Electrical Power Reliability and Resilience Program (ER2)

PROGRAM BUDGET	ADMINISTERING ENTITY	NATIONAL OBJECTIVE
$1,316,406,180	PRDOH	LMI/ UN 70% LMI GOAL
MAX AWARD	**START – END DATE**	**ELIGIBLE AREA**
PER PROJECT AMOUNT	DURATION OF THE GRANT	PUERTO RICO

Table 21 - ER2 Program Budget

Hurricane Impact

As detailed throughout the Unmet Needs Assessment and as documented by FEMA in its approval of significant recovery funds related to the comprehensive recovery of the electrical system, the electrical grid must be rebuilt from the ground up. On September 20, 2017, the Federal Government determined that the damage in all areas of Puerto Rico resulting from Hurricanes Irma and María was of sufficient severity and magnitude to warrant a major disaster declaration under the Stafford Act. Therefore, the major disaster declaration for Puerto Rico was issued with FEMA-4336-DR and FEMA-4339-DR. As of June 2021, HUD allocated a total of $1,932,347,000 for a portion of the unmet energy sector need.

Eligible Activities

HUD has determined that the aggregate of electrical power system improvements to be completed with CDBG–DR funds subject to 86 FR 32681 are critical factors of the region's long-term recovery from Hurricane María and its resilience to future weather events. As per the Notice, HUD recognizes that the broad scope of these activities may limit the ability of grantees to categorize these CDBG–DR funds into discrete categories of CDBG eligibility and to appropriately assign a CDBG national objective to each component of the planned improvements.

Therefore, eligible activities for the Electrical Power Reliability and Resilience Program (**ER2**) Program include:

Electrical Power Systems Improvements Activity

- HUD is waiving section 105(a) (42 U.S.C. § 5305(a)) of the HCDA and establishing an alternative requirement only to the extent necessary to create a new eligible activity, electrical power system improvements, which shall be applicable only for the grant funded pursuant to this Action Plan.
- Under this activity, all uses of funds that meet the definition of electrical power system improvements and comply with the alternative requirements are both

eligible under the waiver and alternative requirement and meet the statutory purpose of the funds.

- This activity includes the use of funds for payment of the non-Federal share required in connection with a Federal grant-in-aid program undertaken as part of an activity that meets the definition of electrical power system improvements and otherwise complies with grant requirements.
- Electrical power system improvements that can be demonstrated to have a public benefit may be installed or applied on private lands.

Electrical Power System Improvements

86 FR 32681, 32692 defines electrical power system improvements as the acquisition, construction, reconstruction, rehabilitation or installation of facilities, improvements, or other components that are undertaken to extend, upgrade, and otherwise enhance and improve the cost-effectiveness, reliability, efficiency, sustainability, or long-term financial viability of the grantee's electrical power system, including activities to increase the resilience of the electrical power system to future disasters and to address the impacts of climate change. This definition includes interim assistance and financing public or private acquisition for reconstruction or rehabilitation, and reconstruction or rehabilitation, of privately-owned property.

The refinancing or paying down of debt shall be eligible only for the purpose of acquiring a facility only upon HUD's consultation with the federal agencies that comprise the TCT.

Ineligible Activities

The definition of an electrical power system and the use of funds for electrical power system improvements shall not include ineligible activities as provided at 24 C.F.R. § 570.207, including costs for the operation and maintenance of the system.

This definition and the use of funds for electrical power system improvements shall not include the use of CDBG–DR funds for the operation and maintenance costs of a public utility or the costs of fuel or energy purchase contracts in effect prior to the applicability date of the Notice.

National Objective

Electrical System Enhancements and Improvement programs funded by CDBG-DR assistance must meet one (1) of the two (2) national objectives. These are either the LMI or Urgent Need National Objective. However, for purposes of this allocation, documentation of LMI is distinct. Eligible activities will be considered to meet the LMI National Objective if at grant closeout least 70% of the funds, not including planning and administrative cost, meet one of the following criteria.

- Provide at least 51% of the grantee's low- and moderate-income residents with either a subsidized rate for electricity below that charged to other residential ratepayers or a lower rate for electricity than was charged prior to complete

implementation of the CDBG–DR funding electrical power system improvements; or

- Measurably improve the reliability of the electrical power system in low-and moderate-income areas that are primarily residential. Measurably improved reliability shall mean a documented decrease in power supply interruptions, excluding planned interruptions and interruptions caused by major events.

