended entirely as emergency or back-up power supply for the facility, the Cooperative may waive the application fee.
 - (2) The member shall receive an estimate of the study cost before the Cooperative initiates the study.

2) <u>Line Extension and Modifications to Cooperative Facilities</u>

- a) If interconnection of a particular DG facility requires substantial capital upgrades to the Cooperative system, the Cooperative shall provide the member with an estimate of the schedule and member's cost for the upgrade. If the member desires to proceed with the upgrade, the Member and the Cooperative will enter into a contract for the completion of the upgrade.
- b) If the Cooperative concludes that an application for interconnection describes facilities that may require additional devices and operating schemes beyond those described in this manual, the Cooperative shall make those additional requirements known to the member at the time the interconnection studies are completed.
- c) As a part of the interconnection analysis performed by the Cooperative, the member will be provided with an estimate of any line extension or other cost to be incurred in providing electric delivery service to the Member's DG facility.
- d) Notwithstanding the Cooperative's line extension policy, the member shall pay the full cost of construction of any transmission, substation, distribution, transformers, metering, protective, or other facilities or equipment which is required to serve the Member's DG facility.
- e) In the event it is necessary at the time of initial interconnection or at some future time for the Cooperative and/or its Power Supplier to modify electric delivery systems because the Member's DG and/or the quality of power provided by the Member's DG adversely affects the Cooperative and/or its Power Supplier's delivery system, the member will reimburse the Cooperative and/or its Power Supplier for all costs of modifications required for the interconnection of the Member's DG facilities.

f) Network service

Network service is defined as two or more Cooperative primary distribution feeder sources electrically tied together on the secondary or low voltage side to form one power source for one or more Members. The service is designed to maintain service to the Members even after the loss of one of these primary distribution feeder sources. If a DG facility requests interconnection to a secondary network system, additional requirements may apply.

3) Communications

The Cooperative and the Member agree to treat knowledge gained as a result of the application and/or interconnection studies about the other party as confidential.

4) Review Liability

The member acknowledges and agrees that any review or acceptance of such plans, specifications and other Information by the Cooperative and/or its Power Supplier shall not impose any liability on the Cooperative and/or its Power Supplier and does not guarantee the adequacy of the member's equipment or DG facility to perform its intended function. The Cooperative and its Power Supplier disclaim any expertise or special knowledge relating to the design or performance of DG installations and does not warrant the efficiency, cost-effectiveness, safety, durability, or reliability of such DG installations.

5) Non-discrimination

All applications for interconnection and parallel operation shall be processed by the Cooperative in a non-discriminatory manner. Applications will be processed in the order that they are received. It is recognized that certain applications may require minor modifications while they are being reviewed by the Cooperative. Such minor modifications to a pending application shall not require that it be considered incomplete and treated as a new or separate application.

VI. MEMBER'S RESPONSIBILITY PRIOR TO OPERATION

1) Applicable Regulations

The DG facility shall be installed and operated subject to and in accordance with the terms and conditions set forth in the Cooperative's rules, regulations, bylaws, rates and tariffs, the requirements of this manual, the Policies and Procedures of the Cooperative's power supplier where applicable, the Policies and Procedures of the Cooperative's transmission service provider where applicable, and in compliance with all applicable federal, state and local laws, regulations, zoning codes, building codes, safety rules, environmental restrictions, ordinances and regulations, including without limitation, the most recent IEEE Standard 1547 Guide for Distributed Generation Interconnection, other applicable IEEE standards, applicable ANSI standards, including ANSI C84.1 Range A, UL1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, Electric Reliability Council of Texas (ERCOT) Independent System Operator (ISO) directives and ERCOT guidelines, and in accordance with industry standard prudent engineering practices.

2) Member Application and DG Plan Approval

The DG facility will be built per the Application for Operation of Member Owned Generation form and DG plan approved by the Cooperative.

3) Contracts

The member will sign and deliver a signed agreement for interconnection to the Cooperative substantially in the form as shown in the "Agreement for Interconnection and Parallel Operation of Distributed Generation" form included in this Manual.

4) <u>Fees</u>

All fees for the application, interconnection studies, and modifications to the Cooperative's facilities will be paid in full before interconnection.

