|  |
| --- |
| **Assistance Requesting:** **Primary** **Community Lifeline Utilized:**FMA (Flood Mitigation Assistance) BRIC (Building Resilient and Infrastructure Communities)  Safety and Security  Energy (power grid, fuel) HMGP (Hazard Mitigation Grant Program)  Food, Water, Shelter  Communications  **** Health and Medical TransportationIf HMGP: FEMA-DR-#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hazardous Material (HAZMAT)  **Community Information: Community NFIP/CRS Status:**  Conforms to State Mitigation Plan NFIP Participating  In Good Standing  Conforms to Local Mitigation Plan  Non-Participating  CRS Community State or Local Government  Private Non-Profit CRS Community Score: \_\_\_\_\_\_\_  Project Pre-Identified in Local Plan  Declared County (HMGP only)  **Building Codes:**   Adopted the building codes consistent with the international codes?  Year of Building Code: \_\_\_\_\_\_\_\_\_\_\_\_ Building Code Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Building codes been assessed on the Building  Code Effectiveness Grading Schedule? BCEGS Score: \_\_\_\_\_\_\_\_\_  **For state use only:**Date Pre-Application Received \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  State Reviewer\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_ |

This worksheet is for all Hazard Mitigation Assistance grant programs “Generator Transfer Switch for Critical Facility” proposals that support the Statewide Portable Generator Initiative. Please complete ALL sections and provide the documents requested. If you require technical assistance with this worksheet, please contact the Hazard Mitigation Division at (404)-635-7522, gema-hazmitpoc@gema.ga.gov or 1-800-TRY-GEMA to have a Hazard Mitigation Program Specialist assigned to you.

1. Applicant Information
	* 1. Name of Applicant: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Applicant Type

 State Government Local Government Private Non-Profit

3. Worksheet Prepared by:

 Ms. Mr. Mrs. First Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Last Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Telephone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address (City, State, Zip): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 E-mail address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4. Authorized Applicant Agent (**An individual authorized to sign financial and legal documents on behalf on the local government (e.g., the Chairperson, Board of County Commissioners, or the County Manager, etc.).

Ms. Mr. Mrs. First Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Last Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Telephone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address (City, State, Zip): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-mail address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date Submitted: \_\_\_\_\_\_\_\_\_**

1. Project Information/Mitigation Plan
2. Project Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Project Summary: (Describe in detail what you are proposing to do.)
4. **Date of Hazard Mitigation Plan approval by FEMA: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

This project must be identified in your Hazard Mitigation Plan. Provide a copy of the goal, objective, and action step that supports your project application. Please attach a letter of endorsement for the project from your County’s Emergency Management Agency (EMA) Director

**For each generator transfer switch location, please complete sections I through VII in its entirety.**

1. **Project Description: Generator transfer switch for\_\_\_\_\_­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **History of Hazards of Existing Generator**

### Provide a detailed power outage report for each critical facility that needs a generator transfer switch. Include weather related events for as long as records are available. Indicate the cause of the power outage. This information should be obtained from your power provider. The examples in bold qualify as weather related events.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Time of Outage** | **Duration (Minutes)** | **Outage Type** | **Description** |
| **Mon. Feb. 16, 2015** | **21:26:13 EST** | **623** | **Extreme Storm** | **Trees in Ice Storm** |
| **Tue. Jan. 07, 2014** | **17:41:34 EST** | **42** | **Lightning** | **Lines clear, fault on breaker** |
| Tue. Jan. 07, 2014 | 06:37:00 EST | 75 | Equipment Fault | Cracked Insulator |
| **Thu. Dec. 19, 2013** | **13:31:40 EST** | **47** | **Trees-Other** | **Lines down due to trees** |

**\*All information needs to be provided by a power company and have supporting documentation\***

### Structure Information for Critical Facility that needs a Generator Transfer Switch

* 1. **Critical Facility Type:**

🞎 Police Station 🞎 Fire Station 🞎 Hospital 🞎 Water Treatment Facility

🞎 Wastewater Treatment Facility 🞎 EOC 🞎 Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. **Additional Data to Determine Cost Effectiveness**

Name of current electrical power provider: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please include a power outage report for the critical facility which includes weather related events from as long as records are available, **refer to History of Hazards section.**

Power Outage Report Attached 🞎Yes 🞎 No

### Critical Facility and Value of Service Data

1. **For Water or Wastewater Services**

 Number of customers served: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **For Hospitals**

 Number of people served by this hospital: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 What is the distance in miles between this hospital and the hospital that would treat these people in the event this hospital was inoperative? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Number of people served by the nearest hospital: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 If service remained but displaced to new location, provide the number of days displaced\_\_\_\_\_ and costs\_\_\_\_\_\_\_

1. **For Police Stations**

 Type of station:

 ¨ Metropolitan: Police stations that serve a principal city or urbanized area with a population of at least 50,000 inhabitants

    ¨ City (outside metropolitan area): the area served by the police station is a city outside of a metropolitan area

    ¨ Rural (nonmetropolitan): areas that are outside of the metropolitan area and composed of mostly unincorporated areas

