APPLICATION, PROCEDURES, AND REQUIREMENTS FOR INTERCONNECTION AND PARALLEL OPERATION FOR RENEWABLE GENERATION

FOR CENTRAL ELECTRIC POWER ASSOCIATION

Applicant must not operate their generating facility in parallel with Central Electric's system until written authorization for Interconnection and Parallel Operation has been approved.

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I. APPLICATION

MEMBER INFORMATION

_____
NAME OF APPLICANT

_____
PRIMARY CONTACT PERSON

_____ _____
PRIMARY PHONE NUMBER SECONDARY PHONE NUMBER

_____
E-MAIL ADDRESS

_____
PHYSICAL ADDRESS OF THE SOLAR SITE

_____
ACCOUNT NUMBER

____ New System – At a location with an existing Billing Meter

____ New System – At a location with no Billing Meter currently on site

____ Modification to Existing System

PROGRAM SELECTION

SELECT ONE OF THE FOLLOWING DISPERSED POWER PRODUCTION PROGRAMS:

____ OPTION #1 – SELF GENERATION WITHOUT A POWER PURCHASE AGREEMENT

The electricity produced serves the facility's needs first. Any excess electricity is delivered to the power grid without payment. If the facility needs additional electricity, it must be bought from Central Electric Power Association. An Interconnection Agreement is required.

____ OPTION #2 – SELF GENERATION AND POWER PURCHASE AGREEMENT

The electricity produced serves the facility's needs first. TVA purchases any excess electricity that is delivered to the grid. If the facility needs additional electricity, it must be bought from Central Electric Power Association. An Interconnection Agreement is required.

____ OPTION #3 – BUY ALL SELL ALL POWER PURCHASE AGREEMENT

All of the electricity produced and delivered to the power grid is sold to TVA. The facility buys all of its electricity from Central Electric Power Association. An Interconnection Agreement is required.

INSTALLER INFORMATION

_____

INSTALLER COMPANY NAME

_____

COMPANY POINT OF CONTACT NAME

_____

INSTALLER'S PHONE NUMBER

_____

INSTALLER'S E-MAIL ADDRESS

_____

INSTALLER'S CERTIFICATION TYPE

_____

INSTALLER'S CERTIFICATION NUMBER

SYSTEM INFORMATION

_____

SYSTEM SIZE (TOTAL AC OUTPUT)

_____

INVERTER MANUFACTURER

_____

MODEL OF INVERTER

_____

SOLAR PANEL MANUFACTURER

_____

MODEL OF SOLAR PANELS

_____

BATTERY MANUFACTURER, IF APPLICABLE

_____

MODEL OF BATTERY, IF APPLICABLE

SIGNATURES

The Applicant agrees to provide Central Electric Power Association with any additional information required to complete the Interconnection Application.

I hereby certify that I have provided true information in this Application, and that I have read the Procedures and Requirements for Interconnection and Parallel Operation, incorporated herein, and to the best of my knowledge, my generation facility is in compliance with all requirements.

[Participant]

PRINTED NAME: _____

SIGNATURE: _____

DATE: _____

[Installer]

PRINTED NAME: _____

SIGNATURE: _____

TITLE: _____

DATE: _____

This is NOT permission to interconnect. Applicant must not operate their generating facility in parallel with Central Electric's system until written authorization for interconnection and parallel operation has been received.

CHECK LIST

_____ Attach a copy of the Installer's Certification.

_____ Attach a copy of the single line diagram showing the design of the proposed system.

MAKE SURE THE FOLLOWING ITEMS ARE LABELED ON THE DRAWING:

- ALL COMPONENTS OF THE SYSTEM
- CAPACITY OF THE COMBINER PANEL
- WIRE SIZES
- FUSE SIZES
- GROUNDING
- MAIN BUSBAR RATING
- MAIN DISCONNECT RATING
- SOLAR DISCONNECT RATING
- BATTERY DISCONNECT RATING
- INVERTER RATING
- NUMBER OF INVERTERS AND THEIR INPUT AND OUTPUT CAPACITY
- SOLAR PANEL MAXIMUM OUTPUT RATING
- ACTUAL CALCULATIONS SHOWING SIZE, NUMBER, AMPACITY, AND DERATING OF CONDUCTORS & OVERCURRENT PROTECTION DEVICES