5) Warranty

The member must provide credible tangible proof that the DG to be interconnected has or had an original manufacturer's warranty against breakdown or undue degradation for at least five years.

6) Inspection and start-up

The member shall provide the Cooperative in writing at least thirty (30) days before the initial energizing and start-up testing of the Member's DG equipment and the permit the Cooperative to witness the testing of, and inspect, any equipment and

protective systems associated with the interconnection. The member shall revise and re-submit the application with information reflecting any proposed modification that may affect the safe and reliable operation of the Cooperative system.

a) Site testing and commissioning

Testing of protection systems shall include procedures to functionally test the protective elements of the system up to and including tripping of the DG and interconnection point. Testing will verify all protective set points and relay/breaker trip timing. The Cooperative may witness the testing of installed switchgear, protection, and DG. The member is responsible for routine maintenance of the DG, control, and protective equipment. The member will maintain records of such maintenance activities, which the Cooperative may review at reasonable times.

b) Inspection Liability

The Cooperative's review process and any inspections are intended to safeguard the Cooperative's facilities and personnel. The member acknowledges and agrees that any review or acceptance of such plans, specifications, testing and other Information by the Cooperative and/or its Power Supplier shall not impose any liability on the Cooperative and/or its Power Supplier and does not guarantee the adequacy of the member's equipment or DG facility to perform its intended function. The Cooperative and its Power Supplier disclaims any expertise or special knowledge relating to the design or performance of generating installations and does not warrant the efficiency, cost-effectiveness, safety, durability, or reliability of such DG installations.

7) Conditions Preventing Interconnection.

In the event that it comes to the attention of the Cooperative that there are conditions preventing safe interconnection and proper parallel operation it shall notify the Member and the Member shall not interconnect and/or initiate parallel operation until such conditions are corrected and the member has provided at least ten (10) days written notice to the Cooperative.

8) Refusal to Interconnect Service or Disconnection of Service

The Cooperative may, at its sole discretion, prevent the interconnection or disconnect the interconnection of DG facilities due to reasons such as safety concerns, reliability issues, power quality issues, breach of interconnection contract or any other reasonable issue. Any disconnection may be without prior notice.

Pag	e	2

TAYLOR ELECTRIC COOPERATIVE, INC. AGREEMENT FOR INTERCONNECTION AND PARALLEL OPERATION OF DISTRIBUTED GENERATION

Th	nis Interconnection Agreement ("	Agreement") is made	and entered into the	his day
of	, 20, by	Taylor Electric Coope	erative, (("Cooperative"),
a corpora	tion organized under the laws of	Texas		, and
		, ("DG Owner/Opera	ator"), each hereina	after sometimes
referred	to individually as "Party" or	both referred to co	ollectively as the	Parties." In
considera	tion of the mutual covenants set for	th herein, the Parties a	gree as follows:	
1. Scope	e of Agreement This Agree	ement is applicable	to conditions un	der which the
•	ve and the DG Owner/Operator a	• •		
•) owned by the DG Owner/Ope	•	0	`
	kV or less ("Facilities") may be		·	
	n system ("System").			,

The provisions of the Cooperative's Distributed Generation Procedures & Guidelines Manual for Members ("DG Manual") shall be a part of this contract, but in no way does it define nor guarantee the Members Tariff or rate in any way.

- 2. Establishment of Point of Interconnection The point where the electric energy first leaves the wires or facilities owned by the Cooperative and enters the wires or facilities provided by DG Owner/Operator is the "Point of Interconnection." Cooperative and DG Owner/Operator agree to interconnect the Facilities at the Point of Interconnection in accordance with the Cooperative's Rules and Regulations and DG Manual relating to interconnection of Distributed Generation (the "Rules") and as described in the attached Exhibit A. The interconnection equipment installed by the DG Owner/Operator ("Interconnection Facilities") shall be in accordance with the Rules as well.
- 3. Responsibilities of Cooperative and DG Owner/Operator for Installation, Operation and Maintenance of Facilities DG Owner/Operator will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for, its Facilities, unless otherwise specified on Exhibit A. DG Owner/Operator shall conduct operations of its Facilities in compliance with all aspects of the Rules, and Cooperative shall conduct operations of its electric distribution facilities in compliance with all aspects of the Rules, or as further described and mutually agreed to in the applicable Facilities Schedule. Maintenance of Interconnection Facilities shall be performed in accordance with the applicable manufacturers' recommended maintenance schedule. The DG Owner/Operator agrees to cause its Interconnection Facilities to be constructed in accordance with specifications equal to or better than those provided by the National Electrical Safety Code and the National Electrical Code, both codes approved by the American National Standards Institute, in effect at the time of construction.