Program Objective and Description

The Electrical Power Reliability and Resilience Program (**ER2**) provides assistance to subrecipients to create electrical system reliability and resilience. The program will serve the needs of communities by funding projects that are not currently anticipated to be funded from other federal or local sources. For construction activities, the subrecipient must agree to budget the operations and maintenance activities for the long-term sustainability of the electrical power system improvements. These multi-year budgets for operations and maintenance will apply for the useful life of the improvement or enhancement. Projects must demonstrate leverage, with the ER2 award consisting of not more than 40% of the proposed project cost, depending on the size and scale, and other factors of the project, as it will be outlined in the Program Guidelines.

Program funds will be provided for infrastructure and physical assets that qualify as Electrical Power System Improvements. Projects are encouraged to integrate energy assets and contribute to the diversification of energy resources. Projects pursued as Microgrids shall conform to the Microgrid Regulations, as approved by the Puerto Rico Energy Bureau (**PREB**).[192] Projects will be evaluated to identify opportunities for alignment with efforts to increase energy efficiency. PRDOH anticipates that approximately 80% of projects funded under ER2 will qualify as *Other sources of power, distributed energy, microgrids* components. PRDOH understands the importance of proper land-use, so projects proposed as solar farms may only be allowed in accordance with permissible land-use, permits and applicable zoning regulations. PRDOH will seek opportunities to utilize brownfields as per EPA guidance and recommendations.

PRDOH may use procurement methods in accordance with PRDOH policies and procedures. Additionally, PRDOH may utilize direct and subrecipient selection methods in accordance with its policies and procedures and Program Guidelines. To strengthen coordination with other relevant governmental agencies of Puerto Rico, PRDOH may work closely with relevant governmental agencies in the review of potential activities. Up to 30% of the ER2 Program allocation may be set aside for eligible government projects of public benefit.

[192] Microgrids may use either renewable, combined-heat-and-power, or hybrid generation resources, as described by the PREB Regulation on Microgrid Development, Section 3.03, Regulation No. 9028, May 16, 2018. https://energia.pr.gov/wp-content/uploads/sites/7/2018/10/20181025152622240.pdf

Cogeneration & Large Project Microgrids

Distributed renewable energy generation and industrial cogeneration are fast-growing markets that satisfy specific consumer sector energy needs. These behind-the-meter generation installations can be maximized by being integrated into district and community-level microgrids. Microgrid integration will extend the benefits of renewable energy and resiliency of the behind-the-meter generation projects across a broader population. The integration of the behind-the-meter generation installation to a microgrid represents customized technical challenges which include significant infrastructure cost, for which ER2 funds may contribute. Microgrids funded under the ER2 Program will foster renewable energy integration and community-level resilience. Projects pursued as Microgrids shall conform to Microgrid Regulations, as approved by the Puerto Rico energy Bureau (**PREB**). Large-scale energy resilience installations, including those considered for public institutions such as those related to education, may also be evaluated for funding.

Small Project Microgrids

Small and moderately sized microgrids may provide much-needed energy resilience at the community level. These microgrids may be targeted to non-PRASA communities and vulnerable communities that were without power the longest, which tend to be hard-to-reach communities in the mountains or in rural areas. Additionally, PRDOH may consult criteria utilized in the comprehensive microgrid analysis conducted by Sandia National Laboratories[193] as a frame of reference for considering community access to critical services.

To address the specific HUD requirements for subrecipient capacity for this allocation for electrical power system enhancements and the requirement to document the availability of operation and maintenance plans for any funded improvements, PRDOH may collaborate with PREPA and P3A to procure renewable energy resources in bulk on behalf of these communities to gain economies of scale, or may use other procurement methods in accordance with PRDOH policies and procedures. Additionally, PRDOH may utilize direct and subrecipient selection methods in accordance with its policies and procedures and Program Guidelines. This will allow vulnerable communities to be served in compliance with applicable regulations while meeting the needs of the people and integrating distributed energy improvements into the island-wide energy system. PRDOH will work closely with the DOE to ensure the technical specifications of the Scope of Work (SOW) meet federal requirements. In the scope of work and/or the written agreement, PRDOH will seek to ensure that the most vulnerable communities are targeted for services in alignment with the prioritization criteria. In addition, PRDOH may collaborate with PREPA and/or P3A, or other applicable entities, to ensure opportunities for community participation and education are provided to support the long-term success of the microgrid.

