

# Generator: Instructions

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*\*The following information is intended for guidance only and is not a request for information. The following template is only intended to help the reader understand the FEMA Hazard Mitigation Grant Program (HMGP) application process.*

The user can provide the requested information by adding text or comments to the form, or by including the information in a separate document with their subapplication.

Additional technical guidance is provided in the attached Generator Technical Review Job Aid (Technical Job Aid) and the Environmental and Historic Preservation (EHP) Generators: Information Required for Environmental Review (EHP Job Aid), which are referenced throughout these instructions.

## A. Applicant/Subapplicant Information

1. **Applicant/Subapplicant Legal Name:** Enter your organization's legal name.
2. **Organizational Unit:** Enter the name of the department or agency within your organization that is pursuing the grant.
3. **Project Title:** Enter the name of the project title. The title should be short but descriptive (e.g., Town of High Winds Police Station Backup Generator).
4. **Applicant/Subapplicant Type:** Enter the type of applicant or subapplicant; refer to Hazard Mitigation Assistance (HMA) Guidance (Part III, Sections A and B) for information on Eligible Applicants and Subapplicants.
5. **Proposed Project Total Cost:** Enter the total cost of the project in the first field provided. In the fields beneath that, indicate the percentage and dollar amount of both the federal and local shares for the project.
6. **Certifications:** Read the statement provided and enter the requested information to certify the Applicant/Subapplicant reviewed and concurred with the HMGP program requirements.
7. **Mitigation Plan:** Mark the appropriate box—Yes or No. If Yes was marked, provide the specified information for the Local and State, Tribal, or Territorial Mitigation Plan. Refer to HMA Guidance (Part III, Section E.5) for information on hazard mitigation plan requirements.
8. **National Flood Insurance Program:** Mark the appropriate box—Yes or No. HMGP mitigation project subapplications for projects sites within the Special Flood Hazard Area are eligible only if the jurisdiction in which the project is located is participating in the program.
9. Enter the **Tax ID Number**, five-digit Federal Information Processing Standards (**FIPS**) code, six-digit **Community Identification Number**, and Data Universal Numbering System (**DUNS**) number for the Applicant/Subapplicant.
10. Enter the **U.S. Congressional District** for your jurisdiction, if applicable.
11. Enter the **State Legislative District** for your jurisdiction, if applicable.
12. **Primary Point of Contact:** Enter the contact information for the person coordinating the implementation of this grant throughout the application process.



13. **Alternate Point of Contact:** Enter the name and contact information for the alternate point of contact who can coordinate the implementation of this grant when the primary point of contact is not available.
14. **Authorized Applicant/Subapplicant Agent:** Enter the name and contact information for the authorized agent for your organization. The Authorized Applicant/Subapplicant Agent **MUST** be the chief executive officer, mayor, or person of comparable status who is authorized to sign contracts, authorize funding allocations or payments, etc.

## **B. Project Narrative and Scope of Work**

Mitigation projects funded by HMA must be both technically feasible and effective at mitigating the risks of the hazard(s) for which the project was designed. Effective mitigation measures funded under HMA provide a long-term or permanent solution to a risk from a natural hazard.

1. Enter the name and Applicant/Subapplicant type for your organization and indicate the number of generators included in the project. Describe the existing conditions of the facility/facilities. For each facility, describe if there is currently a generator on-site. If so, would the project be replacing or augmenting the current generator?
2. Describe the critical services at each facility. If different than the services provided during regular operations, describe the services each facility provides during emergency events.
3. Provide a detailed description of the natural hazards and risks being mitigated, including a loss of power and damage at the facility, if available. Describe the need for the mitigation project and how it will reduce/eliminate the risk of future damage. See **Step 1** of the **Technical Job Aid** for additional guidance.
4. Provide a detailed scope of work. Clearly explain the proposed activity, identify the tasks required to complete the proposed activity and define the tasks to be accomplished in clear, concise and meaningful terms. See **Step 1** of the **Technical Job Aid** and **Sections 1** and **2** of the **EHP Job Aid** for additional guidance. The scope of work should include the following:
  - a. Provide the design criteria that the project will comply with, including relevant building code(s) and standard(s).
  - b. Provide proposed generator(s) size (kW) and justification for such size. Justification could be one of the following, but not limited to, preliminary design by an engineering professional, electrical contractor quote, electrical equipment vendor quote, utility bill peak demand or utility transformer feeding the facility.
  - c. Provide plans of the existing electrical system(s), if available, and how the new generators will be connected.
  - d. Describe any necessary supporting infrastructure, such as conduit, concrete pad, transfer switches, generator housing, associated fuel tanks, battery systems, enclosures and/or security fence.
  - e. Identify the fuel source, describe how long-term fuel will be ensured and describe how fuel will be maintained during a natural hazard event.
  - f. When natural gas is the main fuel source, include documentation proving the authority having jurisdiction (i.e., the natural gas utility) acknowledges relying on natural gas for an emergency generator is acceptable.
  - g. Clearly state and document that the project will be constructed to the latest edition of codes and standards by including a description of the building code and standards to be followed. If additional