The DG Owner/Operator covenants and agrees to cause the design, installation, maintenance, and operation of its Facilities and Interconnection Facilities to reasonably minimize the likelihood of a malfunction or other disturbance, damaging or otherwise affecting or impairing the System. DG Owner/Operator shall comply with all applicable laws, regulations, zoning codes, building codes, safety rules and environmental restrictions applicable to the design, installation and operation of its Facilities and Interconnection Facilities.

The Cooperative will notify DG Owner/Operator if there is evidence that the Facilities' operation causes disruption or deterioration of service to other Member(s) served by the System or if the Facilities' operation causes damage to the System. DG Owner/Operator will notify the Cooperative of any emergency or hazardous condition or occurrence with the DG Owner/Operator's Facilities, which could affect safe operation of the System.

4. **Operator in Charge -** The Cooperative and the DG Owner/Operator shall each identify an individual (by name or title) who will perform as "Operator in Charge" of the facilities and their section of the Interconnection Facilities. This individual must be familiar with this agreement as well as the provisions of other agreements and any regulations that may apply.

5. Limitation of Liability and Indemnification

- a. Notwithstanding any other provision in this agreement, with respect to the Cooperative's provision of electric service to DG Owner/Operator and the services provided by the Cooperative pursuant to this Agreement, Cooperative's liability to DG Owner/Operator shall be limited as set forth in the Cooperative's tariffs and terms and conditions for electric service, which are incorporated herein by reference.
- b. Neither Cooperative nor DG Owner/Operator shall be liable to the other for damages for any act or omission that is beyond such party's control, including, but not limited to, any event that is a result of an act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, explosion, breakage or accident to any part of the System or to any other machinery or equipment, a curtailment, law, order, or regulation or restriction by governmental, military, or lawfully established civilian authorities.
- c. Notwithstanding Paragraph 5.b of this agreement, the DG Owner/Operator shall assume all liability for, and shall indemnify Cooperative for, any claims, losses, costs, and expenses of any kind or character to the extent that they result from DG Owner/Operator's negligence or other wrongful conduct in connection with the design, construction or operation of the Facilities or Interconnection Facilities. Such indemnity shall include, but is not limited to, financial responsibility for (a) monetary losses; (b) reasonable costs and expenses of defending an action or claim; (c) damages related to death or injury; (d) damages to property; and (e) damages for the disruption of business. This paragraph does not create a liability on the part of the DG Owner/Operator to the Cooperative or a third person but requires indemnification where such liability exists.
- d. Cooperative and DG Owner/Operator shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines, wires, switches, or other equipment or property on their respective sides of the Point of Interconnection. The Cooperative, while retaining the right to inspect, does not assume any duty of inspecting the DG Owner/Operator's lines, wires, switches, or other equipment or property and will not be responsible, therefore. DG Owner/Operator assumes all responsibility for the electric service supplied hereunder and the facilities used in connection therewith at or beyond the Point of Interconnection.

- e. For the mutual protection of the DG Owner/Operator and the Cooperative, only with Cooperative prior written authorization are the connections between the Cooperative's service wires and the DG Owner/Operator's service entrance conductors to be energized.
- 6. **Design Reviews and Inspections -** The DG Owner/Operator shall provide to the Cooperative the following documentation and inspection results:
 - a. <u>One-Line Diagram</u>. The diagram shall include at a minimum, all major electrical equipment that is pertinent to understanding the normal and contingency operations of the DG Interconnection Facilities, including generators, switches, circuit breakers, fuses, protective relays, and instrument transformers.
 - b. <u>Testing Records.</u> Testing of protection systems shall be limited to records of compliance with standard acceptance procedures and by industry standards and practices. These records shall include testing at the start of commercial operation and periodic testing thereafter.
- 7. **Right of Access, Equipment Installation, Removal & Inspection -** The Cooperative may send an employee, agent or contractor to the premises of the DG Owner/Operator at any time whether before, during or after the time the Facility first produces energy to inspect the Interconnection Facilities, and observe the Facility's installation, commissioning (including any testing), startup, and operation.