Number of people served by this police station: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of police officers who work at this location: \_\_\_\_\_\_\_\_\_\_\_

How many police officers would serve the same area if the station were shut down due to a disaster? \_\_\_\_\_\_\_\_\_\_

1. **For Fire Stations**

 Type of area served by the fire station:

   ¨ Urban: Counties with large (more than 1 million residents) or small (less than 1 million residents) metropolitan areas

     ¨ Suburban: Micropolitan (with an urban core of at least 10,000 residents) counties adjacent to a large or small metropolitan area

     ¨ Rural: Non-core counties adjacent to a large or small metropolitan area (with or without town)

     ¨ Wilderness: Non-core counties not adjacent to micropolitan counties (with or without town)

Number of people served by this fire station: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Distance in miles to next closest fire station that has backup power \_\_\_\_\_\_\_\_\_\_\_

Does Fire Station Provide EMS 🞎 Yes 🞎 No

If Fire Station provides EMS (Distance in miles to next closest fire station that could provide EMS service and has backup power): \_\_\_\_\_\_

1. **For EOC**

Type of EOC: 🞎 Stand-alone structure 🞎 Part of an existing structure

 Use of existing structure: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Operation of EOC: 🞎 Full time, daily 🞎 Temporary, only upon activation

Annual Operating Budget: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Average Number of Days of Use per year: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **For Other Facility \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Annual budget(s) for the department(s) affected by loss of facility: \_\_\_\_\_\_\_\_\_\_\_\_

If service remained but displaced to new location, provide the number of days displaced\_\_\_ and costs\_\_\_\_\_\_\_\_\_

### Location of Critical Facility that needs a Generator Transfer Switch

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Structure Name** | **Address** | **Zip Code** | **Year Built** | **Will Require Modification to Add Transfer Switch to Outside Of Structure (Yes or No)** | **Latitude/ Longitude** |
|   |   |   |   |   |  |

**\*Latitude and Longitude coordinates need to be in Decimal Degrees. The coordinates should be where the portable generator connects to the structure.**

1. **Include Flood Insurance Rate Map (FIRM) showing each structure**
* Attach a copy of the panel(s) from the FIRM.
* VE
* AE
* AO or AH\*
* A (no base flood elevation given) \*
* B or X (shaded)
* C or X (unshaded)

**\*If located in the above zones with an asterisk, the transfer switch must be installed to the 0.2% annual chance.**

1. **Map and Photographs showing each structure**
* Include Google map with the structure clearly marked.
* Provide high-resolution color photographs by email showing a front view, a side view, a back view, and a street view of the structure.

### Generator Transfer Switch Budget

### List all anticipated costs in detailed. Consider the potential future date of construction when compiling the cost estimate. Please provide documentation for each budget item with detailed vendor(s) estimates.

|  |  |  |
| --- | --- | --- |
| **Item Description** | **Cost Estimate** | **Source** |
| Manual Transfer Switch |  |  |

### Existing Generator Data Sheet

1. **Running Load (KW) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Starting Load (KW) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
3. **Is load being stepped in? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
4. **Generator Specified (KW) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
5. **Generator Voltage \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
6. **Single or Three Phase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
7. **Type of Controls \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_**

 **Automatic Manual**

1. **Type of Fuel \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_**

 **Gas Diesel Propane Other**

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

**Existing Generator Type:** 🞎 Fixed 🞎 Portable

* Generator on slab, not in Special Flood Hazard Area- relevant codes and standards are stated in the application’s Scope of Work
* Generator on slab, in Special Flood Hazard Area- relevant codes and standards are stated in the application’s Scope of Work AND:
	+ - A letter provided by floodplain manager stating project complies with 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 Georgia 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 project complies with local floodplain ordinance
	+ Certification from a Georgia 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 have 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.**

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

 Signature Title Date

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

 Print Name Organization Telephone Number

NOTES:

1. The existing generator must have been installed in accordance with all applicable local and national building and electrical codes, in addition to the “Generator Codes and Standards.” (See attached page)
2. Please attach available information on proposed equipment, load, and sizing data, etc.
3. The Applicant should have developed and implemented a generator maintenance plan which includes periodically exercising the generator under load.

**THIS FORM MUST BE SIGNED BY A CERTIFIED ELECTRICIAN**

**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 emergency.*

**445-2. Marking.** Each generator shall be provided with a nameplate giving the marker’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.**

1. **Constant-Potential Generators**. Constant-potential generators, except alternating-current generators and their exciters, shall be protected from excessive current by circuit breakers or fuses.
2. **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 that in the shunt field. The overcurrent device shall not open the shunt field.
3. **65 Volts of 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 nor more than 150 per cent of their full-load rated current.
4. **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.
5. **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 not less than 115 per cent 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 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 430-133 shall be compiled 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.***

1. Ventilation and Maintenance. Motors shall be located so that adequate ventilation is provided and so that maintenance, such as lubrication of bearings and replacing of brushes, can be readily accomplished.

*Exception: Ventilation shall not be required for submersible types of motors.*

1. 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.*