design considerations must be made to meet regulatory requirements of facility oversight agencies, these should be noted (i.e., water and wastewater treatment plants have additional regulatory requirements that may need to be met).

- h. Provide a detailed description of where the generator will be located for each facility. Include the elevation height of each generator pad and how it would be elevated.
  - i. If the project would disturb the ground for any reason (e.g., clearing a staging area, installation of pad, underground connections), describe the activities (both temporary and permanent) that would require ground disturbance and show the locations on a map or plan view; include length, width and depth of all ground disturbance.
  - j. Describe the existing condition of the ground surface (e.g., pavement, landscape shrubs and trees, previously undisturbed soils with vegetation) that would be disturbed.
  - k. Describe how the project will be accessed, where staging area would be located and the vehicles and equipment that would be used.
  - l. Provide a geographic information system (GIS), Google Earth files (.kmz), or map or image that clearly shows the boundaries of the project area. Include all elements of the project, ground disturbance, access and equipment staging.
  - m. Provide a few representative photographs of the surrounding area to the north, south, east and west of the project area. Provide photos of any buildings at the project site from the north, south, east and west.
5. Define the level of protection the mitigation will provide. Also address protection from all relevant natural hazards (flood, wind, snow, earthquake, wildfire, etc.). For generators, the level of protection may be based on the probability of the generator's failure. What is the probability that the generator will experience failure during a time when there is also a power outage? If losing power because of hurricanes, tornadoes, and/or storms, the generator should also be protected from high winds or flooding. For example, "the generator will be elevated above the 500-year flood event elevation and anchored per the American Society of Civil Engineers (ASCE) 7, Minimum Design Loads and Associated Criteria for Buildings and Other Structures, enabling the hospital's critical functions to remain operational during a 500-year flood or high-wind event."

## C. Alternatives Considered

Mitigation project alternatives are required as part of application development. Indicate at least three alternative actions that were considered in the planning process:

1. No Action Alternative and its consequences.
2. Alternative that was considered but not selected, and why.
3. Additional alternative actions considered but not selected (not required).
4. The Proposed Action alternative is the project you are proposing in the application; explain why it is the most practical, effective and environmentally sound alternative.

See **Step 1** of the **Technical Job Aid** for additional guidance.

## D. Generator Description

Fill out the Generator Description spreadsheet completely and attach to the application, based on the following columns:

- A. **Site Number:** Enter site designation number such as 1, 2, 3, etc. (e.g., if there is only one generator, it could be designated as 1).
- B. **Building/Facility Name:** Enter name of the building(s).
- C. **Building/Facility Description:** Provide a description of the type and number, size and dimensions of structure(s) to be served by the generator.
- D. **Critical Facility Type:** Select the type of facility from the drop-down list (Emergency Operations Center, firehouse, police station, hospital, water treatment plant, nursing home, wastewater treatment plant, other). If choice is not listed, please provide in Column U.
- E. **Date of Construction:** Enter year of construction of building(s) or facility. Please also include dates of any building alterations.
- F. **Address (number, street, city, state, zip code):** Enter the physical address of the building where the generator will be in service.
- G. **Latitude (decimal format to six places):** Enter the geographic coordinate that specifies the north-south position of the generator location in decimal format to six places.
- H. **Longitude (decimal format to six places):** Enter the geographic coordinate that specifies the east-west position of the generator location in decimal format to six places.
- I. **Type of Generator:** Select from the drop-down list (fixed or portable). If generator is portable, add storage location (address and latitude/longitude), use implementation plan and how it will be secured from theft in Column S.
- J. **Generator Phase:** Select 1 or 3 from the drop-down list.
- K. **Voltage (V):** Enter voltage of the generator.
- L. **Horsepower (HP):** Enter horsepower of the generator.
- M. **Capacity (kW):** Enter capacity of the generator in kilowatts.
- N. **Transfer Switch:** Select from the drop-down list (Yes or No). If yes, add the amperage and whether the switch is automatic or manual in Column S.
- O. **Type of Fuel:** Select fuel type from the drop-down list (natural gas, propane, diesel, electric, other). If other, note what type in Column S.
- P. **Physical Location:** Select from the drop-down list (interior, exterior, roof). This is in reference to the generator being inside or outside the building.
- Q. **Pad:** If the generator is to be located outside of the building, select whether it will sit on an existing pad or a new pad; otherwise, select N/A.
- R. **Other Features:** Describe if other eligible components (protective fencing, generator enclosures, fuel tanks, elevated platforms) are being installed as part of the project.