At all times the Cooperative shall have access to DG Owner/Operator's premises for any reasonable purpose in connection with the interconnection described in this Agreement, the Rules, or to provide service to its Members.

- 8. **Confidentiality of Information -** Unless compelled to disclose by judicial or administrative process, or by other provisions of law or as otherwise provided for in this agreement, the DG Owner/Operator and the Cooperative will hold in confidence any and all documents and Information furnished by the other party in connection with this agreement.
- 9. **Prudent Operation and Maintenance Requirements -** The DG Owner/Operator shall operate and maintain its Facilities and Interconnection Facilities in accordance with industry standards prudent electrical practices in effect at the time a DG Owner/Operator executes an interconnection agreement with the Cooperative.
- 10. **Disconnection of Unit -** DG Owner/Operator retains the option to disconnect its Facilities from the System, if DG Owner/Operator notifies the Cooperative of its intent to disconnect by giving the Cooperative at least thirty (30) days' prior written notice. Such disconnection shall not be a termination of the Agreement unless DG Owner/Operator exercises rights under Section 13.

DG Owner/Operator shall disconnect Facilities from the System upon the effective Date of any termination under Section 13.

Subject to the Rules, for routine maintenance and repairs on the System, Cooperative shall provide DG Owner/Operator with seven (7) business days' notice of service interruption.

Cooperative shall have the right to suspend service in cases where continuance of service to DG Owner/Operator will endanger persons or property. During the forced outage of the System serving DG Owner/Operator, Cooperative shall have the right to suspend service to effect repairs on the System, but the Cooperative shall use its efforts to provide the DG Owner/Operator with reasonable prior notice.

- 11. Metering Metering shall be accomplished as described in the Cooperative's DG Manual.
- 12. **Insurance** Insurance shall be required as described in the Cooperative's DG Manual.
- 13. Effective Term and Termination Rights This Agreement becomes effective when executed by both Parties and shall continue in effect until terminated. This agreement may be terminated as follows: (a) DG Owner/Operator may terminate this agreement at any time by giving the Cooperative sixty days' written notice; (b) Cooperative may terminate upon failure by the DG Owner/Operator to generate energy from the Facilities in parallel within six (6) months after completion of the interconnection; (c) either Party may terminate by giving the other Party at least thirty (30) days prior written notice that the other Party is in default of any of the terms and conditions of the Agreement or the Rules or any rate schedule, tariff, regulation, contract, or policy of the Cooperative, so long as the notice specifies the basis for termination and there is opportunity to cure the default; (d) Cooperative may terminate by giving DG Owner/Operator at least sixty (60) days' notice in the event that there is a material change in an applicable law, or any requirement of the Cooperative's wholesale electric suppliers or any transmission utility, independent system operator or regional transmission organization having responsibility for the operation of any part of the System.
- 14. **Applicable Law –** This agreement shall be governed by and interpreted and construed in accordance with the laws of the State of Texas. The venue of any legal proceeding relative to this agreement shall be in Taylor County, Texas.
- 15. Compliance with Laws, Rules and Tariffs Both the Cooperative and the DG Owner/Operator shall be responsible for complying with all applicable laws, rules and regulations, including but not limited to the laws of the state of Texas, and the Cooperative's DG Manual, Tariffs, Rules and Regulations, By-Laws and other governing documents. The interconnection and services provided under this agreement shall at all times be subject to the terms and conditions set forth in the tariff schedules and rules of the Cooperative as applicable to the electric service provided by the Cooperative, which tariffs and rules are hereby incorporated into this agreement by this reference. The Cooperative shall have the right to publish changes in rates, classification, service or rule, with the proper notification to all DG owners/operators and Cooperative members.
- 16. **Severability** -If any portion or provision of this agreement is held or adjudged for any reason to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion shall be deemed separate and independent, and the remainder of this agreement shall remain in full force and effect.
- 17. **Amendment -** This Agreement may be amended only upon mutual agreement of the Parties, which amendment will not be effective until reduced to writing and executed by the Parties.
- 18. Entirety of Agreement and Prior Agreements Superseded This Agreement, including the Rules and all attached Exhibits and Facilities Schedules, which are expressly made a part

