United States Virgin Islands

CDBG DR Electrical Power System Enhancements and Improvements Action Plan

Virgin Islands Housing Finance Authority

Version 3.0

Amendment: Substantial

Public Comment Period:

Submitted to HUD:

Approved by HUD:

ACTION PLAN REVISION HISTORY

For Substantial and Non-substantial Changes

Version	Date	Description
Version 1.0	February 24, 2023	Initial CDBG-Electrical Action Plan
Version 2.0	June 14, 2024	CDBG-Electrical Action Plan Non-Substantial Amendment for identifying the activity delivery costs of each program, adding a direct selection method for the PR2, and clarifying that the funding change percentage for triggering a substantial amendment is 10% of total allocation.
Version 3.0	##	This Substantial Amendment revises the PR1 Program from project activities at the Estate Richmond Power Plant on St. Croix to Territory-wide initiatives for grid resiliency, adjust the grant allocations budget to reflect the current unmet needs reducing the PR1 Program from 78% to 52.9%; increases the allocation to PR2 from 10% to 32.1%. Create a subcategory in PR2 to expand the need of larger systems and in recognition of the expanding scope of project activities to reflect the need in the direct community innovation applications; adjusts and defines the activity delivery costs percentages to address the increase in programmatic administration costs, restores the allowable percentage for planning and administration to the 15% to address the increase costs in these areas.

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1.1 Introduction – Funding Award

Hurricanes Irma and Maria

In 2017, Hurricanes Irma and Maria caused widespread destruction in the United States Virgin Islands. In particular, the electric power grid was severely damaged, resulting in extensive power outages across all islands of the territory. Exacerbating the outages were the fundamental problems of outdated electrical generation and transmission facilities, high residential electrical rates, a majority LMI population, and a lack of capital dedicated to electrical grid improvements.

This Action Plan addresses part of those needs and is written to provide the basis for planning, designing, and constructing improvements to the USVI's electrical grid.

CDBG-DR Funding Award

Signed into law on February 9, 2018, the *Further Additional Supplemental Appropriations for Disaster Relief Requirements Act of 2018* (Public Law 115–123) appropriated approximately $28 billion in Community Development Block Grant (CDBG) funds to address unmet need due to 2017 disasters, which include Hurricanes Irma and Maria. The U.S. Department of Housing and Urban Development (HUD) further allocated these funds as Community Development Block Grant Disaster Recovery (CDBG–DR) and Community Development Block Grant Mitigation (CDBG-MIT) funding, including to the United States Virgin Islands (USVI or the Territory). The CDBG-DR funds for unmet disaster needs and CDBG-MIT funds for mitigation projects in the Territory are available at

- Action Plan | VI Housing Finance Authority (vihfa.gov) or https://cdbgdr.vihfa.gov/contracts/action-plan/ for the CDBG-DR Action Plan and

- Mitigation- Virgin Islands Housing Finance Authority (vihfa.gov) or https://cdbgdr.vihfa.gov/programs/cdbg-mitigation/ for the CDBG-MIT Action Plan.

Two billion dollars in CDBG-DR funds for enhanced or improved electrical power systems in Puerto Rico and the U.S. Virgin Islands were made subsequently available in the June 22, 2021, Federal Register Notice (*FR-6261-N-01, p.32681*), including $67,653,000 specifically designated for the Territory. As outlined within this document, the Action Plan for Electrical Power System Enhancements and Improvements (EPSEI) describes the planned use of these federal funds within the Territory.[1]

[1] Federal Register / Vol. 86, No. 117 / Tuesday, June 22, 2021 2021-12934.pdf (govinfo.gov)

Territorial Government Organization

The USVI Government, in consultation with local territorial government agencies, semi-autonomous agencies, authorities, and community stakeholders, plus U.S. governmental representatives, has prepared this CDBG-DR Electrical Power System Enhancements and Improvements Action Plan to utilize the $67,653,000 in allocated funding. The published June 22, 2021, Federal Register Vol. 86, No. 117 (*FR-6261-N-01, p. 32681)* governs the use of the $2 billion CDBG–DR allocation for enhanced or improved electrical power systems, with HUD establishing a waiver and alternative requirement that creates electrical power system improvements as a CDBG–DR eligible activity while also designating how these funds were to be allocated.

The USVIs' Territorial Government has organized various autonomous and semi-autonomous entities to perform vital roles within the Territory, including the Virgin Islands Housing Finance Authority (VIHFA) that prepared this Action Plan on behalf of the USVI to submit to HUD. The VIHFA is the grantee for the CDBG-DR and CDBG-MIT funds for the Territory; as such, it serves as the entity responsible for administering the funds in compliance with applicable regulations and timeframes for the $67,653,000 that was allocated to the USVI to enhance the Territory's electrical power system.

Proposed Allocation

The proposed uses of the $67,653,000 as described in this CDBG-DR Electrical Power Systems Enhancement and Improvements Action Plan, are as follows.

The funding allocations have been broken out to show project direct cost and project activity delivery costs.

Figure 1 Proposed Allocation of CDBG-DR EPSEI Funds

Electrical Power System Improvements Activity	Current Action Plan	Direct Project Costs	Amended Allocation	Total Allocation %
PR1 Grid Resiliency ~~Electrical Power System Improvements Richmond Estate Generating Facility~~	$53,000,000	$31,120,380	$35,788,437	52.9%
PR2 Community Innovations Application Program ~~Electrical Power System Improvements~~				
Energy Vulnerable	$10,000,000	$16,530,863	$19,010,493	28.1%
Solarized HUBS	$0	$2,353,148	$2,706,120	4.0%
Planning	$1,270,350	$6,765,300	$6,765,300	10.00%
Administration	$3,382,650	$3,382,650	$3,382,650	5.00%
Total	$67,653,000	$60,152,341	$67,653,000	100.00%

1.2 Background on Hurricanes Irma and Maria

In September 2017, the United States Virgin Islands (USVI or the Territory) saw two back-to-back category five Hurricanes arrive just a few days apart, which resulted in catastrophic destruction that caused the longest sustained blackout in (modern) United States history. These two hurricanes — Irma and Maria— devastated the USVI and especially its power system infrastructure, leading to CDBG funding allocations for both disaster recovery (CDBG-DR) and mitigation (CDBG-MIT) and in the "Most Impacted and Distressed" (MID) area designation by HUD for the entire Territory.[2]

The Hurricanes' Impact in the Territory

Hurricane Irma impacted the USVI on September 6 as a powerful windstorm that directly passed over St. Thomas and St. John, tearing roofs off many buildings while also dropping rain at unprecedented levels while the hurricane slowly crossed the Territory. On September 20, 2017, Hurricane Maria came behind with similar characteristics on a parallel path, causing considerable water damage to the many unprotected structures already without roofs in the St. Thomas and St. John district, while also still inflicting even more severe damage on St. Croix just a few days after Irma had left the area. Catastrophic hurricane rains from Maria fell on already saturated ground from the prior category 5 hurricane, which led to additional flooding and landslides, dramatically impacting already damaged infrastructure systems in the Territory. From the perspective of electric utility systems, these two storms placed considerable additional pressure on the Territory's aging infrastructure, washed out roadways, created debris, caused mudslides, and downed most power lines in the USVI. Damage to the Territory's infrastructure had far-reaching effects, starting with how long it took for heavy equipment to get up onto the roads to begin rebuilding homes and restoring power and other essential services.

For additional details on the overall impacts of Hurricanes Maria and Irma to the Territory, readers are encouraged to consult VIHFA's other two Action Plans and Amendments for CDBG Disaster Recovery and CDBG Mitigation funds, available at https://cdbgdr.vihfa.gov/contracts/action-plan/ and https://cdbgdr.vihfa.gov/programs/cdbg-mitigation. /

Power Instability Following Hurricanes Irma and Maria

Even though Hurricanes Irma and Maria arrived in the Territory more than five (5) years ago, power instability from these storms continue to hamper its economic recovery, impeding efforts to complete the Territory's much-needed recovery cycle. Frequent blackouts occur in the USVI due to insufficient generation or instability within existing systems.[3] Unpredictable power outages continue to be common in the Territory, even as already high electricity prices continue to rise. Energy remains the single most

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[2] Federal Register / Vol. 86, No. 117 / Tuesday, June 22, 2021 https://www.govinfo.gov/content/pkg/FR-2021-06-22/pdf/2021-12934.pdf

[3] Susan Carlson, "WAPA problems cause rolling blackouts in St. Thomas-St. John, | News | virginislandsdailynews.com, 08/10/22 (https://www.virginislandsdailynews.com/article)

comprehensive and critical factor to be addressed for the Territory's future, as systemic energy instability negatively impacts daily life in so many ways. Residents in the USVI need power to have access to water, healthcare, communication, refrigeration, fuel, cooling, and security.

1.3 Background on Power Outages and Electricity History

Hurricanes Irma and Maria significantly damaged key elements of the electrical systems in both Puerto Rico and the U.S. Virgin Islands. At its peak 95% of the Territory was without power, with repairs taking five months before power could be restored.[4] Most residents in the Territory had no potable water for weeks, and some for many months. In the Territory 90% of customers lost internet access due to damage from the hurricanes to telecommunications infrastructure.[5] These effects following Hurricanes Irma and Maria are all linked to power infrastructure failures.

Total needs for infrastructure improvements – to energy infrastructure, but to a broader infrastructure as well, following the hurricanes were set at $6.93 billion, including the costs for estimated emergency recovery measures, permanent repair, and reconstruction work, as well as planned resilience and mitigation efforts. The Territory has previously identified multiple disaster-related infrastructure priorities to be addressed using available funding resources. The storms' impact on infrastructure and its systems has affected many systems, which has informed prior project decisions and priorities addressed within previously approved CDBG Action Plans including particularly prioritizing funds to initiatives that benefit low- and moderate-income individuals and households.

1.4 Summary of HUD Requirements

In preparing this Action Plan, VIHFA developed Electrical Power System Enhancements and Improvement ("EPSEI") Programs based on the allocation requirements and identified unmet needs, together with input from disaster-impacted stakeholders.

VIHFA has developed an unmet needs assessment to inform the use of CDBG–DR funds for electrical power system improvements, as required by HUD. This Action Plan includes an estimate of unmet needs based on planned electrical power system improvements and considering mitigation and resilience measures that are not likely to be addressed by other sources of funds. VIHFA considered the various forms of assistance available or likely to be available for such improvements, using the best available data to estimate the portion of need unlikely to be addressed by insurance proceeds, other Federal assistance, or any other funding source (thus producing an estimate of unmet need).

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[4] Federal Register / Vol. 86, No. 117 / Tuesday, June 22, 2021 2021-12934.pdf (govinfo.gov)

[5] Virgin Islands Next Generation Network (viNGN), refenced in CDBG-DR Action plan, page 9, https://www.vihfa.gov/sites/default/files/USVI%20Disaster%20Recovery%20Action%20Plan%203.1.19.pdf

The unmet needs assessment for this Action Plan must:

(i) evaluate all aspects of the electrical power system that were damaged by the disaster and are at greatest risk from future disasters;

(ii) estimate unmet needs to ensure that CDBG–DR funds are planned for uses that meet electrical power system needs that are not likely to be addressed by the Federal Emergency Management Agency (FEMA) or other funding sources by accounting for the various forms of assistance available or likely to be available to VIHFA or its subrecipients (obligated and projected FEMA funds, public utility resources, other grantee funds); and

(iii) account for the costs of incorporating mitigation and resilience measures to protect against the projected effects of future extreme weather events, other natural hazards, and long-term risks, together with the costs of incorporating improvements to address long-term carbon reduction goals.

VIHFA has developed this Action Plan with a goal to maximize the appropriated use of CDBG-DR Program funds, which then supports the needed coordination and engagement by both governmental and non-governmental stakeholders to successfully identify unmet needs to consider how to best address them. By evaluating damage to the USVI system from Hurricanes Irma and Maria in 2017, plus risks to the system from future disasters, along with the anticipated costs in incorporating resilience features and mitigating risks from future disasters in the Territory while identifying need that has not already been addressed previously using other funding sources to determine project outcomes, it becomes much easier to then factor in input from the public and other interested agencies when making decisions on how to potentially use this key funding to improve the Territory's electrical infrastructure in an impactful way.