[193] Jeffers, R.F. *et al.* (2018). *Analysis of Microgrid Locations Benefitting Community Resilience for Puerto Rico*. United States. https://doi.org/10.2172/1481633.

PRDOH may consult with communities on the planning and design of the electrical power system improvements to ensure alignment with community service areas and consideration of critical assets. To the extent that data is available, this program will prioritize the communities near feeders that suffered the most extended delays in restoration after Hurricane María, along with other remote or hard-to-reach communities.

PRDOH may provide technical assistance and support to the impacted communities to aid in active participation in using, and maximizing the benefits provided by the microgrid. The expertise acquired through training will enable communities to empower themselves in their energy resilience. The awarded entity will be in charge of the operation and maintenance costs of these microgrids due to the requirements of the Federal Register Notice.

For those organizations seeking to implement community-based installations of energy production and storage as subrecipients, PRDOH offers funding opportunities as part of the CEWRI Program in the CDBG-MIT Action Plan. Community installations may include larger kilowatt, bimodal systems that can support health, lighting, communication, and other backup energy needs of area residents with awards of up to $2,000,000. Units of general local government/ Local and Municipal Governments, Community-Based Development Organizations and private not-for-profits, and Non-governmental organizations[194] are eligible applicants under the CDBG-MIT CEWRI Program and are encouraged to evaluate the program as described in the CDBG-MIT Action Plan. The CDBG-MIT Action Plan may be found at: https://cdbg-dr.pr.gov/en/cdbg-mit/ (English) and https://cdbg-dr.pr.gov/cdbg-mit/ (Spanish).

Small-scale Commercial Renewable Energy

To provide energy resilience to small to medium-size enterprises, which are critical for Puerto Rico's economy and often serve as community lifelines, PRDOH will set-aside up to $30,000,000 to DEDC for utilization in their Energy Support Program ("Programa de Apoyo Energético"). Through the Energy Support Program, DEDC is using a $20,000,000 allocation of American Rescue Plan Act (ARPA) funds to provide financial assistance to small businesses for their acquisition of renewable energy resilience measures. By providing this set-aside to DEDC, PRDOH would be leveraging other available funds to broaden the impact of the CDBG-DR electrical power system improvements allocation. Funds may also be used to support the Green Energy Trust to provide assistance on green energy efforts aimed at the residential sector.

Centro Médico

As outlined in the Unmet Needs Assessment, key medical facilities across the Island experienced cascading failures due to sustained loss of power after the hurricanes. This resulted in loss of life and compounded impact on public health. Centro Médico is a hospital complex that serves as the main center for trauma cases for Puerto Rico and the Caribbean. The hospital complex includes the University of Puerto Rico Medical Science

[194] 26 USC § 501(c)(3).

Campus, Oncological Hospital, and Industrial Hospital. A microgrid project is essential for the hospital complex operation to receive essential energy savings and provide resilience to the facility. Targeted funds will provide concept design and turn-key development for the Centro Médico Complex Microgrid. The hospital complex or its provider will be required to demonstrate financial capabilities for the operations and maintenance of the microgrid.

Generation

Generation remains a critical pressing need for the stability of the Island system. In addition to the distributed energy, behind the meter integration, and community microgrid projects, PRDOH will work with PREPA and other stakeholders to develop innovative generation solutions that will propel the Island forward in terms of resiliency, sustainability, and efficiency, while advancing goals in reducing Puerto Rico's carbon footprint. Proposed solutions for generation will be consulted with the TCT as applicable. They may be submitted for inclusion into the IRP as needed.

Method of Distribution

- Subrecipient Distribution Model
- Direct Distribution Model

Eligible Applicants

- Government of Puerto Rico Agencies, Authorities, Trusts and Boards (undertaking projects to support electrical power system improvements);
- Public-private partnerships as defined by Act 29-2009, as amended, known as "Public-Private Partnership Act";
- Units of general local government, Local and Municipal Governments (including departments and divisions) (undertaking projects to support electrical power system improvements);
- For-profit businesses (undertaking projects to support electrical power system improvements) (Note: Funds made available under this Action Plan may not be used to assist privately-owned utilities. A CDBG–DR grantee may seek a waiver of this prohibition when it has identified an electrical power system improvement project that is a priority and where assistance to a privately-owned utility is proven to be necessary to implement the project);
- Public Hospital and Health Systems; and
- Not-for-profit entities that meet capacity and experience requirements.

