

Applicant Name: \_\_\_\_\_ Building/Facility Name: \_\_\_\_\_

Will this project allow the facility to be fully operational in the event of a total power outage? \_\_\_\_\_

<b>1. Running Load (KW)</b>	_____	<b>Concrete Pad Dimensions</b>
<b>2. Starting Load (KW)</b>	_____	
<b>3. Will the load be stepped in?</b>	_____	
<b>4. Generator Specified (KW)</b>	_____	
<b>5. Generator Voltage</b>	_____	
<b>6. Single or Three Phase</b>	_____	
<b>7. Type of Controls</b>	_____	
<b>8. Fuel Type</b>	_____	
		<b>Length:</b> _____
		<b>Width:</b> _____
		<b>Depth:</b> _____

**Additional information/remarks (Select appropriately):**

**Generator Type:** \_\_\_\_\_

- Generator on a slab, not in Special Flood Hazard Area- relevant codes and standards are stated in the application's Scope of Work
- Generator on a slab, in Special Flood Hazard Area- relevant codes and standards are stated in the application's Scope of Work AND:
  - A letter provided by the floodplain manager stating the project complies with the local floodplain ordinance
- Elevated generator, not in Special Flood Hazard Area- relevant codes and standards are stated in the application's Scope of Work AND:
  - Certification from a Tennessee registered engineer that the elevating structure is designed for the anticipated load to the structure including but not limited to wind, flood, snow, seismic
- Elevated generator, in Special Flood Hazard Area- relevant codes and standards are stated in the application's Scope of Work AND:
  - A letter provided by the floodplain manager stating the project complies with the local floodplain ordinance
  - Certification from a Tennessee registered engineer that the elevating structure is designed for the anticipated load to the structure including but not limited to wind, flood, snow, seismic

If portable, provide transport, hook up, and fuel supply and storage requirements at multiple facilities and how these will be executed.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**I certify that I have visited the project site, performed all necessary tests, and verified that the attached calculated loads and generator specifications will meet all requirements of this proposed installation as described in the Application's description of work.**

_____	_____	_____
<i>Print Name</i>	<i>Title</i>	<i>Date Signed</i>
_____	_____	_____
<i>Signature</i>	<i>Organization</i>	<i>Telephone Number</i>

- NOTES:**
- The generator must be installed in accordance with all applicable local and national building and electrical codes, in addition to the "Generator Codes and Standards".
  - Please attach available information on proposed equipment, load, sizing data, etc.
  - The Applicant should develop and implement a generator maintenance plan which includes periodically exercising the generator under load.

**THIS FORM MUST BE SIGNED BY A DESIGN PROFESSIONAL, PUBLIC WORKS DIRECTOR, SUPPLIER, CERTIFIED ELECTRICIAN, POWER COMPANY, OR ANOTHER PROFESSIONAL WITH THE EXPERTISE TO DETERMINE THE CORRECT SIZE OF THE GENERATOR**

## Generator Codes and Standards

*In accordance with the National Electrical Code*

**NOTE:** Manufacturer's installation instructions will apply for all areas outside the flood hazard area. In the absence of manufacturer's instructions, the method of installation will be approved by the building official as related to the pad supporting the generator. Inside the flood area, a structure will be required for support of the generator to be designed by an engineer and approved by the building official and elevated 2 feet above base flood elevation.

**445-1. Location.** Generators shall be located in dry places, and also so as to meet the requirements for motors in Section 430-14.\* Generators installed in hazardous locations as described in Articles 500-503, or in other locations as described in Articles 510-517, 520, 530, and 665, shall also comply with the provisions of those Articles.

*It is recommended that waterproof covers be provided for use in an emergency.*

**445-2. Marking.** Each generator shall be provided with a nameplate giving the maker's name, the rating in kilowatts or kilovolt-amperes, the normal volts and amperes corresponding to the rating, and the revolutions per minute.

**445-3. Drip Pans.** Generators shall be provided with suitable drip pans if required by the authority having jurisdiction.

**445-4. Overcurrent Protection.**

- (a) **Constant-Potential Generators.** Constant-potential generators, except alternating-current generators and their exciters, shall be protected from the excessive current by circuit breakers or fuses.
- (b) **Two-Wire Generators.** Two-wire, direct-current generators may have overcurrent protection in one conductor only if the overcurrent device is actuated by the entire current generated, except in the shunt field. The overcurrent device shall not open the shunt field.
- (c) **65 Volts or Less.** Generators operating at 65 volts or less and driven by individual motors shall be considered as protected by the overcurrent device protecting the motor if these devices will operate when the generators are delivering no more than 150 percent of their full load-rated current.
- (d) **Balancer Sets.** Two-wire, direct-current generators used in conjunction with balancer sets to obtain neutrals for 3-wire systems shall be equipped with overcurrent devices which will disconnect the 3-wire system in the case of excessive unbalancing of voltages or currents.
- (e) **3-Wire, Direct-Current Generators.** Three-wire, direct-current generators, whether compound or shunt wound shall be equipped with overcurrent devices, one in each armature lead, and so connected as to be actuated by the entire current from the armature. Such overcurrent devices shall consist either of a double-coil circuit breaker or of a 4-pole circuit breaker connected in the main and equalizer leads and tripped by two overcurrent devices, one in each armature lead. Such protective devices shall be so interlocked that no one pole can be opened without simultaneously disconnecting both leads of the armature from the system.

**445-5. Size of Conductors.** The conductors from the generator terminals to supplied equipment shall have an ampacity of not less than 115 percent of the nameplate current rating of the generator. Neutral conductors shall be the same size as the conductors of the outside legs.

**445-6. Protection of Live Parts.** Live parts of generators of more than 150 volts to the ground shall not be exposed to accidental contact where accessible to unqualified persons.

**445-7. Guards for Attendants.** Where necessary for the safety of attendants the provisions of section(s) 430-133 shall be complied with.

**445-8. Grounding.** If a generator operates at a terminal voltage in excess of 150 volts to ground, the frame shall be grounded in the manner specified in Article 250. \* If the frame is not grounded, it shall be permanently and effectively insulated from the ground.

**445-9. Bushings.** Where wires pass through an opening in an enclosure, conduit box, or barrier, a bushing shall be used to protect the conductors from the edges of the opening having sharp edges. The bushing shall have smooth, well-rounded surfaces where it may be in contact with conductors. If used where there may be a presence of oils, grease, or other contaminants, the bushing shall be made of a material not deleteriously affected.

**\* 430.14. Location of Motors.**

- (A) **Ventilation and Maintenance.** Motors shall be located so that adequate ventilation is provided and so that maintenance, such as lubrication of bearings and replacement of brushes, can be readily accomplished.  
*Exception: Ventilation shall not be required for submersible types of motors.*
- (B) **Open Motors.** Open motors that have commutators or collector rings shall be located or protected so that sparks cannot reach adjacent combustible material.

*Exception: Installation of these motors on wooden floors or supports shall be permitted.*