HUD defines an electrical power system in a broad way. Bringing together the many components that contribute to the proper operation of the grid, including physical assets for generation, transmission, and distribution, as well as technological and administrative components. Specifically, the definition is stated in FR-6261-N-01, p. 32692:

> "An electrical power system shall be defined as an interconnected or autonomous set of transmission lines, distribution lines, substations, central power generation stations, other sources of power, distributed energy resources, or enabling technologies and services, such as industry standard billing, accounting information technology, cybersecurity enhancements, microgrids and fuel transfer delivery systems, that are necessary for the provision of reliable, resilient, stable, and cost effective electrical service."[6]

The main objective of the CDBG-DR Program is to support the Territory's economic and social development, providing quality of life, safety, security, and growth opportunities for its residents' future. CDBG-DR funds provide a unique opportunity to improve quality of life for the Territory's residents while

[6] https://www.govinfo.gov/content/pkg/FR-2021-06-22/pdf/2021-12934.pdf

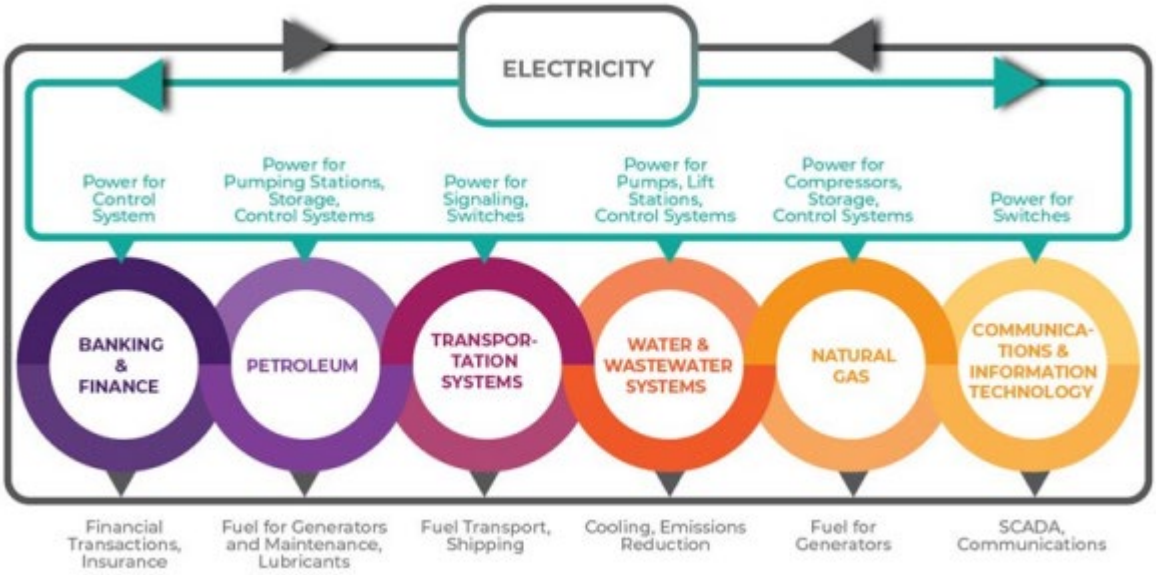
also strengthening its economy through much-needed electric power system enhancements. While this funding cannot address all unmet need, it can contribute to making improvements to the electrical system that would not otherwise be possible, making this plan an important one for the Territory and its residents.

The unstable electrical system exposed by Hurricanes Irma and María is still felt every day by the Territory's residents. As the current condition of the electrical power system is critical, the system will remain extremely weak and susceptible to collapse from any future major event, in which vulnerable communities will suffer the most, unless action is taken to address systemic issues. Every community in the Territory deserves to enjoy a strong, reliable, and resilient electrical power system that ensures the tranquility of the people and a better quality of life for residents. Lessons learned from Irma and María provide the Territory the opportunity to now take an approach to creating more resilient and more systems that work well and are developed in a sustainable manner that will serve residents well for many years to come, making this plan a critical document for the Territory's residents.

Power System Interdependencies

The electric power system in the Territory supplies energy essential to many critical services, such as communication systems, hospitals, industry, schools, and water supplies. See Figure 2 below (Electric Power Interdependency Examples).

Figure 2- Electric Power Interdependency Examples



Specific critical loads must be considered relevant unmet needs for the entire Territory when looking at the existing electrical systems. These include essential logistics assets needed before and during the disaster recovery process to ensure the materials supply chain and the continuity of production for crucial products. Considering the lessons learned from Hurricanes Irma and María, the power supply for these critical loads must be reliable and resilient, requiring work on many different components to make sure

that all parts function as well as possible when linked together, anticipating where weak points may be to shore them up in advance while anticipating what may be needed to fix problems during future disasters.

A fault in the electric power service can endanger the lives of many individuals, such as patients in a hospital without a reliable backup power system, and negatively affect the operation of commerce and industry. These interdependencies were widely documented in the aftermath of Hurricanes Irma and María, which only compounded already ongoing difficulties within the system and revealing significant concerns on the current system's limitations and its concerning long-term impact on the population. When the electric power system suffers from an outage, connected critical services are hindered or cease to work until the situation is resolved. Frequent outages can cause a chain reaction resulting in the collapse of other essential services, which can be seen upon examining the current USVI electrical system and how the hurricanes devastated it previously.

1.5 Prioritization and Guiding Principles

Given the sequence of Congressional actions and HUD allocations, the full allocation of CDBG-DR and CDBG-MIT funding available to the Territory has been publicized with ongoing efforts underway to address unmet need while allocating CDBG-DR and CDBG-MIT funds. To maximize the federal and private assistance available to the Territory, this new CDBG-DR EPSEI Action Plan has been developed to address identified need in addition to the projects already anticipated under the Action Plans that HUD has approved previously.

Risk Assessment Summary

Hurricane winds, earthquakes and flooding are the disasters which pose the greatest threat to the electrical infrastructure of the territory. The 2019 Hazard Mitigation Plan (THMP) cites data from the Atlantic Oceanographic and Meteorological Laboratory that calculates a 42% annual chance of a hurricane or tropical storm striking the US Virgin Islands. During Hurricanes Irma and Maria, high winds toppled overhead utility lines, while heavy rains and flooding damaged electrical substations and the generators at the power plant resulting in customers territory-wide losing power, some going without electricity for several months. Over 90% of all aerial power lines were damaged during the storms, and about 7500 poles were damaged on St. Croix. The 4-megawatt utility-scale solar installation on St. Croix at Estate Spanish Town Solar Project experienced damage although it was not a complete loss like the facility on St. Thomas. All the generators at Richmond experienced water intrusion to varying degrees, which caused countless electrical faults and prevented the units from being immediately returned to service without inspections ,cleaning and the replacement of several motors and MCCs. This wreaked havoc on both the population and businesses in the territory.

In the aftermath of the disasters, the recovery efforts focused heavily on the transmission and distribution component. First CAT B FEMA funding facilitated the replacement of the overhead utility lines to restore the power. After those efforts in the immediate aftermath of the storm, FEMA awarded CAT F mitigation funding to facilitate the installation of resilient composite polls and the undergrounding utility lines to improve the electric grid's resistance to windstorm damage. A sophisticated analysis was performed that considered the number of customers served, the terrain and the main backbone of each feeder to determine which areas would receive composite poles and which areas would be buried. These efforts will significantly improve the transmission and distribution network's resiliency to damaging wind events.

Unfortunately, no such analysis was performed for the Richmond Power Plant and the units were returned to service after completion of emergency repairs. However, no resiliency measures were taken to improve their resistance to future disasters. Additionally, although WAPA did request reimbursement from FEMA for the costs to repair the units, FEMA did not award any funding for the repairs nor for the implementation of hardening/resiliency measures on any of the existing generation assets.

The U.S. Virgin Islands faced severe damage from these hurricanes, leading to widespread destruction, economic instability, and long-term challenges in utility operations. Many businesses closed or struggled to recover, reducing electricity demand and shifting the region's energy landscape toward renewable integration. Additionally, aging infrastructure, load shedding vulnerabilities, and environmental risks continue to impact grid reliability. To address these concerns, the revised PR1 is designed to mitigate the following risks through strategic improvements in disaster resilience, infrastructure modernization, and adaptive energy policies.

1. *Economic & Business Recovery*

- Utility demand decline: Business closures and higher electricity rates have impacted energy consumption patterns.
- Renewable energy shift: Large-scale consumers are adopting independent power solutions, reducing reliance on traditional electricity.

2. Infrastructure & Grid Reliability Risks

- Aging power infrastructure: Storm damage has increased maintenance costs and grid instability.
- Load shedding vulnerabilities: Fluctuating demand may lead to further outages without proactive management.

3. Environmental & Climate Risks

- Vegetation threats: Tree-related outages and storm damage affect service reliability.
- Resilience improvements: Strengthening infrastructure to withstand future storms and prevent disruptions.

4. Operational & Utility Challenges

- High costs of maintenance and recovery: Frequent truck rolls add to expenses and safety concerns.
- Consumer dissatisfaction: Increased outages and reliability issues affect public confidence in utility services.

Low- and Moderate-Income Population in the Territory

Evaluating priorities for potential CDBG–DR EPSEI Action Plan projects requires meeting the criteria for area benefit activities benefitting low- and moderate-income persons in the Territory, as outlined at 24 CFR 570.483(b)(1). In serving the LMI population in the Territory's impacted areas, at least 70 percent of the entire CDBG-DR ESPSEI that are being funded must be used for activities that benefit low- and moderate-income persons. These key factors are guiding principles used in evaluating potential project priorities for electrical power system improvements for the Territory.

Stakeholder Input and Information Gathering

In developing the CDBG-DR EPSEI Action Plan, input from stakeholders through the scheduled public hearings and throughout the public comment process also is a critical component in developing and evaluating potential project priorities. Connecting with stakeholders has informed prioritization and has guided the principles used in making decisions undertaken in developing the Action Plan. Input from stakeholders in the energy sector, including affected local governments, public utilities including the Virgin Islands Water and Power Authority (WAPA), local university representatives (particularly from the University of the Virgin Islands), and other stakeholder associations and representatives, as well as residential customers and public interest groups representing residential customers also have provided more guiding principles that have been used in evaluating potential project priorities in the Action Plan.

~~These~~ Previous engagement efforts have also involved the required consultation with the Federal Technical Coordination Team (TCT) members while developing Action Plan priorities and guiding principles, which has been critical. Coordination has involved participation in quarterly TCT meetings and receiving Technical Assistance from the TCT to utilize appropriate information during the planning and coordination endeavors undertaken to prepare the Electrical Power System Enhancements and Improvements Action Plan.

Pursuant to Federal Register FR 6412-N-01, the quarterly TCT consultation requirement will no longer apply; however, at HUD's request, VIHFA shall engage with its TCT to provide updates on the implementation of CDBG-DR, CDBG-MIT, and other federal funding for electrical power system improvements until grant closeout. Additionally, the consultation requirements outlined in paragraph V.B.4 of the June 2021 Notice, which prohibit grantees from using other CDBG-DR and CDBG-MIT funds allocated for Hurricanes Irma and Maria for activities related to enhancing or improving electrical power systems until HUD consults and coordinates with its federal partners through the TCT, shall no longer apply. HUD will continue to engage its federal partners directly to provide ongoing technical assistance to each grantee and monitor the use of all CDBG-DR and CDBG-MIT funds for electrical power system improvements. HUD will also maintain engagement with federal partners through the TCTs, the Recovery Support Function Leadership Group (RSFLG) energy subgroup, and other relevant forums.

Estate Richmond Generation Project De-Selection Due to Ineligibility

In 2022, VIWAPA presented its proposal to use CDBG-DR Electrical Grid funds for project activities at the Estate Richmond Generation Project. In June 2024, VIWAPA announced its Public Assistance (PA) award from FEMA. VIWAPA intends to utilize this Fixed Cost Offer in the amount of $674,642,576.89 from FEMA to fund the complete rebuild of the Estate Richmond Generation Plant. As a PA Subrecipient --VIWAPA / St. Croix, 000-UR8I4-01, VIWAPA will participate under Subaward #1119, pursuant to Disaster #4340, in accordance with Section 428 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

Therefore, all proposed project activities at the Estate Richmond Generation Project no longer meet the criteria for an unmet need and, as a result, are ineligible for CDBG grant funds. CDBG funds may only be reimbursed for allowable costs in accordance with 2 CFR Part 200. Failure to comply with applicable

federal regulations, FEMA guidelines, and the PA Alternative Procedures Pilot Program (including requirements for procurement, contracting, environmental and historic preservation compliance, and audit and financial accountability) may result in the forfeiture of federal funding.

~~During the 2017 storms, the generators at the Richmond facility sustained material damage from wind-driven rain with mixtures of salt water that resulted in costly repairs and a prolonged recovery period. This is documented in the WAPA damage description and dimensions report submitted to FEMA/DHS which noted the following damage to the Richmond facility:~~

- ~~i. Unit 17 - Fuel Oil Gas Turbine Generator, 1 each of Alsthom/GE : 24.5 Mw Base @ 13,800 Volts, storm incipient moisture throughout the area containing switchgear, motor control centers (MCC), panelboard (load Centers) as well as instruments,~~
- ~~ii. Unit 19 - "Fuel Oil Gas Turbine Generator, 1 each of General Electric model 5001 Fuel Oil Gas Turbine Generator 24.5 Mw Base @ 13,800 Volts, the control house and equipment enclosure sustained significant damage, primarily doors blown open or damaged. Emergency cleaning and drying as required. Emergency inspection, cleaning and testing of all electrical motors on unit"~~
- ~~iii. Unit 20 - "Fuel Oil Gas Turbine (GT) Generator, 1 each of 24.5 MegaWatts (MW) Base @ 13,800 Volts Fuel Oil Gas Turbine (GT) Generator, Maria storm event the GAC door was forced open by wind and damaged but was repaired after the storm so that it closed properly. Because the door was opened during the storm the GAC equipment had to be inspected, cleaned and tested. All electrical motors on the unit and off base support skids had to be cleaned and tested. (Source: A. Christian, Department of Homeland Security Federal Emergency Management Agency. 29 Sep 2020. Project Report: 76893 P/W 1119, Project Title: XMUR808 St. Croix Richmond Power Generation Units.)~~

Resilient power generation capacity is an integral component of reliable energy infrastructure and without it, the road to recovery from future disasters will always be long and difficult to traverse. Considerable federal resources have been channeled towards making the transmission and distribution system resilient including the installation of composite poles and the undergrounding of distribution lines: ~~however, generation capacity in the Virgin Islands has been left largely unimproved aside from the CDBG-DR EPSEI funding awarded to the Harley powerplant. The Richmond plant has not seen any substantial investment to improve resiliency or reliability at the facilities despite the fact that the damage description clearly identified that the generation components sustained significant damage~~. Unfortunately, they are currently still susceptible to damage from future disasters. Additional project activities are needed to rebuild the Grid Resiliency in the Virgin Islands The federal funding has mostly been centered on increasing generation through more advanced generation and incorporation of renewal power systems. VIWAPA has implemented several projects to increase available electricity with micro-grid and solar grid installations and partnerships. This Substantial Amendment seeks to support the utilities' efforts to reduce the duration and frequency of power outages through the revised PR1 Program of Grid Resiliency.