_____ Attach a copy of the inverter specifications.

_____ Attach a copy of the solar panel specifications.

_____ Attach a copy of the battery specifications, if applicable.

_____ Applicant must be a member of Central Electric Power Association before their Application will be approved.

_____ $500.00 Application Fee (due at time of application)

REMIT THE APPLICATION, FEE AND ALL RELATER MATERIALS TO:

Central Electric Power Association
c/o Solar Department
Post Office Box 477
Carthage, MS 39051

Or you can drop the Application, Fee and Related Materials to:
your local branch of Central Electric

II. PROCEDURES & REQUIREMENTS FOR INTERCONNECTION & PARALLEL OPERATION

1.0 GENERAL PROCEDURES & STANDARDS

1.1 Scope

The procedure below describes the steps a member (consumer) must follow in order for their proposed renewable distributed generation (DG) equipment, to be evaluated and approved for parallel operation and interconnection to Central Electric Power Association's (CEPA) distribution system.

Participant will not be allowed to interconnect and operate in parallel their DG Equipment with the distribution system until (a) all provisions of these application procedures have been met, (b) Participant and CEPA have entered into an Interconnection and Parallel Operation Agreement ("Agreement"), and (c) CEPA has given WRITTEN NOTIFICATION to proceed with Interconnection and Parallel Operation.

This application, the Agreement, Participant's Qualifying Facility, and Participant's activities relating thereto are subject to the rules, regulations, and requirements of the Tennessee Valley Authority ("TVA").

1.2 Application for Interconnection

1.2.1 Interconnection Application – This document serves as a technical overview of the proposed distributed generation system including ownership, location, type, equipment specifications, and system size.

Applicant is required to provide the supporting documentation listed in the respective Application for Interconnection and Parallel Operation for Renewable Generation. These include, but are not limited to, system drawings, certifications, equipment specifications, and test results.

Drawings shall include calculations showing; size, number, ampacity, and derating of conductors and over current protection devices, and inverter input and output current.

Each applicant will be given the status of "**Participant**" upon execution of the application. In order to retain the status of Participant, each approved application must install the Qualifying System in accordance with the Application and Interconnection Agreement. Once CEPA has approved the application, the Qualifying System must be fully interconnected and operational within one hundred eighty (180) calendar days of CEPA's approval of the application.

1.2.2 The name designated on the application must match the CEPA account that is associated with the single billing meter at the address of the site.

1.2.3 Each applicant should receive approval from CEPA **prior to purchasing** any DG Equipment. Failure to do so may result in the purchase of equipment that does not qualify for interconnection.

1.2.4 CEPA will review the application for sufficiency and completeness and notify the applicant that all required documents have been received or indicate how the application is deficient.

1.2.5 Within 45 calendar days CEPA will complete an engineering review. This review will determine if a System Impact Study is necessary and if the system meets the minimum safety standards as outlined in the Procedures and Requirements for Interconnection and Parallel Operation.

Should a System Impact Study be required, the applicant will receive a copy of the study and be notified of any additional requirements.

The time required to complete a System Impact Study depends upon a number of factors and the level of impact on the electric system. The applicant shall be responsible for all costs associated with this study.

1.2.6 After the application is approved, the applicant may then proceed with the purchase and installation of the system.

The applicant will not be allowed to proceed with parallel operation until all provisions of these procedures have been met and CEPA has given written notification to proceed with parallel operation.

1.2.7 After installation, the Participant shall notify CEPA that the system is installed. CEPA may then inspect the Distributed Generation equipment for compliance with the proposed design and may require Witness and Commissioning Testing in accordance with the procedures defined by the latest version of IEEE 1547.1. The applicant will provide CEPA with the schedule for, and results of, all applicable Commissioning tests as well as testing information and results.

1.2.8 If the inspection of the completed system and any required tests are satisfactory, CEPA will notify the Participant in writing that interconnection of the Distributed Generation System is authorized for parallel operation. If the system does not pass the inspection and testing, CEPA has the right to Lockout the Facility. The applicant shall not under any circumstance operate the system in parallel until all issues have been resolved and subsequent inspection/test(s) are deemed satisfactory or waived by CEPA, in writing.

1.3 Liability

Participant is responsible for complying with all national, State, and local government requirements. Participant is also responsible for the safe and effective operation, maintenance, and repair of the system in compliance with electric utility standards.

