

## **MUSCLE SHOALS ELECTRIC BOARD**

### **GUIDELINES FOR RENEWABLE ENERGY PROJECTS**

#### **Purpose:**

The intent of this Guideline is to provide an overview of Muscle Shoals Electric Board processes and procedures related to the connection of Customer owned Renewable Energy Projects to the Muscle Shoals Electric Board distribution or transmission grid.

#### **TVA Background Information:**

TVA, through recent years, has launched a number of programs that let Valley-based businesses and consumers support, and partner, with TVA and Local Power Companies in generating clean, renewable energy.

TVA defines renewable energy as generation that is sustainable and is generally replenished naturally. TVA produces renewable energy from various sources including (but not limited to) conventional hydro, wind, and solar. TVA also purchases renewable energy for distribution to its customers, and conducts research into clean and renewable sources.

TVA frequently offers various Programs to encourage participation in the creation of electrical energy via various forms of renewable energy. These Programs vary depending on the size of the installation (how many kilowatts will be produced). The Program specifics also change over time, as TVA adjusts its Policies to reflect current market conditions, and generation needs.

#### **Muscle Shoals Electric Board Renewable Energy:**

Muscle Shoals Electric Board is required by contract to purchase its total electric power requirements from the Tennessee Valley Authority (TVA). Therefore, Muscle Shoals Electric Board cannot purchase any portion of the output of any Customer owned Renewable Energy Generation System connected to its distribution system. Muscle Shoals Electric Board role is to assist customers with participating in TVA programs, provide an interconnection between the Customer Owned Renewable Energy Generation System and TVA for transmitting energy, meter transmitted energy per Muscle Shoals Electric Board and TVA guidelines and to facilitate payments/reimbursements to Customers, from TVA, for the energy generated by their Renewable Energy System. Contact Muscle Shoals Electric Board to find out which TVA Program(s) are applicable at this time.

#### **Muscle Shoals Electric Board Fees and Charges:**

The following is a list of fees and charges for customers establishing a Customer-owned Renewable Energy Generation System. These fees and charges are designed to assist Muscle Shoals Electric Board in

recovering costs associated with Customer owned Renewable Energy Generation System participation in TVA programs.

The Renewable Energy Generation System applicant will also be required to pay any TVA fees and charges outlined in TVA programs per corresponding TVA guidelines.

Muscle Shoals Electric Board Application Fees: Non-refundable payment at time of Application for Interconnection and Parallel Operating Agreement for Renewable Generation submission.

1 kW – 50 kW	\$100
Greater than 50 kW	\$250

Note: These Fees shall be modified over time, at the discretion of Muscle Shoals Electric Board and/or TVA.

Muscle Shoals Electric Board Engineering Fees: Non-refundable payment, with the minimum Engineering Fee payment (see below) due at time of Application for Interconnection and Parallel Operating Agreement for Renewable Generation submission.

Minimum Engineering Charge/Inspection Fee	\$250
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Engineering Fee Cost will vary based on specific size of system, existing distribution and/or transmission facilities and other conditions effecting specific project.

Engineer Fee estimated total cost will be provided after Muscle Shoals Electric Board Interconnection Application is submitted by the Customer.

Muscle Shoals Electric Board Meter Related Charges:

Metering of renewable generation will be completed per Muscle Shoals Electric Board guidelines, and/or TVA guidelines (as applicable), and will require the installation of a special generation meter. The meter will be provided by Muscle Shoals Electric Board, or TVA (as applicable). The Customer shall be charged for the meter. If TVA is not involved, this meter charge will be \$100. If TVA is involved, the meter charge will be provided later in the process.

If TVA is involved, the customer may also be responsible for maintaining communication service to the meter per Muscle Shoals Electric Board and TVA guidelines. If this communication is required, the Customer will incur a standard monthly access fee for the generation meter.

Muscle Shoals Electric Board Aid-in-Construction Charges:

If engineering analysis determines that upgrades to the Muscle Shoals Electric Board distribution or transmission grid infrastructure is required to accommodate the Customer owned Renewable Energy Generation System costs associated with these upgrades will be charged to the Customer as aid-in-construction.

**MUSCLE SHOALS ELECTRIC BOARD****APPLICATION FOR INTERCONNECTION OF DISTRIBUTED GENERATION****Tier 1 (1 kW – 50 kW)**

**This Application is considered complete when it provides all applicable and correct information required below.**

**Participant Information**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Location of Proposed Generation (if different): \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Electric Service Account Number: \_\_\_\_\_

**ELECTRICAL CONTRACTOR (Licensed Electrical Contractor is Required)**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Representative: \_\_\_\_\_

Email Address: \_\_\_\_\_

Contractor's License #: \_\_\_\_\_ City/County/State: \_\_\_\_\_

**GENERATING FACILITY INFORMATION**

Inverter Manufacturer: \_\_\_\_\_ Model \_\_\_\_\_ Qty \_\_\_\_\_

Nameplate Rating: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA) \_\_\_\_\_ (AC Volts)

Single Phase \_\_\_\_\_ Three Phase \_\_\_\_\_

System Design Capacity: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA)

Energy Source: Solar  Wind  Hydro  Other (describe) \_\_\_\_\_

Attach support information to show testing and listing by a Nationally Recognized Laboratory for compliance with the codes and standards outlined in 1.4.1 – 1.4.6 for the proposed system.

Estimated Installation Date: \_\_\_\_\_ Estimated In-Service Date: \_\_\_\_\_

List components of the Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

**ADDITIONAL INFORMATION – Single Line Diagram**

In addition to the items listed above, attach a detailed single-line diagram of the proposed facility, all applicable elementary diagrams, major equipment, (generators, transformers, inverters, circuit breakers, protective relays, batteries, number and location of PV Panels, meter, disconnect switch, etc.) specifications, test reports, etc., and any other applicable drawings or documents necessary for the proper design of the interconnection. Also provide the address or grid coordinates of the facility.

**PERMISSION TO INTERCONNECT**

**Participant must not operate its generating facility in parallel with MSEB’s system until Participant receives authorization for parallel operation from MSEB.** Unauthorized parallel operation could result in injury to persons and /or damage to equipment and/or property for which the customer shall be liable.

**INTERCONNECTION PARTICIPANT SIGNATURE**

I hereby certify that, to the best of my knowledge, the information provided in this Application is true.

Signed: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_