All eligible applicants should meet long-term capacity requirements, such as administrative, technical, and financial requirements to conduct the projects. Details of the process to apply for funding will be outlined in the Program Guidelines.

Eligibility

- Meets HUD Electrical Systems Eligible Activity definition;
- Meets HUD National Objective (Either LMI or Urgent Need);

- Non-Duplication of Benefit (project not proposed for funding under another federal program);
- Operations and Maintenance requirements are met;
- Cost Reasonable; and
- Other CDBG-DR requirements

Program Priority

Potential projects will be evaluated by PRDOH using the following criteria. Threshold Criteria are required as a baseline for the project eligible to be considered. Prioritization Criteria will be used to select, prioritize, or otherwise award a project as part of the program design. This process will be outlined in the Program Guidelines. Selected projects must have a logical nexus with the Unmet Needs Assessment and consist of CDBG-DR Electrical Systems Improvement eligible activities under this Action Plan.

Threshold

1. Non-Duplication of Benefits: Funds are for uses that meet electrical power system needs that are not likely to be addressed by FEMA or other sources of funds.
2. Construction and Resiliency Standards: Project construction will meet quality, durability, resiliency, efficiency, and sustainability standards as defined by:
    - Puerto Rico Building Codes;
    - NERC; and
    - National Association of Regulatory Utility Commissioners and National Electrical Codes 2020.
3. Financial Viability: Project has identified non-CDBG fund sourcing for long-term operation and maintenance, including vegetation management as applicable.
4. Cost Reasonable: Controls for assuring that improvement costs are reasonable

Prioritization

A. Reliability: Noticeably improves the reliability of the system through reducing the:
    - Impact on the number of days without power; and/or
    - Documented decrease in power supply interruptions.
B. Resilience: Noticeably improves the resilience of the system.
    - Projected Impact on the number of total accumulated Customer Hours of Lost Electricity Service (**CHoLES**) after an event
C. High-Impact Area: Provides targeted service to a vulnerable population, underserved communities, and low-and moderate-income areas.
D. Cascading Impact: Demonstrated community benefits tied to electrification, i.e.
    - Economic (i.e., impact on economic activity)
    - Public Health (i.e., power + water connection)
E. Critical Facility: Provides targeted service to a critical facility, such as a Hospital or Elderly Home.
F. Feasibility & Leverage: PRDOH may consider project feasibility and leverage as criteria when prioritizing projects for selection.

Award

- **Min Award**: $10,000,000
- **Max Award**: Per project amount

Regulatory Review

To allow for innovative and time-sensitive approaches to energy resilience, proposed CDBG-DR energy projects are not required to be approved in the IRP in order to apply for funding. However, depending on the impact of the project, the project may be required to undergo regulatory agency evaluation, and the project may need to be included by amendment in the IRP before it can be implemented. An IRP amendment can take more than **seven (7) months**, and requests for an amendment may need to be supported by models justifying the request.

For example, if a non-PREPA entity seeks to fund an energy project, it would have to establish a rate to cover operating and maintenance expenditures. That rate would be subject to review and approval by PREB. In other instances, PREB may need to evaluate the impact of a project on the rest of the system or ratepayers. For example, the cost of fuel is paid and spread across ratepayers, so projects that would impact fuel consumption would need to be evaluated.

While it is not necessary to amend the IRP to include renewable energy projects, it is important to note that the currently approved IRP does not include microgrids in the plan.

Even if a project is for a component already included in the IRP or otherwise identified as Public Policy, it may still need to be validated by the corresponding regulatory agencies in order to ensure there are no inconsistencies with the Public Policy. This review period is designed to be completed within **thirty (30) days**. PRDOH will maintain close coordination with the TCT in order to minimize the possibility of issuing CDBG-DR awards for projects that do not meet the required evaluation criteria for regulatory approval. PRDOH is working to align with the corresponding specific criteria for approval. The IRP is updated every three (3) years as a regular course of business.

PRDOH may consider awards below the $10,000,000 minimum award on a case-by-case basis, considering criteria that the project aligns with larger energy grid development activities or projects underway and the proposal meets other program requirements.