- S. **Ground Disturbance Dimensions:** Explain dimensions (length, width, depth) of any ground disturbance associated with generator, pad, fencing and enclosure installation. In particular, please describe any trenching or boring that will take place for utility connections, including the location of trenching.
- T. **Special Location Conditions:** Select special location consideration from the drop-down list (in Special Flood Hazard Area, adjacent to wetlands, in Coastal Zone, combination of conditions, N/A), as applicable. If it is a combination of conditions, please explain in Column U. If it is in the floodplain, please explain how the generator will be protected from flooding (e.g., elevation to certain height, floodproofing).
- U. **Comment:** Add comments, as appropriate, generated from selections in other columns.

## E. Environmental Planning and Historic Preservation Considerations

Projects potentially could impact nearby physical, cultural (historic and archaeological), biological and social resources. Below are questions about potential impacts your project may have on these resources. Please note that not all of these may be applicable to your project. See the **EHP Job Aid** for more details.

1. Has the public been notified or provided input? If so, provide dates and methods of outreach. If not, describe any planned public engagement activities for the project. See **Section 3A** of the **EHP Job Aid**.
2. Describe any agency coordination and permits obtained from federal, state or local agencies to implement the project. Include copies of any coordination materials, permit applications, or approvals. See **Section 3B** of the **EHP Job Aid**.
3. Provide any studies that have been conducted for the project or for projects that were recently built nearby. Studies could include evaluations of cultural resources (historic, archaeological) or environmental resources (threatened and endangered species, wetlands, hydrology). See **Section 3C** of the **EHP Job Aid**.
4. If the project is located in a floodplain, describe the project activities that would occur or be located in the floodplain, if applicable. On a map, show where project activities would overlap with floodplains. See **Section 3D** of the **EHP Job Aid**.
5. Describe any surface waters in or near the project area (ponds, lakes, rivers, streams, wetlands, other waterbodies). Describe any measures that would be used to avoid waterbodies or avoid impacting water (setbacks, silt fence). On a map, show where project activities would overlap with wetlands or other waterbodies. See **Section 3E** of the **EHP Job Aid**.
6. Describe any known hazardous or contaminated materials at the project site. If the project requires the use of hazardous materials (including herbicides), describe their use and best management practices to minimize environmental exposure. See **Section 3F** of the **EHP Job Aid**.
7. Would the project involve the use of imported fill? If yes, describe the type and source of the fill material. See **Section 3G** of the **EHP Job Aid**.
8. If the project would remove vegetation for any reason, describe the type and amount or area of vegetation (two oak trees, one quarter acre of turf grass). Describe how vegetation would be removed, if applicable (root ball removal, flush cut, dug up, chemical weed killer). If using herbicides, describe best management practices for their use. Estimate during which season(s) or month(s) vegetation removal would occur. See **Section 3H** of the **EHP Job Aid**.

9. List any best management practices that would be used during project construction. See **Section 3I** of the **EHP Job Aid**.

## F. Estimated Work Schedule

Specify the duration of each process component required to complete the project. Although the components' occurrences are not necessarily sequential and activities may be carried out concurrently, the total project timeline cannot exceed the period of performance for HMGP, which is 36 months. If needed, include a detailed schedule in the attached documentation. For additional guidance, see **Step 4** of the **Technical Job Aid**.

## G. Budget Estimating

The jurisdiction must ensure that all project costs are reasonable and necessary for the activity according to 2 CFR Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. For additional guidance, see **Step 5** of the **Technical Job Aid**.