hereof for all purposes, constitutes the entire agreement and understanding between the Parties with regard to the interconnection of the facilities of the Parties at the Points of Interconnection expressly provided for in this agreement. The Parties are not bound by or liable for any statement, representation, promise, inducement, understanding, or undertaking of any kind or nature (whether written or oral) with regard to the subject matter hereof not set forth or provided for herein or in the DG Owner/Operator application, or other written Information provided by the DG Owner/Operator in compliance with the Rules. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this agreement.

- 19. Force Majeure -For the purposes of this agreement, a Force Majeure event is any event: (a) that is beyond the reasonable control of the affected party; and (b) that the affected party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent that they satisfy the preceding requirements: acts of war, public disorder, rebellion or insurrection; floods, hurricanes, earthquakes, lighting, storms or other natural calamities; explosions or fires; strikes, work stoppages or labor disputes; embargoes; and sabotage. If a Force Majeure event prevents a party from fulfilling any obligations under this agreement, such party will promptly notify the other party in writing and will keep the other party informed on a continuing basis as to the scope and duration of the Force Majeure event. The affected party will specify the circumstances of the Force Majeure event, its expected duration and the steps that the affected party is taking to mitigate the effect of the event on its performance. The affected party will be entitled to suspend or modify its performance of obligations under this agreement but will use reasonable efforts to resume its performance as soon as possible.
- 20. **Assignment -** At any time during the term of this agreement, the DG Owner/Operator may assign this agreement to a corporation, an entity with limited liability or an individual (the "Assignee"), provided that the DG Owner/Operator obtains the consent of the Cooperative in advance of the assignment. The Cooperative's consent will be based on a determination that the Assignee is financially and technically capable of assuming ownership and/or operation of the DG unit. The company or individual to which this agreement is assigned will be responsible for the proper operation and maintenance of the unit and will be a party to all provisions of this agreement.
- 21. **Permits, Fees, and Approvals -** The Cooperative will have responsibility for the review, approval or rejection of the DG interconnection application. The approval process is intended to ensure that the implementation of the applicant's DG unit will not adversely affect the safe and reliable operation of the Cooperative's System. The fees associated with the application are listed in the most current fee schedule issued by the Cooperative. All fees are to be submitted in the form of a Bank Cashier's check along with the application unless other payment terms have been approved in advance by the Cooperative.
- 22. **Notices -** Notices given under this Agreement are deemed to have been duly delivered if hand delivered or sent by United States certified mail, return receipt requested, postage prepaid, to:

(a) If to Cooperative:
Kyle Haspel
7966 Hwy 83
Abilene, Texas 79602
(b) If to DG Owner/Operator:

The above-listed names, titles, and addresses of either Party may be changed by written notification to the other, notwithstanding Section 17.

- 23. **Invoicing and Payment -** Invoicing and payment terms for services associated with this agreement shall be consistent with applicable Rules of the Cooperative.
- 24. Limitations (No Third-Party Beneficiaries, Waiver, etc.) This Agreement is not intended to, and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties. This agreement may not be assigned by the DG Owner/Operator without the prior written consent of the Cooperative as specified in Section 20. The failure of a Party to this agreement to insist, on any occasion, upon strict performance of any provision of this agreement will not be considered to waive the obligations, rights, or duties imposed upon the Parties.
- 25. **Headings -** The descriptive headings of the various articles and sections of this agreement have been inserted for convenience of reference only and are to be afforded no significance in the interpretation or construction of this agreement.
- 26. **Multiple Counterparts -** This Agreement may be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.

Pag	е	2	7

IN WITNESS WHEREOF, the Parties have caused this agreement to be signed by their respective duly authorized representatives.