As a result, WAPA provided the following list of projects which identified ~~the Richmond generation project as~~ the highest priority resiliency measures that can be taken to protect against the anticipated effects of future extreme weather events, other natural hazards, and long-term risks and accounts for the costs of incorporating improvements to address long-term carbon reduction goals.

Execution of this project will bolster WAPA's ongoing rebuilding efforts and reduce the likelihood of future damage to the powerplant, planned and unplanned interruptions in power generation.

Figure 3 WAPA's Territory Wide Unfunded Mitigation Projects as of May 2022 and Resubmitted in February 2025

Project #, Project Name	PW #	Projected Mitigation Cost	Proposed Funding Sources
1. Richmond Generation Expansion Project	**1119**	**$53,000,000**	**~~CDBG~~FEMA**
Project Overview: The proposed project consists of installing two (2) power generators of up to 10Mw each at the Estate Richmond Power Plant (ERPP), and 10 MW/20Mwh of Battery Energy Storage Systems (BESS) along with other equipment needed to facilitate use of the new generators. The new generators will have Tri fuel capability, which means that they are able to operate on either liquefied propane gas (LPG) Liquefied Natural Gas (LNG) as the primary fuel source(s) and ultra-low sulfur diesel (ULSD) as a backup. The Tri fuel capability allows for operation that is more flexible during emergencies and for the mitigation of high fuel costs through the opportunity for selection of fuel type. To mitigate the effects of future severe weather events, the proposed generators will reside in the new constructed generator gallery building designed to withstand hurricane force wind and seismic conditions per ASCE7-16 codes per at the ERPP. When the new generators become available for commercial operation, WAPA plans to retire the Aggreko leased generators. This project will provide far-reaching benefits to all ratepayers in the target area of the St. Croix District through installation of more affordable, efficient, and reliable power generation technology. The project reduces the cost of electricity production and allows for improved coordination between system load and the dispatch of generation resources to minimize unnecessary use of fuel.			
***Rate Factor**:* Replacement of leased generation reduces the sub-recipient's reliance on high-cost leases which will reduce costs to the utility and its customers. The project will result in the ability to dispatch low cost, efficient generation which will provide the Authority with the flexibility to fulfill customer demand in the cheapest way possible. This will result in improved generation efficiency which leads to burning less fuel, ultimately lowering rates (prices to the customer). The implementation of new generation resources will also improve grid stability and reliability and is required to support to integration of renewable energy resources.			
Reliability Factor: The combined effects of lower base electricity costs, improved operational efficiency, and reduced air pollution will help to ensure the security, health, and welfare of all US Virgin Islanders. Implementation of the project also benefits our planet through an overall reduced environmental impact.			
HUD National Objective: The national objectives met by this project are benefits to LMI persons and meeting a need having a particular urgency. Census records will document LMI. The cost of power within the US Virgin Islands as compared to the cost of power throughout the remainder of the US and its territories adequately demonstrate**s** urgent need. This project will reduce operational cost by $4.5 million dollars annuall**y** to the consumers by eliminating the leased power generators.			

Project #, Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
2. Power Transformer Replacements at Critical Substations - T3, C-T1, D-T1	**None**	**$10,000,000**	**Pending**

***Project Overview*:** Substations in the T&D System are comprised of transmission switchgear (34.5 or 69 kV), distribution switchgear (24.9 or 13.8 kV) associated protective relays and communications devices, and power transformers that step down the voltage from the transmission voltage to the distribution voltage. These power transformers also interconnect the generation assets at the originating substations in the Power Plants to the substations. Without the use of the power transformers, the transmission and distribution systems cannot function.

In the St. Thomas/St. John District, the Authority owns and operates five electrical substations (34.5/13.8 kV) and one switching station (34.5 kV). Each electrical substation contains a power transformer that converts the transmission voltage to the distribution voltage which is then commuted to the residential customers. The power transformers provide a critical connection point between the transmission and distribution systems. In the Tutu and East End Substations, the two 18/24.5/30 MVA, 34500GRDY/19950V, 13200 GRDY/7620 V power transformers were manufactured in 1992 and commissioned in 1995. They have performed through extreme weather conditions over the past 26 years of service including major hurricanes, power outages, and the coastal environment and corrosive nature of the Virgin Islands. Under normal loading conditions, a power transformer has a useful life of approximately 20-30 years. However, the environment plays a major factor in the lifespan and performance of the transformer and its associated equipment. These transformers provide critical services to customers in the mid-to-eastern portion of St. Thomas, including low-to-moderate income residential housing areas such as Donoe, Tutu, and Bovoni. Without these power transformers, the T&D system in the St. Thomas/St. John District will be crippled and the Authority will not be able to provide electrical services to customers. The East End Power transformer (D-T1) has been out of service since the storms of 2017. If the Authority cannot replace D-T1, it will be unable to make much needed repairs to the Donald C. Francois Substation which also received significant damage due to the storms of 2017 further impacting the Authority's ability to provide services to customers.

In St. Croix, the T3 power transformer is a 30 MVA dual winding transformer that interconnects the generation system bus (13.8 kV) to the distribution system (24.9kV) at the Richmond Power Plant. The STX T3 Substation power transformer is a 3-phase, 60 Hz, Ohio Transformer. This transformer was manufactured in 1988. The transformer main tank contains approximately 3700 gallons of mineral oil pressurized by a nitrogen blanket. The operating capacity of the transformer is 20.1/28.8/30 MVA at 55 Deg. C rise with 24900GRDY/14376 volt on the high side to 13200GRDY/7621 volts on the low side. This transformer has exceeded the useful life expectancy of 20-30 years and has been non-operational for quite some time. The impact to the power system with the unavailability of this transformer is severe.

The other existing transformer connecting the 13.8 kV and 24.9 kV systems is not able to sufficiently support to generation resources. The plant has had to limit the generation on this bus due to the loading limitations.

Rate Factor: The base rates currently support capital and infrastructure improvements. Capital improvements include the replacement of aged/damaged equipment. Currently, the Authority has several transformers that support the delivery of electrical services to customers throughout the territory that are in need of replacement. If these power transformer projects are funded via internal capital funds, the cost of replacement will be included in the rates which would result in higher costs to the rate payers. This project represents a capital investment of approximately $10M. If the transformers are replaced outside of capital funds, the cost would not be borne by the rate payers.

***Reliability Impact*:** The Authority's T&D system was severely impacted by the storms of 2017. Since then, D-T1 has not been returned to service. C-T1 power transformer is also nearing the end of its useful life, and as a critical part of the T&D system needs to be replaced. T3 power transformer in St. Croix has been inoperable for some time. Without this power transformer, the St. Croix system does not have the redundancy and reliability needed to service its customers. The replacement of Power Transformers T3, C-T1 and D-T1 will provide the following:

- Restore the capabilities of the T&D & Generation System
- Ensure reliability and redundancy
- Allow for much needed repairs to other parts of the power system that received storm damage.
- Increase system safety

HUD National Objective LMI: The Authority is not currently able to support the replacement of these power transformers through internal capital projects. The impact to the customer to support the replacement of these transformers is not something the Authority would like to pass on to the rate payers. However, the absence of these transformers will impact the Authority's ability to provide services to customers in the territory, especially in the LMI areas serviced by the electrical substations. The Authority cannot make critical repairs to other substations without being able to fund the replacement of these transformers.

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
3. Richmond Generation Expansion Project Phase 2	~~None~~ 1119	**$40,000,000**	~~CDBG~~FEMA

***Project Overview*:** The proposed project consists of installing two (2) power generators of up to 10MW each at the Estate Richmond Power Plant (ERPP), along with other equipment needed to facilitate use of the new generators. The new generators will have Tri fuel capability, which means that they are able to operate on either liquefied natural Gas (LGN) (LNG**)**) liquefied propane gas (LPG) as the primary fuel source(s) and ultra-low sulfur diesel (ULSD) as a backup. The Tri fuel capability allows for operation that is more flexible during emergencies and for the mitigation of high fuel costs through the opportunity for selection of fuel type.

To mitigate the effects of future severe weather events, the proposed generators will reside in a new constructed generator gallery building designed to with stand hurricane and seismic event as per ASCE7-16 codes at the ERPP. When the new generators become available for commercial operation, WAPA plans to retire unit 19. This project will provide far-reaching benefits to all ratepayers in the target area of the St. Croix District through installation of more affordable, efficient, and reliable power generation technology. The project reduces the cost of electricity production and allows for improved coordination between system load, grid stability and the dispatch of generation resources to minimize unnecessary use of fuel.

Rate Factor: Replacement of leased generation reduces the sub-recipient's reliance on high cost leases which will reduce costs to the utility and its customers. The project will result in the ability to dispatch low cost, efficient generation which will provide the Authority with the flexibility to fulfill customer demand in the cheapest way possible. This will result in improved generation efficiency which leads to burning less fuel, ultimately lowering rates (prices to the customer). The implementation of new generation resources will also improve grid stability and reliability and is required to support to integration of renewable energy resources.

***Reliability Impact:* T**he combined effects of lower base electricity costs, improved operational efficiency, and reduced air pollution will help to ensure the security, health, and welfare of all US Virgin Islanders. Implementation of the project also benefits our planet through an overall reduced environmental impact.

HUD National Objective: The national objectives met by this project are benefits to LMI persons and meeting a need having a particular urgency. Census records will document LMI. The cost of power within the US Virgin Islands as compared to the cost of power throughout the remainder of the US and its territories adequately demonstrate urgent need.

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
4. STX Greenfield Projects - Southgate, Frederiksted	**None**	**$220,255,407**	**~~CDBG~~ Pending**

Project Overview: WAPA proposes to pursue the possibility of adding a total of 21MW of new emergency generation to include within the micro-grid. These following locations are being explored at this time: Gregory Willocks Substation - Spanish Town, Port Authority (Airport) and St Croix Alumina "Alcoa Inc." Hybrid micro-grids can help WAPA increase the reliability and resilience of the USVI's energy system. By distributing generation capacity throughout the Territory and enabling individual communities to island themselves, WAPA can maintain power to large portions of a grid even after major hurricanes.

Smaller scale micro-grids can be particularly useful for providing continued power for critical facilities like hospitals, airport, cell phone towers, Police and Fire Departments, National Guard and Bureau of Corrections in the event of a system-wide outage. Micro-grids can also enable faster recovery from extreme events as portions of the grid can be brought online over time without requiring the full grid to be restored first. Micro-grids can be powered by a variety of energy sources. Hybrid micro-grids include a renewable generation source, battery storage, and fossil fuel generation. The combination of these three power sources takes advantage of the unique characteristics and timing of each source. Renewables provide power during peak and battery storage provides renewable energy during off peak times and help stabilize the grid; fossil fuels provide power when renewables are not available, and batteries are depleted. The Virgin Islands Water & Power Authority has been heavily reliant on fossil fuel dependent electrical generation for several years.

Rate Factor: This project could include a combination of traditional, renewable and battery energy storage resources. Fluctuating global oil prices have directly impacted the cost of producing electricity which is passed on to our consumers. Expanding to renewable energy will reduce carbon emissions and lower consumer billing, while making us less susceptible to global market fluctuations.

Reliability Impact: This micro-grid project will manage risk and reduce restoration time for future similar storm events. This will enable faster recovery of the community through the use of micro-grid systems and renewable energy coupled with battery storage. This will also reduce rates and protects consumers against commodity price volatility

HUD National Objective: **LMI**

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
5. St. Croix Renewable Energy Project - HERA	**None**	**$7,000,000**	**Pending ~~CDBG~~**

***Project Overview*:** This project could include a combination of renewable and battery energy storage resources. Fluctuating global oil prices have directly impacted the cost of producing electricity which is passed on to our consumers. Expanding to renewable energy will reduce carbon emissions and lower consumer billing, while making us less susceptible to the global market fluctuations.

Rate Factor: This project could include a combination of renewable and battery energy storage resources. Fluctuating global oil prices have directly impacted the cost of producing electricity which is passed on to our consumers. Expanding to renewable energy will reduce carbon emissions and lower consumer billing, while making us less susceptible to the global market fluctuations.

