U.S. Department of Homeland Security
Washington, DC 20472

FEMA

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INFORMATION

MEMORANDUM FOR: Regional Administrators
Regions I - X

ATTENTION: Regional Mitigation Division Directors
Hazard Mitigation Assistance Branch Chiefs

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SUBJECT: **Pre-Calculated Benefits for Certain Hospital Generators to Demonstrate Cost-Effectiveness**

I. Background and Purpose of this Memorandum

This memorandum establishes the use of a pre-calculated benefit to demonstrate cost-effectiveness for hospital generator projects.

Projects that are eligible for funding under FEMA's Hazard Mitigation Assistance (HMA) programs must demonstrate cost-effectiveness.[1] FEMA has developed several methodologies that applicants and subapplicants may use to demonstrate cost-effectiveness.[2] Generally, applicants and subapplicants demonstrate cost-effectiveness by conducting a benefit-cost analysis (BCA) that establishes that mitigation projects have a benefit-cost ratio (BCR) equal to or greater than 1.0.[3] Additionally, FEMA provides several streamlined methodologies that applicants and subapplicants may use to demonstrate cost-effectiveness. One of these streamlined methodologies is pre-calculated benefits, in which FEMA calculates pre-determined cost-effectiveness values. Using these pre-calculated benefits eliminates the requirement for applicants to conduct a separate BCA for eligible projects.

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[1] See, for example, for Building Resilient Infrastructure and Communities (BRIC), see Stafford Act Section 203(b); for Hazard Mitigation Grant Program (HMGP) and HMGP Post Fire, see Stafford Act Section 404 and 44 Code of Federal Regulation (CFR) 206.434(c)(5).
[2] In accordance with Office of Management and Budget (OMB) Circular A-94: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs.
[3] A benefit-cost analysis is a quantitative analysis used to assess the cost-effectiveness of a hazard mitigation measure by comparing the project's avoided future damages to the costs over the project lifetime. The result is a Benefit-Cost Ratio (BCR), which is the numerical expression of the cost-effectiveness of a project calculated as the net present value of total project benefits divided by the net present value of total project costs. A project is generally considered to be cost-effective when the BCR is 1.0 or greater, indicating the benefits of a prospective hazard mitigation project are sufficient to justify the costs. For more information on cost-effectiveness and the BCA Toolkit, see the FEMA BCA webpage at https://www.fema.gov/grants/guidance-tools/benefit-cost-analysis.

Given the importance of hospitals and the number of individuals in hospitals who depend on power for their health and well-being, FEMA is focusing efforts on streamlining the application process for secondary measures for sources of power at hospitals. This memorandum establishes the use of a pre-calculated benefit to demonstrate cost-effectiveness for hospital generator projects. The hospital generator pre-calculated benefit is intended to support FEMA's commitment to simplify processes and policies and improve stewardship of federal taxpayer dollars. FEMA understands that the effort necessary to complete such analyses can increase the burden on subapplicants, particularly those with limited access to resources. This pre-calculated benefit reduces the time and resources needed to complete and review cost-effectiveness for projects involving generators for hospitals and aims to increase the availability of mitigation opportunities to help communities increase resilience against future disasters.

The Hazard Mitigation Assistance Division completed an analysis using existing cost-effectiveness methodologies to determine a pre-calculated benefits value for projects involving certain hospital generators.

Therefore, for projects involving hospital generators that meet the criteria stated below, applicants and subapplicants may use the pre-calculated benefits to demonstrate cost-effectiveness instead of conducting a separate analysis using the FEMA BCA Toolkit. If the pre-calculated benefits are insufficient to show cost-effectiveness, the applicant and subapplicant can use the FEMA BCA Toolkit to demonstrate cost-effectiveness.

II. Scope and Applicability

This memorandum is effective on September 30, 2021. The memorandum only applies to hospital generator projects in hospitals with emergency departments; other facilities should continue to use the FEMA BCA Toolkit to demonstrate cost-effectiveness.