TAYLOR ELECTRIC COOPERATIVE, INC	[DG OWNER/OPERATOR NAME]
BY:	BY:
TITLE:	TITLE:
DATE:	DATE:

EXHIBIT A: DESCRIPTION OF FACILITIES AND POINT OF INTERCONNECTION

DG Owner/Operator will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for its Facilities, unless otherwise specified on Exhibit A.

FACILITIES SCHEDULE NO.

[The following Information is to be specified for each Point of Interconnection, if applicable]
1. <u>Name:</u>
2. Facilities location:
3. <u>Delivery voltage:</u>
4. Metering (Voltage, location, losses adjustment due to metering location, and other:
5. Normal Operation of Interconnection:
6. One-line diagram attached (check one) :/ Yes /
7. Facilities to be furnished by the Cooperative:
8. Facilities to be furnished by DG Owner/Operator:
9. Cost Responsibility:
10. Control area interchange point (check one): / Yes / No
11. Supplemental terms and conditions attached (check one): /Yes / No
12. Cooperative rules for DG interconnection attached (check one): / Yes / No
IOCODEDATIVE NAME:
[COOPERATIVE NAME] [DG OWNER/OPERATOR NAME]
BY: BY:
TITLE: TITLE:
DATE:

TAYLOR ELECTRIC COOPERATIVE, INC.

APPLICATION FOR OPERATION OF MEMBER OWNED GENERATION

This application should be completed as soon as possible and returned to the Cooperative Member Service representative in order to begin processing the request. See Distributed Generation Procedures and Guidelines Manual for Members for Additional Information.

INFORMATION: This application is used by the Cooperative to determine the required equipment configuration for the Member interface. Every effort should be made to supply as much Information as possible.

PART 1 OWNER/APPLICANT	T INFORMATION			
Company:				
Mailing Address:				
City:	County:	State:	Zip Code:	
Phone Number:	F	Representative:		
PROJECT DESIGN	N/ENGINEERING (as	applicable)		
Company:				
Mailing Address:				
			Zip Code:	
Phone Number:	Number: Representative:			
ELECTRICAL CON	ITRACTOR			
Company:				
			Zip Code:	
Phone Number:	R	epresentative:		
TECL #:				
TYPE OF GENERA	ATOR (as applicable)			
Photovoltaic	Wind	Microtu	urbine	
Diesel Engine	Gas Eng	ine Turbine	e Other	

ESTIMATED LOAD INFORMATION

The following Information will be interconnection. <i>This Information billing purposes</i> .	ne used to help properly design the Cooperative Member on is not intended as a commitment or contract for rate, for
Total Site Load(kW)	
Average consumption based or	n previous 12 month's billed usage(kWh)
Total DG Output(kW)	
Mode of Operation (check a	all that apply)
Isolated	Paralleling Power Export
	OSED INSTALLATION AND OPERATION he proposed installation, including when you plan to operate
For Solar only	
1) DC System Size (kW)	
2) Module Type Standard Premiur	m Thin Film
3) Array Type Fixed (open rack) 1-Axis backtracking	Fixed (roof mount) 1-Axis tracking 2 Axis Tracking
4) System Losses (%)	
5) Tilt (deg)	
6) Azimuth (deg)	
7) DC to AC size ratio	
8) Inverter Efficiency (%)	
9) Ground coverage ratio	

10) Maximum rated system output (p	ovwatts.nrel.gov)	
PART 2			
(Complete all applicable items. Cop	y this page as	required for addit	ional generators.)
SYNCHRONOUS GENERATOR D. Unit Number: Total number Manufacturer:	of units with lis	·	
Type:	Date of manufact	cture:	
Serial Number (each): Phases: SingleThree R.F.	 Р.М.:	Frequency	v (Hz):
Rated Output (for one unit):	Kilowatt	Kilov	volt-Ampere
Rated Power Factor (%): Ra	ted Voltage (Vo	olts) Ra	ated Amperes:
Field Volts: Field Amps: _			
Synchronous Reactance (X'd):	%	on	KVA base
Transient Reactance (X'd):	%	on	KVA base
Sub transient Reactance (X'd):		% on	KVA base
Negative Sequence Reactance (X's	s):	% on	KVA base
Zero Sequence Reactance (Xo):	9	% on	KVA base
Neutral Grounding Resistor (if appli			
I ₂ ² t of K (heating time constant): Additional Information:			
INDUCTION GENERATOR DATA			
Rotor Resistance (Rr):	ohms Stator	Resistance (Rs)	: ohms
Rotor Reactance (Xr):	_ _ohms Stator	Reactance (Xs):	ohms
Magnetizing Reactance (Xm):	ohmsShort	Circuit Reactance	e (Xd"): ohms
Design letter:	Frame	e Size:	
Exciting Current:	Temp	Rise (deg C°): _	
Reactive Power Required: Additional Information:	Vars (ı	no load), Vars	(full load)
PRIME MOVER (Complete all appli Unit Number: Type:			
Manufacturer:			
Serial Number:	_ Date of man	ufacturer:	
H.P. Rates: H.P. Max.:	Inertia Co	onstant:	lbft ²
Energy Source (hydro, steam, wind	, etc.)		