Reliability Impact: Unstated
HUD National Requirement*:* LMI

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
6. St. Croix Longford Wind Project	**PW#**	**$85,000,000**	**Pending ~~CDBG-MIT~~**

Project Overview: **Installation of wind project.**
Rate Factor: This project could include a combination of renewable and battery energy storage resources. Fluctuating global oil prices have directly impacted the cost of producing electricity which is passed on to our consumers. Expanding to renewable energy will reduce carbon emissions and lower consumer billing, while making us less susceptible to the global market fluctuations.
Reliability Impact: Unstated
HUD National Objective: **LMI**

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
7. RHPP - Unit 11 Load Center Project	**PENDING**	**$952,146**	**FEMA**

Project Overview: Remove the Motor Control Centers from the turbine building basement and replaced with new MCC's that will be installed on the upper level of the steam turbine building. The project will involve not only the removal of the MCC's, but also removing all control and power cables connected to the MCC's and installation of new cables from the new location of the MCC's to the motors required for operations of the power plant.
Rate Factor: Unstated
Reliability Impact: This project aims to harden the infrastructure of the plant and improve the resiliency of the plant electrical system during exposure to extreme weather conditions. Replacement station service switchgear will be designed and installed to meet regulatory standards. It will also mitigate the vulnerabilities in the plant auxiliary equipment control which would allow immediate production and distribution of water and power to the consumers contingent upon the distribution systems being able to receive the product**.**
HUD National Requirement: **LMI**

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
8. Richmond- IDE #3 15 kV Switchgear Relocation	**1119**	**$641,707**	**FEMA**

Project Overview: Relocate the existing out door 15KV switch gear into an existing building and replacing the outdoor switch gear with a 15KV Gas Insulated Switch gear consisting of one main input breaker and six distribution breakers. Relocate the existing outdoor 15KV switch gear into an existing building and replacing the outdoor switch gear with a 15KV Gas Insulated Switch gear consisting of one main input breaker and six distribution breakers. By enclosing the 15Kv switchgear, the plant station service reliability would be improved.

Positioning the switchgears in an enclosed structure will reduced its susceptibility to water intrusion. Once the switchgear is protected from the weather, plant recovery after a storm event would take less time because cleaning of the switch gear would not be necessary. Critical services like water production, fuel transfer, firewater protection to the pier, and telephone services would be immediately restored once the storm event has passed. Installing a Gas Insulated Switch gear will reduce the possibility of a fault by 50 percent and reduce the footprint of an equivalent non-Gas Insulated Switch gear by 75 percent.

Rate Factor: This project aims to harden the infrastructure of the plant and improve the resiliency of the plant electrical system during exposure to extreme weather conditions. Replacement station service switchgear will be designed and installed to meet regulatory standards. It will also mitigate the vulnerabilities in the plant auxiliary equipment control which would allow immediate production and distribution of water and power to the consumers contingent upon the distribution systems being able to receive the product.

Reliability Impact: Unstated

HUD National Requirement: **LMI**

Project #, Project Name	PW #	Projected Mitigation Cost	Proposed Funding Sources
9. Grid Capacitors, 68 units (Territory-Wide)	**None**	**$612,000.00**	**CDBG-EGRID**

Project Overview:

The proposed project consists of installing 68 capacitors on the existing transmission infrastructure. The increase in real power (kW) from distributed renewable generation (Solar PV plants) results in less real power (kW) being provided by the synchronous generators at the Randolph Harley and Richmond Power Plants. However, the reactive power demand remains the same. This reactive power kVAr is produced at the power plant at the high cost of fuel. This project proposes the use of capacitors distributed throughout the grid to produce reactive power, near the reactive loads, thereby reducing the need to burn fuel for reactive power support.

To mitigate the effects of future severe weather events, the proposed installations will be constructed to withstand hurricane wind and seismic conditions per ASCE7-16 codes per at the ERPP.

This project will provide far-reaching benefits to all ratepayers in the territory. The project reduces the cost of electricity production and allows for improved coordination between system load and the dispatch of generation resources to minimize unnecessary use of fuel.

Rate Factor:

This project reduces rates by reducing fuel costs. Generators provide real (kW) and reactive (kVAr) power to serve the load. Most of the kVAr will be produced by the capacitors, reducing the the LEAC.

Reliability Factor: The combined effects of lower base electricity costs, improved operational efficiency, and reduced air pollution will help to ensure the security, health, and welfare of all US Virgin Islanders. Implementation of the project also benefits our planet through an overall reduced environmental impact.

HUD National Objective: The national objectives met by this project are benefits to LMI persons and meeting a need having a particular urgency. Census records will document LMI.

Project #, Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
10. Grid Forming Substations BESS St. Croix	**None**	**$10,000,000**	**CDBG-EGRID**

Project Overview:
The project mitigates the adverse effects to ratepayers when the substations in the event of power outages or other critical events. WAPA operates two distribution substations on St. Croix. This project envisions the use of BESS and each substation to provide spinning reserve for the system as well as battery backup for as many customers on the substation as its capacity allows. Thus, the substation BESS can serve as a second and tangent redundancy to the generation plant.

To mitigate the effects of future severe weather events, the BESS units will reside in a new constructed building designed to withstand hurricane and seismic event as per ASCE7-16 codes at the ERPP.

Rate Factor:
This project will reduce rates by storing renewable energy for discharge at times when a fuel burning generator would be dispatched. This would result in a direct rate reduction. The BESS will provide spinning reserve support for the grid, sustaining power to consumers in the event of a generator outage. The cost of providing that level of reliability to LMI consumers exceeds $1M annually in fuel and maintenance costs.

***Reliability Impact*:**
These grid forming batteries will provide immediate backup power to some or all customers connected to substations in residential communities in the event of a failure of the transmission system. This BESS will provide backup power to consumers, allowing WAPA some time to respond to substation outage and repair or redivert the customers to another substation feed**.**

***HUD National Objective:* LMI:** The Authority is not currently able to support the critical loads during prolonged outages. Installment will reduce the effects that lack of power have on rate payers by mitigating the frequency and duration of outages.

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
11. Grid Forming Substations BESS St. Thomas	**None**	**$14,000,000**	**CDBG-EGRID**

***Project Overview*:**
The project mitigates the adverse effects to ratepayers when the substations in the event of power outages or other critical events. WAPA operates four distribution substations on St. Thomas. This project envisions the use of BESS and each substation to provide spinning reserve for the system as well as battery backup for as many customers on the substation as its capacity allows. Thus the substation BESS can serve as a second and tangent redundancy to the generation plant.

To mitigate the effects of future severe weather events, the BESS units will reside in a new constructed building designed to withstand hurricane and seismic event as per ASCE7-16 codes.

Rate Factor:
This project will reduce rates by storing renewable energy for discharge at times when a fuel burning generator would be dispatched. This would result in a direct rate reduction. The BESS will provide spinning reserve support for the grid, sustaining power to consumers in the event of a generator outage. The cost of providing that level of reliability to LMI consumers exceeds $1M annually in fuel and maintenance costs.

***Reliability Impact*:**
These grid forming batteries will provide immediate backup power to some or all customers connected to substations in residential communities in the event of a failure of the transmission system. This BESS will provide backup power to consumers, allowing WAPA some time to respond to substation outage and repair or redivert the customers to another substation feed.

HUD National Objective: LMI:
The Authority is not currently able to support the critical loads during prolonged outages. Installment will reduce the effects that lack of power have on rate payers by mitigating the frequency and duration of outages.

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
12. Pole mounted Distribution Transformer Replacements	**--**	**$3,000,000**	**CDBG-EGRID**

Project Overview:
Pole mounted transformers on the grid, not replaced during the restoration**,** has been failing out of old age and deteriorated tanks. Transformers with deteriorated tanks could result in environmental hazards if they are not replaced in a proactive manner. Additionally, a large number of transformers which are not suitably rated for WAPA's system were installed out of convenience to facilitate restoration of service to customers, e.g. WAPA's grid voltage is 13.8kV, however 13.2kV transformers were utilized during the restoration for the abovementioned reason. Use of transformers outside of their normal range results in accelerated degradation and pre-mature failure. These installations were intended to be temporary, if they are not replaced in a timely manner customers will experience outages. This project targets the replacement of deteriorating and incompatible transformers with stainless steel pole mount unit to increase tank longevity and reliability. On completion, the grid will be better prepared to support the distributed energy resources and grid supporting devices, such as BESS and synchronous condensers, scheduled in other projects**.**

Rate Factor: Pole mount transformers are used primary for residential customers. Replacement of defective transformers funded by WAPA have immediate impact on utility rates. Grant funding eliminates this impact on rates**.**

Reliability Impact: Most pole mount transformer failures affect multiple customers. Replacements can take up to three hours if a transformer is available. However, it can take weeks if one is not available. At this point, WAPA Replacing transformers in a timely manner eliminates this risk

HUD National Requirement: **LMI**

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
13. Line Reconductoring with Tree Wire	**--**	**$9,000,000**	**CDBG-EGRID**

Project Overview:
This project focuses on upgrading sections of the backbone of the distribution network which traverses heavily vegetated areas within the territory. This would allow uninterrupted power during stormy conditions where brush contact would traditionally cause a power outage. The scope includes conductor and fitting replacements and structural review of the affected areas. Recovered material from the upgrades can be redeployed in future line extensions projects eliminating reconducting rate impacted power line extensions.

Rate Factor:
Reconductoring forested areas with Tree Wire protects the environment while yeilding significant benefits to customers supplied by that line. However, it's a cost which would be borne by rate payers if WAPA funds this project. Grant funding would prevent an increase in rates for the LMI customers directly, but indirectly it would reduce rates through increased reliability.

Reliability Impact:
Tree Wire reduces outages by reducing fault current values during brush contact. Bare wire immediately isolates the contacted lines in the event of brush contact. Therefore, Tree Wire reconducting increases the reliability of power to customers.

HUD National Requirement: **LMI**

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
14. SCADA Communication Network Integration for 80 Remote	**--**	**$2,500,000**	**CDBGD-EGRID**

Project Overview:
This project involves sourcing and installation of communication lines and hardware to pole top and pad mounted switches on the distribution network. It will facilitate remote control of field devices, a reduction in the duration of outages and an increase in the reliability of the distribution network throughout the Territory. Communication infrastructure was not restored to most field devices following the storms of 2017. This project aims at sourcing and installing infrastructure which rebuilds the communication links between these devices and the existing SCADA network.

Rate Factor:
WAPA's funding for this project would directly increase rates to LMI customer group. Grant funding would eliminate this negative rate impact.

Reliability Impact:
Remote control access to field devices eliminates truck rolls and increases effective utilization of crews. The remote operation results in reduced outage duration, improved monitoring and operation of the distribution network, and prepares the grid for deployment of smart grid and microgrid technologies.

HUD National Requirement: **LMI**

Project Name	*PW #*	*Projected Mitigation Cost*	*Proposed Funding Sources*
15. Source, Install and Configure 60 Remote Reclosing Devices throughout the territory	**--**	**$3,575,000**	**CDBG-EGRID**

Project Overview: This project aims at deploying reclosers and sectionalizers throughout the territory in an effort to improve the reliability of the distribution system, up to 65 units are targeted in this project. It will involve the design and installation of these remote switches to comply with industry**'s** best practices**.**
Rate Factor: Remote reclosing devices are used to increase the reliability of distribution networks. Funding through WAPA increases base rates directly, while grant funding does not. Indirectly, once installed increased reliability increases sales and in turn reduce**s** the base rates.
Reliability Impact: Reclosing devices reduces the number of customers affected by an outage, thereby increasing reliability on feeders where they are installed. They are also configurable to reclose after outages for temporary faults and isolate permanent faulted sections. The remote capability of these devices allows system operators to reconfigure the distribution network to transfer loads to unaffected feeders. This is accomplished without a truck roll, resulting in improved crew response to localized outages. All of these actions increases the reliability for the LMI customers.
HUD National Requirement: **LMI**

In the end, the Estate Richmond Generation project was previously selected for CDBG-DR EPSEI funds after considerable consultation between VIHFA and WAPA, upon factoring in the guiding principles and carefully evaluating potential projects. Upon analyzing candidate projects from WAPA and evaluating all options at length with a lens focused on LMI impact and stakeholder input, applying the overall criteria indicated below to make a final decision. These priorities below are also consistent with the goals and program considerations outlined in the June 22, 2021, Federal Register Notice allocating the funding.

The planned Richmond project will follow a formal application process similar to other CDBG-DR-funded infrastructure investments, whereby the subrecipient enters into a formal agreement with the VIHFA and additional project details, budgets, and roles and responsibilities are finalized.

The $647 million PA award resolved the unmet need of the central generation of St. Croix. Thus, untying the PR1 Program from addressing an unmet need. VIHFA has been in consistent dialog with local and federal community partners including several outreach sessions to present the best portfolio of projects for the territory's need. After considerable consultation between VIHFA and WAPA, upon factoring in the guiding principles and carefully evaluating potential projects, as well as mitigating the risk to grant funding, this Amendment proposes the renaming of the PR1 from Estate Richmond Generation Project to PR1-Grid Resiliency Program that will focus on proposed project activities that support, enhance and improve the electrical grid integrity across the territory. Upon analyzing candidate projects from WAPA and evaluating all options at length with a lens focused on LMI impact and stakeholder input, applying the overall criteria indicated below to make a final decision. These priorities below are also consistent with the goals and program considerations outlined in the June 22, 2021, Federal Register Notice allocating the funding.