1.4 Insurance

CEPA requires the following levels of Liability Insurance for Personal Injury and Property Damage. This coverage must be maintained during the entire term of the interconnection agreement.

Generation greater that 1kW but equal or less than 10 kW not less than $150,000.00 of coverage.

Generation greater than 10 kW but equal or less than 100 kW not less than $300,000.00 of insurance coverage.

Generation greater than 100 kW but less than 1 MW not less than $500,000.00 of insurance coverage.

Generation greater than 1 MW not less than $1,000,000.00 of insurance coverage.

1.5 Indemnity and Limitation of Liability

Participant agrees to release, defend, indemnify, and save harmless CEPA, TVA, the United States of America, and their respective directors, officers, employees, agents, attorneys, and contractors ("Indemnitees") from all liability, claims, demands, causes of actions, costs (including but not limited to attorney fees), or losses for personal injuries, property damage, or loss of life or property, sustained by Participant, Participant's agents and family, CEPA, or third parties arising out of or in any way connected with installation, testing, operation, maintenance, repair, replacement, removal, defect, or failure of Participant's Qualifying System ("Losses"). Without limiting the foregoing, Participant's obligations under this section shall extend to and include Losses arising out of or resulting from the negligence or other acts or omissions of CEPA or other Indemnitee(s), provided that Participant shall not be required to release, defend, indemnify, and save harmless an Indemnitee for any Losses caused by the willful misconduct of the Indemnitee.

CEPA shall not be liable to Participant for any indirect, incidental, special, punitive, or consequential damages arising under this Agreement, arising from any breach or partial breach of the provisions of this Agreement, or arising out of any act or omission of CEPA, TVA, or their respective directors, officers, employees, agents, attorneys, and/or agents.

The obligations of this section shall survive termination of the Agreement.

1.6 Modifications and Additions to DG System

If Participant desires to modify the Qualifying System in a manner that increases its gross power rating, Participant must submit a new Application for the proposed expansion. For any modification not increasing the gross power rating, Participant must provide CEPA with written notification that fully describes the proposed modifications at least thirty (30) calendar days prior to making any modifications.

1.7 Assignment

The Interconnection Agreement shall not be assignable by the Participant.

1.8 Inspection and On-going Compliance

CEPA will provide Participant with as much notice as reasonably practicable, within writing, email, or by phone, as to when CEPA may conduct an inspection and/or document review. Upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, CEPA shall have access to Participant's premises for the purpose of accessing the manual disconnect switch, performing an inspection or disconnection, or if necessary, to meet CEPA's legal obligation to provide service to its member-customers.

2.0 SYSTEM STUDY PROCESS

2.1 Study Process

CEPA shall review applications and perform a minimal engineering review of all projects. CEPA will contact the applicant and notify them of any concerns associated with the application or if there is a need for a System Impact Study.

2.2 Minimum Engineering Review

The minimum engineering review is designed to identify any adverse system impacts that would result from interconnection of the Distributed Generation System. Examples of such negative impacts would include exceeding the short circuit capability rating of breakers, violations of thermal overload or voltage limitations, and reviewing grounding requirements and electrical system protection.

The minimal engineering review will determine if a System Impact Study will be necessary.

2.3 System Impact Study

The System Impact Study is designed to identify and detail adverse electrical system impacts that would result if the proposed project were interconnected without project modifications or electrical system modifications.

All costs associated with a System Impact Study will be prepaid by the applicant prior to the study being done.

Once the System Impact Study is complete, the applicant will receive a copy of the study along with a non-binding, good-faith estimate of the cost to perform all upgrades identified in the study.

3.0 METERING

3.1 Metering Requirements

A Distributed Generation System may not only supply power to a Participant's home, it may, in periods of low usage, supply power to the CEPA distribution system. As a result, additional metering requirements are required. Minimally, a bi-directional utility meter is required to measure both consumption from and generation to the utility grid.

Additional costs associated with the purchase, operation, and maintenance of the appropriate metering equipment is the responsibility of the Participant.

4.0 SYSTEM REQUIREMENTS

4.1 Manual Disconnect Switch

Applicant must install a readily accessible, manual, lockable, visible load break disconnect switch between the generation source and CEPA's distribution system that is visibly marked in accordance with the labeling requirements. The disconnect shall be mounted separate from meter socket in a visible location within five feet of the meter socket or as otherwise approved by CEPA.