1. **Costing Methodology:** Indicate which method(s) were used to determine the project costs. Choose whether the estimates were obtained from construction contractors and similar vendors, historical data from previous projects/activities (with an inflation factor, as needed) or using an online estimation tool. If none of these were used, please choose "Other" and describe the methodology used to develop the cost estimate. For additional guidance, see **Step 5** of the **Technical Job Aid**.
2. **Cost Estimate:** Enter the costs associated with all tasks/activities necessary to complete the project, as applicable. Ensure all tasks/activities match the information included in all other documentation provided with the application. All costs should be detailed and not contain any lump sums. The cost estimate should include a line-item breakdown of costs consistent with all elements described in the *B. Project Narrative and Scope of Work* and *I. Budget Estimating* sections of this application. For additional guidance, see **Step 5** of the **Technical Job Aid**.
3. **Budget Narrative:** Provide a budget narrative with explanations, justifications, and line-item details of the project costs. If needed, indicate in box that the narrative is in an attachment to the application and provide with application submittal.

The budget narrative should explain how costs were derived, including any details not in the line items. For additional guidance, see **Section 5** of the **Technical Job Aid**.

## H. Nonfederal Funding Share (25% of Total Planning Grant Costs)

List all sources and amounts used in the nonfederal share, including all in-kind services. In-kind services may not exceed the 25% nonfederal share. For each source, indicate the name of the source agency, describe the type of funding, and the amount.

Attach letters of funding commitment for each source.

## I. Cost-Effectiveness

1. Provide the project's benefit-cost ratio. Describe the benefit-cost analysis (BCA) methodology and list the documents attached to the application that support the BCA. Indicate if BCA software was used to determine that the project benefits versus the total project costs resulted in a ratio of 1.0 or greater.

Indicate the Benefit-Cost Ratio in the line provided. Otherwise, select that no BCA was required for a 5% Initiative project category.

2. An export of the BCA tool and pdf of the BCA is to be included with this application as required documentation. It is recommended that the application includes a BCA narrative describing the methodology, assumptions, and justifications for all inputs to the subapplication documentation. Provide a brief explanation of the BCA methodology below and list the documents attached to this application that are provided in support of the application.

All inputs for the BCA must be documented unless a FEMA default value is used. The BCA should be developed in accordance with **Step 10** of the **Technical Job Aid**. The Technical Job Aid will provide additional guidance for the development the BCA and required supporting documentation for the BCA. This section of the job aid describes how to complete the BCA, as well as documentation that will be needed in support of the BCA. It is recommended that a BCA narrative be provided to describe the methodology, assumptions, and justification for all inputs in the BCA. The following is a checklist of all items in the BCA (at minimum) that should be justified in the BCA narrative:

- Project Cost
- Project Useful Life
- Annual Maintenance Cost
- Loss of Function of Critical Facilities, and/or Nonresidential Buildings
- Before Mitigation Damages (including how recurrence intervals were calculated)
- After Mitigation Damages (including how recurrence intervals were calculated)

The BCA software can be found at <https://www.fema.gov/benefit-cost-analysis> with explanations of how to use the tool. It is a best practice to provide a BCA narrative as supporting documentation. The BCA narrative should describe the methodology, assumptions and justifications for all inputs to the subapplication documentation.

## J. Required Documentation Attached

Indicate all attachments to be included with this form. Please also indicate any additional documentation in the box below.

- Photos of site(s)
- Site layout figure
- Specification sheet for type of generator
- Documentation to support generator sizing (engineering, generator manufacturer, electrical utility, etc.). See **Step 2** of the **Technical Job Aid**, including critical functions versus powering the entire building.
- FIRMetts with property locations clearly marked. FIRMetts can be accessed in the FEMA Flood Map Service Center (<https://msc.fema.gov/portal/home>).
- Consultation Documentation
- State Historic Preservation Officer Consultation, required if:

- Structure is 45 years or older at the time of FEMA review
- New ground is being disturbed
- Project is located in a Historic District
- Appropriate BCA documentation, including an export of the BCA tool and pdf of the BCA Report from the toolkit (if applicable) and all supporting documentation
- Fund commitment letter, which lists the sources and amounts used in the nonfederal share requirement, including all in-kind services
- Assurances (FEMA Form 112-0-3C or 20-16c (Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements), and SF-LLL (Disclosure of Lobbying Programs) if applicable)
- Completed SF-424 (Application for Federal Assistance), signed by the authorized representative of the jurisdiction
- Completed SF-424d (Construction Programs) and SF-424c (Budget Information for Construction Programs)
- Detailed budget with additional budget narrative if box provided is not sufficient
- Designated Authorized Agent documentation designating authority for the signatory to sign contracts, authorize funding allocations or payments, or apply for grant funding that is signed by the ruling body of the applicant
- If there will be additional items not listed, please indicate those items in the comment box below this section.