To the extent that a different candidate project may need to be identified in the future for some reason, VIHFA and WAPA would follow the same prioritization procedure for an updated project selection, as reflected below:

1. Overall availability of funding: with $67.653 million of total CDBG-DR EPSEI funds, certain projects that meet other criteria but have budgets larger than available funds, across CDBG-DR electrical grid funds and other sources, are removed from consideration to ensure investments lead to complete projects that fulfill a national objective.
2. Low- and moderate-income (LMI) benefits: projects that provide benefits to LMI households and communities, whether through rate savings or through reliability improvements in a given Low-/mod- geographic area.
3. Criticality: assessing the extent to which customers who are anticipated to benefit from the project were impacted by Hurricane Maria or Irma and the extent to which customers are likely to lose power in the future or where vulnerabilities to future disasters remain significant.
4. Resilience and sustainability: the extent to which the project incorporates mitigation into the scope, including hardening, the elevation of equipment, and other protective measures, as well as the degree to which sustainable materials are incorporated into project scope, and the extent to which the project furthers decarbonization goals and promotes the use of sustainable energy sources.
5. Project execution and timing: Considerations of shovel-readiness, complexity of environmental review, and the extent to which site selection, permitting, planning and design work have been completed, with an overall focus on the schedule for completion for the project, and the timing for the disbursement of CDBG-DR funds.
6. Technical feasibility: the degree of specialized equipment, the use of innovative technologies, and other considerations that inform the way the project may be implemented.
7. Cost reasonableness: an assessment of the project's economics, including calculation of benefits, that expenditures are justified, and considerations of maintaining operating the project once completed.

For comparison, see also the prioritization criteria for the EPSEI program funded with VIHFA's primary $1.075 billion CDBG-DR allocation, as described on pages 25-26 of the 3rd substantial amendment to the CDBG-DR Action Plan, which can be accessed at https://cdbgdr.vihfa.gov/contracts/action-plan/.

1.6 Action Plan Amendments

The VIHFA will update the Action Plan as needed through a substantial or a non-substantial amendment process, depending on the extent of updates and modifications and any changes to eligibility or national objective, with plans to provide additional relevant details related to the project once they are determined, in accordance with established HUD regulatory guidelines and expectations. Edits to grammar, formatting, the order of the document, clarification of technical considerations, and responses to the public comments may also be incorporated as needed.

Amendment No. 1 – Non-Substantial Amendment Summary Table

Pursuant to maintaining a dynamic Action Plan, the VIHFA has determined that a non-substantial amendment to its CDBG-DR EPSEI Action Plan is necessary. The first is to account for seven percent of the program's allocation for activity delivery costs without changing the program's earmarks. The second is to provide VIHFA's rationale for using a direct selection method for the Community Innovations Program

PR2), and its intention to engage the Virgin Islands Energy Office as ~~the designated~~ a direct subrecipient for PR2. Finally, the Unmet Needs Assessment was updated to show the Covered Project funding allocation in the recently approved CDBG-MIT Action Plan's. Other minimal or grammatical errors were corrected.

Figure 4 Amendment No. 1 Summary Table

Section	Revision	Type
1.1 & 3.1	Proposed Funding Allocation revised to specify that each Program's Budget Allocations includes Activity Delivery Cost of 7%.	Non-substantial
2,1	Inclusion of Amendment No 1 Summary Table	Non substantial
2.3	Expansion on the power interruptions affect the LMI populations.	Non-substantial
2.11	Unmet needs assessment inclusion of the CDBG-MIT action plan's Covered Project	Non-substantial
3.10	Language added to expand on types of organizations closest to and best positioned to address LMI needs. As well as VIHFA's identification of a qualified subrecipient for PR2	Non substantial
5.18	Correction that any funding change greater than 10% would require a substantial amendment.	Non substantial

Amendment No. 2 –Substantial Amendment Summary Table

To adapt to evolving needs and priorities, the Virgin Islands Housing Finance Authority (VIHFA) has identified the need for a substantial amendment to its CDBG-DR EPSEI Action Plan. This adjustment ensures continued alignment with disaster recovery objectives, improved resource allocation, and responsiveness to emerging challenges. This substantial amendment will (1) rename the PR1 Program from Estate Richmond Generation Project Program to Grid Resiliency Program. The first is to account for seven percent of the program's allocation for activity delivery costs without changing the program's earmarks. The second is to provide VIHFA's rationale for using a direct selection method for the Community Innovations Program (PR2), and its intention to engage the Virgin Islands Energy Office as ~~the designated~~ a direct subrecipient for PR2. Finally, the Unmet Needs Assessment was updated to show the Covered Project funding allocation in the recently approved CDBG-MIT Action Plan's. Other minimal or grammatical errors were corrected.

Figure 5 Amendment No. 2 Summary Table

Section	Revision	Type
1.1 & 3.1	Proposed Funding Allocation revised to specify that each Program's Budget Allocations includes Activity Delivery Cost of 8% and 7%.	Substantial
1.5, 2.1, 4.1 4.4	Deselection of the Estate Richmond Generation Project. With supporting rationale. Revised the VIWAPA prioritized project list to bring it current to unmet needs in 2025. Revision to the TCT consultations to state that they are no longer required.	Substantial
1.6, 3.10	Revised references to the Virgin Islands Energy Office to state that the agency is a direct selection subrecipient of the Community Innovation Application Program and not the sole designated subrecipient of the program.	Substantial

2,0	Revised to include updates to bring current to February, 2025.	Substantial
3.1, 3.2	Revise the bueInclusion of Amendment No 2. Summary Table	Non substantial
2.5	Update of the Unmet needs assessment narrative and tables to bring these current to February, 2025	Substantial
2.11	Revision of the unmet needs assessment to reflect the current project list of WAPA portfolio of projects administered and proposed.	Substantial
3.10	Expansion of types of organizations closest to and best positioned to address LMI needs. As well as VIHFA's identification of a qualified subrecipient for PR2	Non substantial
3.4, 3.5,3.7, 3.8	Revision of the Background to bring current and remove references to Estate Richmond Generation Program .	Substantial
4.5	Revision of "Sample Calculation of Rates table to include the first 250KwH.	Non substantial
5.18	Revision of the proposed budget of the program allocations funding change greater than 10% would require a substantial amendment.	Substantial
5.25	Revision of proposed schedule for application status and notification to 45 days.	Non substantial
A.13	Revision of the projected expenditures and assumptions to reflect the change in allocations.	Substantial

2.0 UNMET NEEDS ASSESSMENT

2.1 Introduction

An unmet needs assessment is required by the U.S. Department of Housing and Urban Development for the USVI to assess the impact of Hurricanes Irma and Maria as it relates to the electrical power distribution system, and to identify areas of need where the CDBG-DR electrical power grid improvement funds may be utilized where other sources of funding have not been identified for assistance.

These unmet needs assessment looks at a variety of recovery needs specifically as it relates to the infrastructure and electrical grid that were not address by the previous disaster related funding and not addressed in the original CDBG-DR Action Plan and subsequent amendments. The CDBG-DR Action Plan, utilizing data from May 2020, calculated a total Energy need of $2.282 billion, which consisted of $594 million tied to emergency and temporary repairs and $1.688 billion for permanent repairs and resilience. The latest amendment (Amendment 3) identifies approximately $1.19 billion of unmet energy infrastructure needs.

The electrical power systems unmet needs assessment for this Action Plan and the $67.653 million in CDBG-DR EPSEI funding takes as its foundation the general unmet needs assessment for the territory's overall CDBG-DR funding, incorporating the most recent information available and looking at a more specific range of recovery and resilience needs tied to electrical power system than the overall assessment of recovery needs.

2.2 Methodology and Summary of Unmet Needs

The unmet needs assessment for the electrical power system focuses on the energy sector in terms of impacted and at-risk energy infrastructure. The initial components of the unmet needs assessment establish a total need damage on the grid as sustained from 2017 hurricanes; evaluation of components at the greatest risk from future disasters; benefit low- and moderate-income persons; and costs of incorporating resilience measures to mitigate impacts from future extreme weather events and the effects of global climate change.

Building on this base need, the next step in the unmet needs assessment process is to look at funding from other sources including federal partners, particularly FEMA, and non-electrical grid CDBG-DR funds and other governmental funding. This is to ensure that CDBG–DR funds are planned for uses that meet electrical power system needs that are not likely to be addressed by other sources of funding assistance that are currently available or likely to be available based on the most up-to-date information available. The preparation of the unmet needs assessment involved gathering data and key information; updating existing information, including information gathered as part of the CDBG-DR and CDBG-MIT Action Plans process; consulting with and fostering relationships with WAPA, DOE (Department of Energy), members of the TCT, other stakeholder organizations – *for more details, see Consultation section;* utilizing plans, studies, reports, resource materials – *for more details, see Appendix A.12 Summary of Key Reports.*

2.3 Electricity Production on the U.S. Virgin Islands

The U.S. Virgin Islands Water and Power Authority (WAPA) has the responsibility of producing and distributing electricity and drinking water to approximately 55,000 residential and commercial customers throughout the U.S. Virgin Islands. WAPA was created in 1964 though Act No. 1248, and Fossil Fuel Electric Power Generation. *(*Sources: About Us (viwapa.vi) and the CDBG-DR Action Plan) VIHFA as the grantee is administrating the grant funding on behalf of HUD and WAPA is the subrecipient for the funds for the electrical power system enhancement and improvement projects.

WAPA maintains two electric grids. On St. Croix, WAPA primarily produces electricity at the Estate Richmond electric power generating facility, and with additional solar facilities, there is an operational generating capacity of 80 megawatts on the island. The Randolph Harley Power Plant on St. Thomas is the primary productive facility on that island, and which, in connection with St. John and Water Islands via underwater cables, is the other grid system in the Territory, with a system capacity of 110 megawatts. The Estate Richmond Terminal capacity is 10,400 cubic meters of liquified petroleum gas ("LPG"), and the Randolph Harley Terminal capacity is 14,000 cubic meters. (Source: www.vitema.vi.gov/docs/default-source/key-documents/virgin-islands-territorial-emergency-operations-plan-(teop-2022-version).pdf?sfvrsn=ad4b59a3_2) The two systems are separated by over 40 miles of ocean. Maintaining two systems for providing electricity across the whole Territory requires redundancies in both networks.

VIWAPA advised that the installation of four 9 MW (36 MW), efficient engines at the Randolph Harley Power Plant was completed in November 2024. Under the prudent replacement program, TMUR801-WAPA Harley E Randolph Power Plant Emergency repairs, $210,226,082 was awarded for the replacement of two gas turbines and other auxiliary electrical components. The award, XMUR808-STX Richmond Power Generation Units, will see the replacement of four gas turbines and two steam turbines along with improvement of other auxiliary systems. Microgrid projects will also enhance grid stability and reliability. The East microgrid project on St. Thomas will include wind and solar provided by IPPs through PPAs, supported by a new substation and transmission lines. The St. Croix West microgrid will comprise of an IPPs solar farm. The system continues to be hardened by the composite pole and feeder undergrounding projects.

WAPA maintains the same servicing structure in both districts including a single rate structure. Customers are classified and charged at either a residential rate or commercial rate. Due to this single rate structure, improving the operations of either power system will benefit residents of both districts regardless of geography. Electricity rates are approved by the Public Services Commission (PSC) of the Virgin Islands. The most significant component of the rate structure is the Levelized Energy Adjustment Clause, ("LEAC") which is used to cover the cost of fuel sources for power generation (for more information, see Rates Section of Action Plan).

According to the U.S. Energy Information Administration (EIA), nearly all the USVI's energy needs are currently met through imported petroleum products, as is the case with many islands. In 2020, about two-thirds of the electricity for the islands' two power systems was generated from propane, about one-third from fuel oil, and about 2% from solar power. (Source: US Virgin Islands Profile (eia.gov)).WAPA indicated that in 2025, this aggregate continues to be about the same with a slight increase of solar to 8% on St. Thomas and 30% on St. Croix. The prices of petroleum products are subject to market volatility. This was particularly evident in the Spring of 2022 following the breakout of war in Ukraine and due to

other market considerations. Petroleum prices have been at record highs, putting financial pressure on WAPA and consumers.

As of March 14, 2025, Brent crude oil prices have shown significant volatility since 2022, peaking at $123.70 per barrel in June 2022 due to the Russia-Ukraine conflict disrupting supply chains, before declining to $81.13 per barrel on average in 2024, according to preliminary data from November 2024 (Statista, 2025). This reflects a decrease of approximately 19% from the 2022 annual average of $100.08 per barrel, yet prices remain subject to fluctuations driven by geopolitical tensions, OPEC+ production decisions, and global demand shifts.(Source: Statista. (2025).”Average annual Brent crude oil price from 1976 to 2024 (in U.S. dollars per barrel)”. Retrieved from https://www.statista.com/statistics/262860/uk-brent-crude-oil-price-changes-since-1976/.)