Environmental Review

The federal environmental review requirements for the eligible projects under the ER2 scenario shall comply with the NEPA process regarding the consultation to state and federal agencies and the evaluation of environmental impacts in preparing the environmental document. Simultaneously, PRDOH will comply with the state environmental review process as enacted by the Puerto Rico Environmental Public Policy Act (Act 416).

Flood Insurance

PRDOH and its subrecipients will implement procedures and mechanisms to ensure that assisted property owners comply with all flood insurance requirements prior to providing assistance.

Application Status

For the complete description regarding applicant communication and Application Status Updates, please see the section of the same name on this Action Plan. In addition to the program-specific protocol for application status updates as published in Program Guidelines, applicants may contact PRDOH or the Program Subrecipient to request information when those become available.

Quality Construction and Green Building Standards

PRDOH will implement construction methods that emphasize quality and durability. All electrical power system enhancements will be designed to incorporate principles of sustainability, including energy efficiency, resilience, and mitigation against the impact of future natural disasters

Green Building Standards means that PRDOH will require that applicable construction meets an industry-recognized standard that has achieved certification under at least one of the following programs: (i) ENERGY STAR (Certified Homes or Multifamily High-Rise), (ii) Enterprise Green Communities, (iii) LEED (New Construction, Homes, Midrise, Existing Buildings Operations, and Maintenance, or Neighborhood Development), (iv) ICC–700 National Green Building Standard, (v) EPA Indoor AirPlus (ENERGY STAR a prerequisite), (vi) the "Permiso Verde," or (vii) any other equivalent comprehensive green building program acceptable to HUD. PRDOH will identify which Green Building Standard will be used in the program policies and procedures, as per HUD requirements.

Where feasible, Puerto Rico will follow best practices such as those provided by the U.S. Department of Energy's Guidelines for Home Energy Professionals. Where applicable, installed appliances must meet ENERGY STAR certification standards at a minimum.

Elevation Standards

As required in 86 FR 32698, PRDOH will apply elevation standards for nonresidential structures construction located in the Advisory 100-year (or 1% annual chance) floodplain. All Critical Actions, as defined at 24 C.F.R. §55.2(b)(3), within the 500-year (or 0.2 % annual chance) floodplain must be elevated or floodproofed (in accordance with the FEMA standards) to the higher of the 500-year floodplain elevation or three feet above the 100-year floodplain elevation. If the 500-year floodplain or elevation is unavailable, and the Critical Action is in the 100-year floodplain, then the structure must be elevated or floodproofed at least three feet above the 100-year floodplain elevation.

- Whether the cost of elevating an electrical power system component is at or below 30% of the cost for a newly constructed in place for an original electrical power system component that can be raised;

- Whether or not raising an electrical power system component to the Base Flood Elevation (BFE)[195] plus three feet is feasible when considering the potential for transferring flood risk to the surrounding area.

Duplication of Benefits (DOB)

In accordance with the Stafford Act, as amended, Puerto Rico will implement policies and procedures to ensure no individual, entity, or subrecipient receives a duplication of benefit for the same purpose and/or effect to recover from the hurricanes. Federal law prohibits any person, business concern, or other entity from receiving federal funds for any part of such loss as to which he has received financial assistance under any other program, from private insurance, charitable assistance, or any other source. The DOB guidance included 84 FR 28836 updates the DOB guidance issued in Federal Register Vol. 76, No. 221 (November 16, 2011), 76 FR 71060, for CDBG-DR grants received in response to disasters declared between January 1, 2015 and December 31, 2021.

All duplicative assistance received must be accounted for and remitted to PRDOH or its subrecipient, regardless of when it is received by the awardee. CDBG-DR funds are designed to be funding of last resort. If additional funds are paid to a subrecipient or awardee for the same purpose, those funds must be returned to PRDOH. All subrecipients will be required to sign a Subrogation Agreement as part of their Grant Agreement. The CDBG-DR Duplication of Benefits policy is available in English and Spanish at https://cdbg-dr.pr.gov/en/download/duplication-of-benefits-policy/ and https://cdbg-dr.pr.gov/download/politica-sobre-la-duplicacion-de-beneficios/.

[195] BFE is defined by FEMA as the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year. https://www.fema.gov/node/404233#:~:text=%E7%AE%80%E4%BD%93%E4%B8%AD%E6%96%87-,Base%20Flood%20Elevation%20(BFE),level%20in%20any%20given%20year.