GENERATOR TRANSFORMER (Complete all applicable items) TRANSFORMER (between generator and utility system)

Distributed Generation Procedures and Guidelines Manual for Members

	Page 33			
Generator unit number: Date	of manufacturer:			
Manufacturer:				
Serial Number:				
High Voltage: KV Connection: de	elta wye, Neutral solidly grounded?			
	elta wye, Neutral solidly grounded?			
	% on KVA base			
Transformer Resistance (R):	% on KVA base			
Transformer Reactance (X):	% on KVA base			
3 11111 (14)				
INVERTER DATA (if applicable)				
Manufacturer:	Model:			
Rate Power Factor (%): Rated Voltage	Model: e (Volts): Rated Amperes:			
Inverter Type (ferroresonant, step, pulse-	width modulation, etc.):			
Type commutation: forced line				
	armonic (%)			
	rmonic (%)			
	test reports, and oscillographic prints showing			
inverter output voltage and current wavefor	orms.			
POWER CIRCUIT BREAKER (if applicable)	,			
Manufacturer:	Model:			
Rated Voltage (kilovolts): Rated ampacity (Amperes)				
Interrupting rating (Amperes):	BIL Ratingex. Vacuum, gas, oil)/			
Interrupting medium / insulating medium (ex. Vacuum, gas, oil)/			
Control Voltage (Closing): (Volts)	AC DC			
	AC DC Battery Charged Capacitor			
Close energy: Spring Motor Hy	draulic Pneumatic Other:			
Trip energy: Spring Motor Hy	draulic Pneumatic Other:			
bushing Current Transformers (N	nax. rallo) Relay Accuracy Class			
iviuiti Katio? No Yes: (availat	le taps)			

ADDITIONAL INFORMATION

In addition to the items listed above, please attach a detailed one-line diagram of the proposed facility, all applicable elementary diagrams, major equipment (generators, transformers, inverters, circuit breakers, protective relays, etc.), specifications, test reports, etc., and any other applicable drawings or documents necessary for the proper design of the interconnection.

SIGN OFF AREA

The Member agrees to provide the Cooperative with any additional information required to complete the interconnection. The Member shall operate their equipment within the guidelines set forth by the Cooperative.

If the member chooses to switch electric providers within 2 years of the date of this agreement, the member agrees to reimburse the Cooperative \$1,500.00 for engineering, administrative and inspection costs incurred.

The member is responsible for ensuring the solar vendors provide correct Information. (Call Taylor Electric Cooperative)

DATE:		
TAYLOR ELECTRIC (AND MORE INFORMA	COOPERATIVE CONTACT FOR APPLICATION SUBMISS	SION
Cooperative contact:		
Address:		
Phone:		

APPLICATION APPROVAL

Distributed Generation Procedures and Guidelines Manual for Members

	Page 35
This application has been approved by the follow. authorized employee:	ollowing named Taylor Electric Cooperative,
NAME:	
TITLE:	
DATE:	

TAYLOR ELECTRIC COOPERATIVE, INC.

<u>Distributed Generation Rider</u>

Application.

Applicable to Qualifying Distributed Generation Facilities meeting the requirements of the Cooperative's "Tariffs for Electric Service section 202.14 Renewable Resource Generation equal to 250 kW or less" and in accordance with the Cooperative's service rules and regulations. A copy of the DG manual will be provided upon request.