Petroleum prices are also being affected by increased consumption and demand by China and the Israel-Gaza unrest. China's demand for oil has been a significant driver of global oil demand growth. Although there has been a recent slowdown in China's oil demand growth, the country still plays a crucial role in the global oil market. Between 2000 and 2023, China accounted for 50% of the growth in world oil demand. However, in 2024, China's oil demand growth slowed due to various factors, including the rise of new energy vehicles and a property sector slump. (Source: https://www.energypolicy.columbia.edu/chinas-slowing-oil-demand-growth-is-likely-to-persist-and-could-impact-markets/).

The recent Israel-Gaza conflict has also impacted the global oil market. The conflict, which began in early October 2023, has led to increased volatility in oil prices. Traders have priced in a risk premium of $3 to$4 per barrel of crude oil due to the unrest[2]. While the conflict has not had a direct impact on oil flows, the geopolitical tensions have contributed to market uncertainty. (Source: https://windearconsulting.com/israel_gaza_war_and_impact_on_world_oil_market/).

Other factors for consideration in assessing energy systems in the USVI include reliability, performance, and economic pressures. WAPA’s generation capacity is comprised of older infrastructure much of which is past its original useful life and as result has led to vulnerabilities and interruptions of service. These interruptions can have far-reaching effects especially on the Low- to Moderate-population. They are particularly vulnerable because they generally do not own any form of emergency generation. This often leads to cascading ramifications such as loss of wages due to the inability to perform work during an outage, children/dependents losing valuable educational experiences and elderly homes unable to regulate household room temperature or refrigerator temperature for food and medicine. WAPA’s financial constraints have also led their generation to suffer from a lack of appropriate maintenance which has resulted in a lack of reliability.

This issue persists into 2025, as evidenced by ongoing power outages attributed to aging infrastructure and deferred maintenance, with WAPA board members noting in May 2024 that the utility’s budget is stretched thin—70% allocated to fuel and only 4-5% to generator leases—leaving insufficient funds for critical upkeep, exacerbating reliability challenges across the territory (Virgin Islands Daily News, 2024). (Source: Virgin Islands Daily News. (2024, May 24). *WAPA failure on St. John leads to call for protest today. Retrieved from www.virginislandsdailynews.com/news/wapa-failure-on-st-john-leads-to-call-for-protest-today/article_8f8e8f8e-19e7-11ef-9f7e-6b8e8f8e8f8e.html)

WAPA’s current generation portfolio on the island of St. Croix consists of three operational gas turbines that are owned outright and 18 Aggreko units that are leased at a very high monthly cost. As stated above,

these leased units will be replaced under the PA award of $647M and developments to increase the portfolio of St. Croix's generation and distribution. Currently, it is important to note that the forced outage rate (FOR), which is the percentage of scheduled operating time that a unit is out of service due to unexpected failures, is very high on the WAPA-owned units, particularly when compared to that of the newer Aggreko units. This significantly impacts WAPA's ability to provide reliable power consistently. While WAPA has backup generators, they were not designed to run for extended periods to offset outages. It is also important to note that the Aggreko units have a net plant heat rate below 10.0 MMBTU/MWH while the WAPA-owned units are in the 15.0-16 MMBTU/MWH range. Heat rate is the measure of how efficient units are at converting fuel into energy. The lower the heat rate, the more efficient the plant. WAPA's current assets are very inefficient as compared to the Aggrekos and newer units currently available on the market.

An additional consideration is that an unreliable electric grid, as well as an overall reduction in costs for the installation of solar generating capacity and battery storage prices, have led customers to install their own power systems ~~however~~,. However, WAPA is still tasked with maintaining the grid all while not being able to collect a standby tariff from these customers. This places an additional burden on the utility's limited resources. St. Croix has a net metering capacity of 6 MW.

2.4 Impact of Hurricanes Irma and Maria on the Electrical Power System

Following Maria and Irma, approximately 105,000 USVI residents were without power for at least four days, with loss of power to 95% of electric customers, more than 52,000 electric utility account holders.

Following the storms, a multi-agency coordination with WAPA, FEMA, and various contractors worked to restore electrical services. Three months after Hurricane Maria, approximately 44% of eligible customers had power restored, 90% by four months, and all eligible customers after approximately 5 months. An eligible customer was defined as a customer whose home could safely receive power, and that total population represented about 93% of WAPA's pre-storm customer base. (Source: WAPA / CDBG-DR Action Plan) As a basis of comparison, it took more than eight months for power to be restored in the USVI following Hurricane Hugo in 1989. (Source: USVI's-Energy-Transformation-Recovering-and-building-a-more-resilient-system-after-Hurricanes-Irma-and-Maria.pdf (bbhub.io), see especially chart on p. 4). Despite The peak demand for power has not returned to pre-storm levels, where the maximum energy load was approximately 107 megawatts before Irma and Maria.

The territory suffered severe damage from Hurricanes Irma and Maria in 2017, resulting in widespread destruction and a sharp economic downturn. The aftermath disrupted businesses, especially in the hospitality sector, as high reconstruction costs and uncertain operational viability hindered recovery. This led to a notable decline in the utility's customer base and overall demand, particularly as many large commercial customers, such as hotels and shopping centers, struggled to rebuild or shut down permanently.

As the territory continues to recover, rebuilding efforts face significant hurdles, including reduced consumer spending, higher electricity rates, and the permanent closure of some key businesses. The economic strain has further impacted on employment and consumer activity. However, many businesses are now integrating renewable energy systems into their recovery plans, which has altered the region's

energy consumption patterns. Large-scale consumers are increasingly adopting these solutions to reduce operating costs, shifting away from traditional energy sources.

This transition, coupled with the loss of major commercial customers, has contributed to a lasting reduction in utility demand. The challenge to restore pre-storm demand levels remains, especially as the integration of renewable energy into the grid continues to rise, further reducing the need for traditional power generation. Looking ahead, the inclusion of independent power producers (IPPs) is expected to further lower demand for plant-generated electricity, accelerating the transformation of the energy landscape in the USVI.

2.5 Risk Assessments of Future Disasters

Electrical power systems are vulnerable to the high winds, coastal flooding, and extreme precipitation that hurricanes bring. Due to its unique location, the Territory is at risk of experiencing a variety of hazards including tropical winds, storm surge, flash flooding, sea level rise, coastal erosion, extreme heat, drought, earthquakes, wildfires, tsunamis, and pandemics. (Source: CDBG-MIT Action Plan) On average, a hurricane passes by the islands every three years and makes a severe impact on the islands every eight years.

Before Hurricanes Maria and Irma, the USVI was most significantly impacted by Hurricane Marilyn in 1995, Hurricane Hugo in 1989, and smaller hurricanes and tropical storms in between, too.

Figure 6 Chronology of Significant Natural Disasters in the US Virgin Islands, 1989 to March 2024

September 17, 1989	Hurricane Hugo struck the USVI and damaged 60% of the electric distribution system in St. Croix. WAPA restored the system and received disaster funding from FEMA of approximately $55 million (accounting for overpayment).
September 15, 1995	Hurricane Marilyn struck the USVI and damaged the electric distribution system. Estimated cost of repairs was $45 million, and WAPA funded restoration and rehabilitation through various means.
September 15, 2004	Tropical Storm Jeanne damaged WAPA facilities. Estimated repair costs were approximately $1 million.
October 16, 2008	Hurricane Omar struck the USVI and caused an estimated $3 million worth of damage to the electric distribution system.

Over the last century, hurricanes and other tropical storms that pass within two degrees of the USVI are highly concentrated in September and October.[4] The risk of impacts tied to natural disasters and climate change is captured in the credit rating for WAPA, for example, as one of the metrics tied to environmental, social, and governmental (ESG) issues as reporting in the Fitch Ratings. WAPA projects incorporating hardening, mitigation, and redundancies are attempts to address the extreme weather event risks. WAPA's financial situation over the last several years, with negative operating balances, cash flow management challenges, and vendor payment delays, continues to contribute to future vulnerabilities, if left unaddressed. For example, the Government Accountability Office ("GAO") cites in its 2017 report on "Federal Support for Electricity Grid Restoration in the U.S. Virgin Islands and Puerto Rico" (Source: GAO-19-296, 2017 HURRICANE SEASON: Federal Support for Electricity Grid Restoration in the U.S. Virgin Islands and Puerto Rico) that "financial challenges contributed to the extent of the damage to grid infrastructure. From ULI St. Croix Advisory Services Panel Report (Christiansted, St. Croix, U.S. Virgin

Islands., June 2018): “More sobering is that WAPA does not have the capital to undertake the changes at the scale required to significantly reduce electric costs and increase reliability. WAPA’s largest challenge is aggregating the capital needed to make the improvements to the electrical system to strengthen the grid and switch to renewable distributed generation. As a heavily debt-burdened government-owned utility, WAPA has less ability to raise money in the capital markets than privately owned regulated utilities.” In the matter of providing context for market and financial pressures, across a span of 12 weeks in April, May, and June 2022, WAPA was spending 70% of its cash on the purchase of fuel alone.

WAPA’s financial situation deteriorated so significantly that the Authority had to rely on the VI government to supplement fuel costs. The loss of customer base to solar and battery energy has severely affected cash flow. Under-collection due to estimating meters, also contributes to the cash problem. In October 2024. the Authority requested an extension of its emergency infusion from the central government of $3 million for fuel. The CEO testified at the legislative hearing Committee on the Whole on October 16, 2004, that on monthly deficits of averaging “$6 million despite the authority’s reports that steps are being taken to reduce costs and bolster revenues” and a requirement of “approximately $33 million for monthly operations” while customer revenues are at $27 million per month. (Source: https://viconsortium.com/vi-wapa/virgin-islands-wapa-faces--3-million-fuel-shortfall--seeks-state-of-emergency-extension-and-government-support).

According to VIWAPA, the landscape continues to be tenuous for the Authority. This is exacerbated by the continued increase in fuel prices. From the summer cost of $0.79 in 2024, the cost of LPG has climbed to $0.90. Diesel has increased similarly. WAPA, however, has solicited the services of Ernst and Young (EY) to assist with managing its financial resources and give guidance on fuel projections. Weekly meetings are scheduled to prioritize vendor payments, based on cash reserves. Similarly, fuel shipments are scheduled when it is determined that sufficient funds are available. This prudent approach in financial management, in addition to giving attention to improving operational efficiency, is gradually allowing WAPA to turn its cash flow situation around.

The allocation under this electrical grid improvements funding does not speak to the going operational and maintenance costs and decision making at WAPA. It does provide complete project structure wholly financed with oversight from the VIHFA. Therefore, this financial infusion can mitigate concerns about legacy decision making at the WAPA. This is because the grant periods require a structured-project process as defined in the governing federal and local federal for the use of funds. The VIHFA anticipates that this structured project process can translate to further improvement in the operations of the utility. Additionally, the grants require that the agency not only finalize all project activities but that it show capacity for operation and maintenance going forward.

According to the USVI Hurricane Recovery and Resilience Task Force report[7] the aging, inefficient infrastructure, as well as reliance upon fossil fuels, and historic unreliability of WAPA’s electrical power systems all are factors is assessing the risks that future disasters pose. The Threat and Hazards Identification and Risk Assessment (“THIRA”) and the Territory’s Hazard Mitigation Plan (“HMP”) identify the several types of emergencies likely to occur that would have an impact on the Territory’s electrical power system, and both documents inform the Territorial Emergency Operations Plan (TEOP), which is used to provide the framework for emergency plans and the provision of disaster assistance. Emergency Support Function 12 (ESF 12) tied to the TEOP addresses Energy (Power and Fuel). (Source: www.vitema.vi.gov/docs/default-source/key-documents/virgin-islands-territorial-emergency-operations-

plan-(teop-2022-version).pdf?sfvrsn=ad4b59a3_2) Additionally, the CDBG-MIT Action Plan, itself informed by the Territorial HMP, last updated in 2019, outlines various Community Lifelines as part of its assessment of risks and hazards that inform mitigation priorities as summarized here:

Figure 7 Hazard Consequence Impact for Energy Lifelines by Island

Hazard	Consequence Classification St. Croix	Consequence Classification St. John	Consequence Classification St. Thomas
Drought	Low Impact	Low Impact	Low Impact
Earthquake	High Impact	High Impact	High Impact
Flooding (Designated Special Flood Hazard Area)	High Impact	Low Impact	High Impact
Four Feet of Sea Level Rise	Low Impact	Low Impact	Low Impact
Storm Surge from a Category 5 Storm	High Impact	Low Impact	Low Impact
Hurricane Winds	Low Impact	Low Impact	Low Impact
Rain-Induced Landslide	Low Impact	Low Impact	Low Impact
Tsunami	Low Impact	Low Impact	Low Impact
Wildfire	Low Impact	Low Impact	Moderate Impact
Pandemic/Disease Outbreak	Low Impact	Low Impact	Low Impact
Source: USVI CDBG-MIT Action Plan			

Components that are at the greatest risk from disaster are already informing WAPA's ongoing rebuilding efforts, which are occurring in stages, and which are informed by various reports, studies, and planning documents from before Hurricanes Irma and Maria, and following the storms. (Source: A Christian, Department of Homeland Security Federal Emergency Management Agency. 29 Sep 2020. Project Report: 76893 P/W 1119, Project Title: XMUR808 St. Croix Richmond Power Generation Units.) Prior to the Hurricanes of 2017 WAPA contracted with Black and Veatch to prepare and Integrated Resource Plan (IRP) this plan was subsequently revised in 2022. Other system studies assisted by NREL and DOE, were subsequently conducted with the goal of developing a generation planning program to facilitate economic dispatch. These reports informed on the type of new generation that should be integrated in the generation fleet, and the part that renewable energy should play in the Authority's future especially as it has the potential to impact rates.