The Participant shall ensure that the manual disconnect switch shall remain readily accessible to CEPA and be capable of being locked in the open position with a single utility padlock.

4.2 Qualifying Systems

Qualifying Systems must have a minimum nameplate capacity greater than or equal to 1 kW and be no greater than 80 MW in size.

All project sites must have a minimum annual usage of at least 1,000 kWh as recorded by the single billing meter at the site.

4.3 Standards and Certifications Criteria

The Distributed Generation System shall be held to the same standard of safety as CEPA. The safety of the general public and the personnel and equipment of CEPA shall in no way be reduced or impaired as a result of interconnection.

The quality, reliability, and availability of service to the other members of CEPA, shall not be diminished or impaired as a result of interconnection.

The Distributed Generation System must comply with the latest revision of the following standards and the applicant must provide evidence of certification with the application.

4.3.1 IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems

4.3.2 IEEE 1547.1 Standard Conformance Testing Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

4.3.3 IEEE 519 Voltage and Current Harmonics

4.3.4 IEEE 2030 Smart Grid Interoperability

4.3.5 UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

4.3.6 NFPA 70 National Electrical Code

4.3.7 The Distributed Generation System shall be considered certified for interconnected operations if the generation equipment and all related interconnection components have been tested and listed by a Nationally Recognized Testing Laboratory (NRTL certification by Department of Labor) for continuous interactive operation with an electric distribution system in compliance with the codes and standards.

4.3.8 If applicable, the applicant must provide evidence that the installation has been inspected and approved by local code officials, prior to parallel operations.

4.3.9 A licensed Professional Engineer or North American Board of Certified Energy Practitioner (NABCEP) Photovoltaic Installer Professional Certification is required to sign the final system design included in the application.

4.4 Equipment Labeling

Applicant must install permanent name plates that are attached by screws in labeling the following DG Equipment:

Meter Base – see example 1.0

Caution Multiple Sources of Power - with a directional arrow pointing to the solar disconnect.

Solar Disconnect- see example 1.0

Must be labeled Solar Disconnect

Battery Systems must have the following labeled with permanent name plates that are attached by screws:

Battery Disconnect – see example 2.0
Battery Disconnect
Must Turn Off Switches 1 & 2 to De-Energize Solar and Battery

Distributed Generation Separation Switch – see example 2.0
Distributed Generation Separation Switch

Example 1.0

Example 2.0 (Battery System)

5.0 POINT OF INTERCONNECTION

5.1 The point where the electric energy first leaves the wires or facilities owned by CEPA and enters the wires or facilities provided by consumer and vice versa is the "Point of Interconnection." CEPA and Participant shall interconnect the Distributed Generation Facilities in accordance with IEEE Standard 1547.

6.0 DISCONNECTION AND RECONNECTION

6.1 CEPA may open the manual disconnect switch or disconnect Participant's meter, pursuant to the conditions set forth in Section 6.2 below, isolating the Qualifying System, without prior notice to Participant. To the extent practicable, however, prior notice shall be given, including an explanation of the conditions necessitating such action. As soon as practicable after the condition(s) necessitating disconnection has been remedied, CEPA will unlock the disconnect switch so Participant may re-energize the Qualifying System.

6.2 CEPA has the right to disconnect the Participant's DG system at any time. Some of the examples that may require disconnect are:

6.2.1 Emergencies or maintenance requirements on distribution system;

6.2.2 Hazardous conditions existing on CEPA's system due to the operation of Participant's generation or protective equipment as determined by CEPA, in its sole discretion.

6.2.3 Adverse electrical effects, such as power quality problems, on the electrical equipment of CEPA or other electric consumers caused by the Participant's distributed generation as determined by CEPA, in its sole discretion.

6.2.4 Participant is no longer a member-consumer at the location in question.

6.2.5 The Interconnection Agreement is terminated in accordance with the provisions of Section 7 of the Procedures for Interconnection and Parallel Operation.

7.0 EFFECTIVE TERM AND TERMINATION RIGHTS

7.1 The Interconnection Agreement becomes effective when executed by both parties. The agreement will continue in effect unless terminated as per one of the following conditions: (a) Participant may terminate the Interconnection Agreement at any time by giving Central Electric at least thirty (30) days written notice; (b) Either party may terminate if one of the parties has defaulted or failed to comply with the terms of the agreement and failed to make corrections within thirty (30) days after receiving written notice of the default or failure.