This methodology is available for all HMA grant programs and can be applied to new applications as well as pending or selected for further review projects. Additionally, pre-calculated benefits can be used to evaluate cost overruns for approved projects, if a new cost-effectiveness review is being performed.

III. Pre-Calculated Benefits for Certain Hospital Generator Projects

The pre-calculated benefit is available for hospital generator projects, if all of the following requirements are satisfied:

- The hospital must have an emergency department.
- The project represents a stand-alone solution.[4] The subapplication must provide enough information to demonstrate technical feasibility and effectiveness of the mitigation solution (including information from a licensed design professional for cost, generator capacity related to critical services throughout the hospital, and scope for a transfer switch, fuel storage, and other required components).
- If the generator is part of a larger project, the pre-calculated benefits from the generator portion cannot be combined or aggregated with the benefits from another portion of the

[4] See, for example, 44 CFR 206.434(c)(4). In other words, at the completion of the generator project, the project solves the problem independently and has all elements necessary to be fully capable of supplying power to the critical services throughout the hospital.

project. Additional information about generator projects under the HMA programs may be found in the 2015 Hazard Mitigation Assistance Guidance and its Addendum,[5] and the Eligibility of Generators as a Fundable Project by the Hazard Mitigation Grant Program and Pre-Disaster Mitigation Program Job Aid.[6]

- The total cost of the project[7] must be less than or equal to the pre-calculated benefits. The pre-calculated benefits for a hospital generator project are $6.95 per hospital building gross square footage (BGSF) in urban areas and $12.62 per hospital BGSF in rural areas.[8] For purposes of this pre-calculated benefit, "urban" is defined as any location within an urbanized area as defined by the U.S. Census Bureau.[9] "Rural" is defined as any location outside of an urbanized area (including urban clusters). Furthermore, all locations in Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands, and other island territories are considered rural for the purposes of this pre-calculated benefit. The applicant or subapplicant must use the address or latitude/longitude of the hospital to determine urban/rural status; this designation cannot be applied county-wide or across Metropolitan Statistical Areas.

Documentation that the project meets the criteria above must be included in the project subapplication in order to use this pre-calculated benefit to demonstrate cost-effectiveness.

The introduction of the hospital generator pre-calculated benefit does not impact total available funding for HMA programs and is only for the purposes of simplifying the subapplication development process. Pre-calculated benefits cannot be used to estimate costs. Cost estimates must be based on industry standards, vendor estimates, or other reliable sources. Only documented, eligible costs for completed work will be reimbursed. Additionally, all projects will be reviewed for cost-reasonableness and all other program eligibility criteria, including applicable codes, standards, and regulations.

For additional information on the HMA programs visit https://www.fema.gov/grants/mitigation.

If you have any questions, please contact the BCA Helpline. The BCA Helpline contact information can be found on FEMA's Benefit-Cost Analysis website on FEMA.gov, available at https://www.fema.gov/grants/guidance-tools/benefit-cost-analysis.

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[5] Available at: https://www.fema.gov/grants/mitigation/hazard-mitigation-assistance-guidance.
[6] Available at https://www.fema.gov/sites/default/files/2020-09/fema_eligibility_generators_fundable_project_under_hmgp_pdm_02-19-15.pdf.
[7] Total project costs include all project costs, not just the federal share.
[8] For example, a hospital of 100,000 BGSF would generate $695,000 in benefits in an urban area or $1,262,000 in benefits in a rural area. A hospital in a rural area would have higher benefits than in an urban area because of the greater average distance to the next nearest hospital. Distances were based on the rural and urban, including suburban, communities' average distance from a hospital, per: https://www.pewresearch.org/fact-tank/2018/12/12/how-far-americans-live-from-the-closest-hospital-differs-by-community-type/, information as of July 12, 2021. Published December 12, 2018.
[9] The U.S. Census Bureau is the only acceptable source for determining whether a location is within an urbanized area. Resources for urbanized area boundaries include the Rural America Story Map (available at https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=49cd4bc9c8eb444ab51218c1d5001ef6) and the TIGERweb application (available at https://tigerweb.geo.census.gov/tigerweb2020/).