Some of the specifically identified electric grid improvements are currently underway and some, including those funded with CDBG-DR electrical grid funds, are planned for future implementation.

2.6 Planned Electric Grid Improvements

WAPA is focusing on recovery, resilience, redundancy, efficiency, and overall modernization as part of its multi-year implementation of infrastructure improvements designed to strengthen and enhance the electrical power system in the Territory. WAPA's overall recovery and resilience work is occurring in multiple stages and in alignment with other strategic, operating, and financial plans.

WAPA's Integrated Resource Plan (IRP) was released in 2019 and looks at the 2020-2044 planning period. The IRP assesses various power supply options under different scenarios with a focus on an optimal plan from an economic perspective. The overall objective of the IRP was "to identify the mix of incremental resources that will achieve a safe, adequate, and reliable supply of power at the lowest reasonable cost and in an environmentally acceptable manner." (Source: http://www.viwapa.vi/docs/default-source/default-document-library/draft----2019-wapa-integrated-resource-plan.pdf) Additionally, WAPA is in the process of preparing a financial Strategic Plan, which focuses first on a phase oriented towards financial stabilization, to be followed by two phases focused on larger-scale organizational and operational transformation. (Source:www.viwapa.vi/docs/default-source/redacted-strategic-plan/viwapa-strategic-plan_may-2022_redacted-final.pdf?sfvrsn=ee6c63e3_2)

Additionally, WAPA's infrastructure repair and reconstruction work is occurring in phases. The first phase focuses on hazard mitigation projects and key areas of the authority's infrastructure that were impacted severely by Hurricanes Irma and Maria in 2017. Examples of work already underway are the undergrounding utility lines and installing composite poles where undergrounding is not feasible. Other phase-one work includes backup and hardening efforts such as enhancing the use of battery storage systems, purchasing emergency generators, enclosing vulnerable equipment in concrete buildings, and installing switchgears at damaged substations. The second phase of WAPA's infrastructure improvements advances projects that enhance the functionality of the electrical power system and advance safety. The progress of these can be followed on viwapa.vi site (Committee on Disaster Recovery & Infrastructure (viwapa.vi)).

Based on VIWAPA's unmet needs, the grid improvement plans include, replacing wood poles with composite poles, feeder undergrounding, transformer rightsizing. A microgrid is planned for the St. Croix West end, Horgensborg, which will be supported by solar and BESS. A microgrid is also planned for the St.Thomas East end, Bovini, which will be supported by solar and wind. A microgrid is also planned for St. John, which will be supported by solar, BESS and emergency generators. The Petronella solar farm connects to the distribution system through Feeder 2A and 3A on St. Croix. Another such connection is planned for Fortuna on St. Thomas.

Figure 8 WAPA's Priorities for "Building and Brighter Future"

Island	Projects	Funding
St. Croix	• Installation of new generation at Richmond Power Plant with Battery Storage	~~HUD~~ FEMA
	• Installation of solar generation at Adventure in St. Croix with Battery Storage	(404)
	• Installation of solar generation at HERA in St. Croix with Battery Storage	FEMA
	• Installation of wind generation at Longford with Battery Storage	FEMA
	• Underground Installation on all primary transmission & distribution feeders to include critical facilities & underground to over 50% of customers	(406)
	• Composite Pole installations on all remaining primary and secondary circuits ○ 4,003 on St. Croix	(406)
	• AMI Project ○ Install concrete bunkers for AMI base stations Underground Fiber Backhaul to Towers ○ Connect more FAPs & AMI collectors	(406)
	• Construction of Control Centers for Production & T&D operations	(406)
St. Thomas / Water Island	• Installation of substation, microgrid controls and Battery Storage at Bovoni	(404)
	• Installation of new generation at the Randolph Harley Power Plant with Battery Storage	(HUD)
	• Installation of solar generation on Water Island with Battery Storage	(406)
	• Underground Installation on all primary transmission & distribution feeders to include critical facilities & underground to over 50% of customers	(406)
	• Composite Pole installations on all remaining primary and secondary circuits ○ 2,333 poles on St. Thomas, 200 on Water Island)	(406)

Island	Projects	Funding
	• Gas Insulated Switchgear and emergency generator installations at substations on St. Thomas and St. John ○ Tutu, DCF, East End, St. John Substations	(406)
	• AMI Project ○ Install concrete bunkers for AMI base stations Underground Fiber Backhaul to Towers ○ Connect more FAPs & AMI collectors	(406)
	• Construction of Control Centers for Production & T&D operations	(406)
St. John	• Installation of two emergency generators in St. John with Battery Storage	(406)
	• Installation of solar generation in Coral Bay, St. John with Battery Storage	(404)
	• Gas Insulated Switchgear and emergency generator installations at substations on St. John	(406)
	• Underground Installation on all primary transmission & distribution feeders to include critical facilities & underground to over 50% of customers	(406)
	• Composite Pole installations on all remaining primary and secondary circuits ○ 1.960 on St. John	(406)
	• AMI Project ○ Install concrete bunkers for AMI base stations Underground Fiber Backhaul to Towers ○ Connect more FAPs & AMI collectors	(406)

(Source: viwapa.vi. (May 2021). (Building a brighter future, pp 5-7)

Figure 9 Listing for Federal Projects/Grants as of 01/30/2025 as provided by VIWAPA

Federal Projects/Grants	Project Allocated Cost	Federal Funds Disbursed	Available Federal Share
FEMA Projects	$5,282,703,666.16	$1,328,929,675.96	$3,953,773,990.20
DOI	12,361,565.00	4,233,640.18	8,127,924.82
EPA	17,848,959.00	13,387,121	4,461,837.57
ARPA	3,907,500.00	3,635,000	272,500.00
GVI	1,300,000.00	1,300,000	
Homeland Port Security	160,000.00	-	160,000.00
HUD	84,152,141.20	71,276,970	12,875,171.15
Total	$5,402,433,831.36	$1,422,762,407.62	$3,979,671,423.74

2.7 Planned Mitigation and Resilience Measures

There is a critical need to incorporate resilience and hardening work into the scope of the restoration and recovery work at both the planning and execution level so that the risk of damages and other extensive impacts associated with future hurricanes and other disasters is mitigated. It is intended that mitigation funds be cost effective, both in terms of protecting the immediate recovery investment, and in terms of minimizing future losses (Source: GAO-19-296, 2017 HURRICANE SEASON: Federal Support for Electricity Grid Restoration in the U.S. Virgin Islands and Puerto Rico). This will result in a power system which is less likely to be catastrophically impacted by a future disaster, is more easily repaired, and which incorporates backup systems to reduce the likelihood of power loss and to minimize the extent of time customers are without power in the event of an outage. This helps the most vulnerable populations and those most at-risk from adverse environmental impacts. (Source: Guide to Expanding: Making the Connection to Electric Power (fema.gov)).

FEMA's Public Assistance (PA) grant program awards funds to qualifying projects for repair and restoration costs, as well as resilience, mitigation, and hardening costs, all of which are detailed in Project

Worksheets (PWs), which are functionally grant awards. FEMA also provides mitigation assistance through the Hazard Mitigation Grant Program, or HMGP. While more details on the specifics of FEMA funding available to WAPA and for electric power improvements and water system repairs are below. In 2022 there were approximately two dozen PWs identifying almost $900 million in eligible project costs, in the range of $560 million to $570 million in funds, or about 63% of the total, were identified as estimates for necessary mitigation work. This analysis was based upon best available data utilize FEMA versioned-PWs as of June 2022. (Source: FEMA PWs tracked by VIHFA from EMMIE with some round and see also Collaboration Energizes Vision to Strengthen Critical Service Sectors in the U.S. Virgin Islands - United States Virgin Islands | ReliefWeb.).

As of January 30, 2025, this amount has been increased to over 91 funded projects with $5,544,809,579.54 project costs with $1,422,762,407.62 funds expended.

~~*Figure 10 FEMA Disaster Recovery Public Assistance Funding*~~

FEMA Disaster Recovery Public Assistance Funding for WAPA

PW#	Location	Description	Total Project Cost	Mitigation Estimate	FEMA Federal Share	Local Cost Share	CDBG-DR Local Cost Share
60	STJ	Electrical Distribution Perm Repair	$ 181,815,788	$ 162,371,693	$ 163,634,209	$ 18,181,579	Yes
85	Water Isl	Elec Distri System Perm Repair	$ 16,405,212	$ 2,580,383	$ 14,764,691	$ 1,640,521	Yes
86	STT	Harley E Randolph Power Plant Repair	$ 100,000	$ -	$ 90,000	$ 10,000	
126	STX	St. Croix Electrical Distribution Perm Repair	$ 317,883,610	$ 197,376,446	$ 286,095,249	$ 31,788,361	Yes
158	STT	WAPA Advanced Metering Infrastucture System	$ 20,629,441	$ 15,964,978	$ 18,566,497	$ 2,062,944	
162	STX	Vehicle Repairs	$ 8,800	$ -	$ 7,920	$ 880	
182	STT	Sarah Hill Complex	$ 75,756	$ 7,957	$ 68,181	$ 7,576	
183	STT	Damaged Vehicles,Water Distribution	$ 24,007	$ -	$ 21,607	$ 2,401	
193	STX	Tank Repairs	$ 27,128		$ 24,415	$ 2,713	
207	STT	PS Repairs	$ 51,209			$ 51,209	
226	STT	St. Thomas WAPA Water Tanks	$ 240,930	$ 240,930	$ 216,837	$ 24,093	
227	STX	STX Facility Repairs	$ -	$ -	$ -	$ -	
240	STT	Randolph Harley Plant Repairs	$ 96,495	$ -	$ 86,845	$ 9,649	
288	STX	Mon Bijou Road	$ 3,259		$ 2,933	$ 326	
307	STT	STT Permanent Work Repairs	$ 343,250,505	$ 170,792,727	$ 308,925,454	$ 34,325,050	Yes
522	STT	St. Thomas WAPA Vehicle Repairs	$ -		$ -	$ -	
548	STT	Power Substations Permanent	$ 4,074,396	$ 2,398,749	$ 3,666,957	$ 407,440	
1034	STT	East End Substation	$ 11,153,166	$ 9,774,547	$ 10,037,849	$ 1,115,317	
1048	STX	Richmond Power Plant Historic Warehou	$ 553,852	$ -	$ 498,467	$ 55,385	
1053	STT	Line Department Transmission & Distr	$ 118,618		$ 106,756	$ 11,862	
1054	STX	St. Croix Estate Slob 1B/1C - STX Veh	$ 43,333		$ 39,000	$ 4,333	
1121	STX	Buildings and Equipmen	$ 1,037,602		$ 933,842	$ 103,760	
1315	STT	Repairs to the St. Thomas East End S	$ 371,530		$ 334,377	$ 37,153	
		Total	**$ 897,964,638**	**$ 561,508,411**	**$ 808,122,087**	**$ 89,842,552**	

Figure 11 Federal Funding by Project Costs and Federal Share as provided by VIWAPA on 02/04/25