7.2 The Interconnection Agreement shall terminate in the event Participant is no longer a member-consumer at the location of the Distributed Generation System.

7.3 The rights and obligations of Section 1.5 shall survive termination of the Interconnection Agreement.

8.0 FEE SCHEDULE

Application Fee	$ 500.00
Distribution System Upgrades	$ actual cost
Monthly Administrative Fee	$ To be determined by CEPA (interval meter only)
Generation Meter	$ actual cost
System Impact Study	$ 8,000.00
TVA Fees & Studies	$ To be determined by CEPA at the time of application

Distribution System Upgrades – Should it be deemed necessary by CEPA, in its sole discretion, that improvements to the Distribution System are required in order to accommodate the Distributed Generation System, the applicant will prepay a good-faith estimate by CEPA for these costs. This money will be placed in an escrow account, and the actual cost will be charged against this account. The applicant will be refunded or billed the difference in actual cost.

The System Impact Study Fee - This money will be placed in an escrow account, and the actual cost of the study will be charged against this account. The Applicant will be refunded or billed the difference in actual cost.

Tennessee Valley Authority Fees and Studies – For a system that interconnects directly to Tennessee Valley Authority's transmission system, additional fees and study costs may be incurred by the applicant.

9.0 POWER PURCHASE AGREEMENT AND PROGRAM SELECTION

9.1 Applicant will elect one of the following Tennessee Valley Authority (TVA) Dispersed Power Production Programs (DPP). The applicant will apply for the DPP Program of their choosing:

OPTION #1 – SELF GENERATION WITHOUT A POWER PURCHASE AGREEMENT

The electricity produced serves the facility's needs first. Any excess electricity is delivered to the power grid without payment. If the facility needs additional electricity, it must be bought from Central Electric Power Association. An Interconnection Agreement is required.

OPTION #2 – SELF GENERATION AND POWER PURCHASE AGREEMENT

The electricity produced serves the facility's needs first. TVA purchases any excess electric that is delivered to the grid. If the facility needs additional electricity, it must be bought from Central Electric Power Association. An Interconnection Agreement is required.

OPTION #3 – BUY ALL SELL ALL POWER PURCHASE AGREEMENT

All of the electricity produced and delivered to the power grid is sold to TVA. The facility buys all of its electricity from Central Electric Power Association. An Interconnection Agreement is required.

9.2 Purchase of Power by Tennessee Valley Authority (TVA)

9.2.1 Applicants who select Option 2 or 3 of the DPP program must register with TVA to start the process of applying for a Power Purchase Agreement (PPA). This process can be done online at www.tva.gov.

9.2.2 The Participant will not be paid for any generation until the Power Purchase Agreement is fully executed.

III. DEFINITION OF TERMS

As used in this Application the following terms are defined as following:

Applicant shall be any eligible residential, commercial, or industrial member served by CEPA that has applied for this program but has not yet been approved.

Billing Meter shall be a retail billing meter located at the site where the Participant's facility or dwelling is located. The billing meter must be fully operational and measure the billing demand and/or the energy consumed at the site.

Calendar Year shall be January 1st through December 31st.

Distributor shall be Central Electric Power Association (CEPA).

DPP shall be TVA's Dispersed Power Production Program. Information can be found at www.tva.gov.

DG shall be Distributed Generation.

IEEE shall be the Institute of Electrical and Electronics Engineers.

Interconnection and Parallel Operating Agreement shall be the agreement executed by the Participant and CEPA to provide for the interconnection of the Qualifying System to CEPA's power system.

NEC shall be the National Electrical Code.

Participant shall be any eligible residential, commercial, or Industrial member served by CEPA whose Application has been approved by CEPA.

Qualifying System shall be either a cogeneration or small power production facility that meets the qualifications set forth in the Application to Interconnect and the Interconnection and Parallel Operating Agreement.

Site shall be Participant's residence, commercial, or industrial real estate and associated personal property to which the Qualifying System is connected, the address of which is identified under Participant's power billing account and on this Application. In addition, the Site must meet all of the following requirements:

The property must receive its retail electricity distribution service from CEPA at the location of the Qualifying System; and

The Qualifying System must be located on the same premises of Participant, where the Participant's own electrical load is located.

TVA shall be the Tennessee Valley Authority.

UL Standards shall be Underwriters Laboratories Standards.