PW#	Funding	Project Title	Project Cost	Federal Share Obligated	Federal Funds Disbursed	Available Federal Share
1	FEMA	Emergency Protective Measures--Power Restoration	$2,000,000.00	$2,000,000.00	$1,700,725.94	$299,274.06
9	FEMA	STX Emergency Protective Measures--Power Restoration	$240,068,827.00	$240,068,827.00	$237,476,760.76	$2,592,066.24
10	FEMA	STT Emergency Protective Measures -- Power Restoration	$168,374,471.87	$168,374,471.90	$164,042,640.01	$4,331,831.89
11	FEMA	STJ Emergency Protective Measures -- Power Restoration	$33,446,989.42	$33,446,989.42	$30,536,153.31	$2,910,836.11
20	FEMA	TIWPB01 - EPM Drinking Water STT	$38,047.56	$38,047.56	$38,047.56	$0.00
25	FEMA	JIWPB01 - EPM Water Distribution St Johns Island	$9,143.13	$9,143.13	$9,143.13	$0.00
55	FEMA	XMUR803- STX Mutual Aid Agreements for Power Restoration	$13,903,366.05	$13,903,366.05	$10,847,715.48	$3,055,650.57
60	FEMA	JMUR801- STJ Electrical Distribution Perm Repairs	$201,953,593.87	$181,758,234.48	$114,667,457.42	$67,090,777.06
84	FEMA	XMUR802 -WAPA Richmond Power Plant Emergency Repairs	$31,584.00	$31,584.00	$31,584.00	$0.00
85	FEMA	WMUR801 - Water Island Elec District System Perm Repair	$16,405,211.81	$15,584,951.22	$14,864,193.52	$720,757.70
86	FEMA	TMUR801-WAPA Harley E Randolph Power Plant Emer Repairs	$210,226,082.30	$206,021,560.66	$0.00	$206,021,560.66
109	FEMA	XMWPB01 - EPM Drinking Water Distribution STX	$94,344.23	$94,344.23	$94,344.23	$0.00
126	FEMA	XMUR801- St. Croix Electrical Distribution Perm Repairs	$539,149,638.32	$512,192,156.40	$371,023,245.96	$141,168,910.44
158	FEMA	TMUR805 - WAPA Advanced Metering Infrastructure System	$177,449,971.47	$173,900,972.05	$3,875,649.04	$170,025,323.01
162	FEMA	XMWPE01 Vehicle Repairs Drinking Water STX	$8,800.00	$8,360.00	$0.00	$8,360.00
182	FEMA	TMWPE02 - Sarah Hill Complex	$75,756.27	$71,968.46	$0.00	$71,968.46
191	FEMA	JMWPB01 EPM Drinking Water Distribution STJ	$30,523.63	$30,523.63	$30,523.63	$0.00
193	FEMA	XMWPF01 - Tank Repairs	$27,127.52	$25,771.15	$0.00	$25,771.15
197	FEMA	TMWPB01 EPM Drinking Water WAPA STT	$69,083.89	$69,083.89	$69,083.89	$0.00
207	FEMA	TMWPF02 - PS Repairs	$56,898.53	$54,053.61	$51,208.68	$2,844.93
211	FEMA	JMWPF01 St John Water System Facilities	$3,347.57	$3,180.20	$0.00	$3,180.20
226	FEMA	TMWPF01 -WAPA STT Water Tanks	$247,638.75	$235,256.82	$184,370.40	$50,886.42
227	FEMA	XMWPF02 - STX Facility Repairs	$115,932.94	$110,136.30	$0.00	$110,136.30
240	FEMA	TIUR801- Randolph Harley Plant Emergency Repairs	$96,494.93	$91,670.18	$0.00	$91,670.18
288	FEMA	XMWPC01 Mon Bijou Road	$3,259.34	$3,096.38	$2,933.41	$162.97
306	FEMA	XMUR806-STX WAPA Power Debris Removal - Island W	$39,089,827.54	$39,089,827.54	$17,597,499.83	$21,492,327.71
307	FEMA	TMUR802- STT Electrical Distribution Perm Repair	$415,388,047.76	$394,618,645.38	$295,360,683.97	$99,257,961.41
338	FEMA	TIUR81Z-VIWAPA-4335-- STT-Management Cost	$106,727.13	$106,727.13	$0.00	$106,727.13
339	FEMA	JIUR8Z1 - 4335 - VIWAPA - STJ - Management Costs	$457.16	$457.16	$457.16	$0.00
341	FEMA	TMUR804- Power Debris Removal STT, STJ and Water Island	$42,667,575.69	$42,667,575.69	$17,606,710.56	$25,060,865.13
522	FEMA	TMUR810 - St. Thomas WAPA Vehicle Repairs	$243,725.63	$231,539.35	$205,644.60	$25,894.75
548	FEMA	TMUR807 - VIWAPA - Power Substations Permanent Repairs	$13,023,761.71	$12,372,573.63	$6,634,396.62	$5,738,177.01
820	FEMA	UR814J2 - 4340-VIWAPA-STJ- Management Costs	$11,786,813.94	$11,786,813.94	$23,465.00	$11,763,348.94
836	FEMA	UR814X2- 4340-VIWAPA-STX-Management Costs	$108,152,304.11	$108,152,304.11	$22,447,903.43	$85,704,400.68
846	FEMA	UR814T1-4340-VIWAPA-STT-Management Costs	$30,824,772.94	$30,824,772.94	$51,673.59	$30,773,099.35
854	FEMA	UR814WI2 - 4340-VIWAPA-WI-Management Costs	$820,260.60	$820,260.60	$0.00	$820,260.60
978	FEMA	JMUR802 - STJ Force Account Labor and Equipment for Emergency Electrical Distribution Repairs	$298,804.19	$298,804.19	$219,150.30	$79,653.89
1034	FEMA	TMUR812 - East End Substation	$11,153,166.03	$10,595,507.73	$8,484,167.74	$2,111,339.99
1048	FEMA	XMUR804 - Richmond Power Plant Historic	$13,172,210.79	$12,908,766.58	$0.00	$12,908,766.58
1053	FEMA	TMUR813 - Line Department Transmission & Distribution Crew Building	$118,617.86	$112,686.97	$72,630.00	$40,056.97
1054	FEMA	XMUR809 - STX Estate Slob 1B/1C - STX Veh	$43,333.41	$41,166.74	$0.00	$41,166.74
1058	FEMA	TMUR815 -Temporary Facilities	$69,719.02	$69,719.02	$69,719.02	$0.00
1067	FEMA	TMUR815 - STT Mutual Aid	$255,801.48	$255,801.48	$182,283.48	$73,518.00
1079	FEMA	TMUR806 - STT WAPA Force Account Labor & Equipment for Emergency Electrical Distribution Repairs	$2,788,525.36	$2,788,525.36	$2,286,497.92	$502,027.44
1096	FEMA	Temporary Facilities 90% Funding	$39,650.14	$37,667.64	$35,685.13	$1,982.51
1115	FEMA	XMUR807- WAPA Force Account Labor and Equipment for Emergency Electrical Distribution Repairs	$2,401,415.88	$2,401,415.88	$2,254,954.42	$146,461.46
1119	FEMA	XMUR808 - STX Richmond Power Generation Units	$674,642,576.89	$661,149,725.36		$661,149,725.36
1121	FEMA	XMUR805 - STX Croix WAPA Buildings and Equipment	$1,037,622.43	$985,741.31	$0.00	$985,741.31
1315	FEMA	TMUR813 - Repairs to the STT East End Substation DT1 Transformer	$3,364,652.00	$3,196,419.40	$2,728,986.22	$467,433.18
1343	FEMA	JMUR802 - STJ Substation Repairs	$38,188.49	$36,279.07	$0.00	$36,279.07
1369	FEMA	XMWPF04 - A&E Costs Related to Prudent Replacement	$30,000,000.00	$28,500,000.00	$3,121,386.60	$25,378,613.40
1418	FEMA	XMWPF05 Intake and Bubble Screen-- Richmond East Potable Water Distribution Sector	$2,613,999.72	$2,561,719.73	$0.00	$2,561,719.73
1424	FEMA	XMWPF03- STX Island-Wide Potable Water Distribution System	$1,281,284,792.85	$1,255,659,097.00	$0.00	$1,255,659,097.00
100340	FEMA	TMUR807 - STT/STJ Island-Wide Potable Water Distribution System	$1,083,115,833.13	$1,061,453,516.47		$1,061,453,516.47
100343	FEMA	JMUR810 - STJ Electrical Distribution Permanent Repairs Feeder 9E	$35,964,720.64	$34,166,484.61	$0.00	$34,166,484.61
404	FEMA	STT Bovoni Microgrid	$4,181,271.36	$4,181,271.36	$0.00	$4,181,271.36
404	FEMA	Queen Street Underground Project	$8,209,946.93	$8,209,946.93	$0.00	$8,209,946.93
404	FEMA	STX Western Microgrid	$4,294,157.13	$4,294,157.13	$0.00	$4,294,157.13
	ARPA	Donoe Pump Station Rehab	$400,000.00	$400,000.00	$400,000.00	$0.00
	ARPA	MIOX Chlorination Units	$300,000.00	$300,000.00	$277,500.00	$22,500.00
	ARPA	Estate Ross Waterline Expansion	$500,000.00	$500,000.00	$250,000.00	$250,000.00
	ARPA	Northside Road Waterline Design	$322,500.00	$322,500.00	$322,500.00	$0.00
	ARPA	Julian Jackson Drive Waterline Rehab	$135,000.00	$135,000.00	$135,000.00	$0.00
	ARPA	STX Water Emergency	$2,000,000.00	$2,000,000.00	$2,000,000.00	$0.00
	ARPA	Ross Estate Project Design & Construction	$250,000.00	$250,000.00	$250,000.00	$0.00
	GVI	GVI - Hurricane Preparedness Fund	$950,000.00	$950,000.00	$950,000.00	$0.00
	GVI	GVI - Local Vendors	$250,000.00	$250,000.00	$250,000.00	$0.00
	GVI	GVI - Petronella	$100,000.00	$100,000.00	$100,000.00	$0.00
	DOI	2020-CIP Comprehensive Personnel Review	$375,000.00	$375,000.00	$355,808.00	$19,192.00
	DOI	2021-MAP Mack Dump Truck	$206,000.00	$206,000.00	$58,923.31	$147,076.69
	DOI	2021-MAP Equipment-Mower, Tractor Mower & Trailer	$208,000.00	$208,000.00	$196,733.00	$11,267.00
	DOI	2021-EIC Hybrid Utility Vehicles	$1,000,000.00	$1,000,000.00	$980,724.00	$19,276.00
	DOI	2022-MAP-Cyber Security Training	$269,106.00	$269,106.00	$87,828.00	$181,278.00
	DOI	2022-MAP-Substation & Underground Power Lineman Training Program	$750,000.00	$750,000.00	$41,198.50	$708,801.50
	DOI	2022-EIC-Hybris & Electric Vehicles Project	$895,790.00	$895,790.00	$895,790.00	$0.00

PW#	Funding	Project Title	Project Cost	Federal Share Obligated	Federal Funds Disbursed	Available Federal Share
	DOI	2022-EIC-Hybrid Bucket Trucks Project	$1,020,000.00	$1,020,000.00	$985,204.00	$34,796.00
	DOI	2023- TAP-Water Distribution Training Project	$296,500.00	$296,500.00	$0.00	$296,500.00
	DOI	2023-EIC-Hybrid Vehicle Project	$360,000.00	$360,000.00	$352,000.00	$8,000.00
	DOI	2023-MAP Water Dept Equipment	$318,816.00	$318,816.00	$279,431.37	$39,384.63
	DOI	2023 - MAP-Substation Maintenance Program	$210,353.00	$210,353.00	$0.00	$210,353.00
	DOI	2024 - TAP-USVI-2024-2 - Renewable Integration & Smart Grid Project	$500,000.00	$500,000.00	$0.00	$500,000.00
	DOI	2024 - TAP-USVI-2024-3 - Power Generation Training & Development Program	$500,000.00	$500,000.00	$0.00	$500,000.00
	DOI	2024 - TAP-2024-Mulchers Project	$220,000.00	$220,000.00	$0.00	$220,000.00
	DOI	2024 - VI-EIC-2024-1 - Electric Bucket Truck Project	$1,044,000.00	$1,044,000.00	$0.00	$1,044,000.00
	DOI	2024 - VI-EIC-2024-2 - Electric Vehicles Project	$1,038,000.00	$1,038,000.00	$0.00	$1,038,000.00
	DOI	2024 - VI-EIC-2024-3 - STT BESS Project	$3,150,000.00	$3,150,000.00	$0.00	$3,150,000.00
	EPA	Hannah's Rest Waterline Project	$3,312,636.00	$3,312,636.00	$1,978,230.00	$1,334,406.00
	EPA	Campo Rico Waterline Project	$10,057,616.00	$10,057,616.00	$7,105,885.43	$2,951,730.57
	EPA	Clifton Hill Waterline Project	$4,478,707.00	$4,478,707.00	$4,303,006.00	$175,701.00
	HUD	RHPP Power Plant	$84,152,141.20	$84,152,141.20	$71,276,970.05	$12,875,171.15
	HPS	Homeland Port Security	$160,000.00	$160,000.00	$0.00	$160,000.00
		Total	**$5,544,809,579.54**	**$5,402,433,831.36**	**$1,422,762,407.62**	**3,979,671,423.74**

~~It is important to note that WAPA did not include estimates for generation hardening work eligible for funding through FEMA's 406 Public Assistance Program. The only information provided was a damage description and dimensions report submitted to FEMA/DHS whereby WAPA requested reimbursement for repairing the damage sustained by the Richmond generation assets during the 2017 disaster. That request was ultimately denied. Since the costs of hardening the repaired generation assets against future risk are not known, this remains an unfunded need at a potentially significant scale.~~ The territory has learned that repairing to existing code is not sufficient to protect communities and to protect the federal investment. Additionally, simply hardening outdated, aging, generation assets is impractical and will not yield any improvement in reliability or efficiency.

The 2020 BCA that FEMA prepared for the island of St. Croix listed the Value of Unit of Service for electrical service at $174 per person per day. It utilized a population of 50,000 based on the 2010 census. The loss of function or the costs and direct economic impacts that the community experienced when physical damages from the 2017 disasters interrupted electrical service for 82 days was computed as $715,033,580. Adjusted for inflation that figure is approximately $853,696,770 in 2022 dollars. The completing the proposed activities while ensuring that they are designed to the latest ASCE 7 & ASCE 24 standards to ensure that mitigation and resilience measures are incorporated to protect against the anticipated effects of future extreme weather events is a worthwhile investment.

2.8 Planned Carbon Reduction Goals

The US Virgin Islands Renewable and Alternative Energy Act of 2009 (Act 7075) established ambitious plans to reduce its dependence upon imported fossil fuels and to minimize the contribution to pollution, climate change and overall environmental degradation by the year 2025. Specifically, the act stipulated that 30% of the peak demanded generating capacity of the WAPA must be derived from renewable energy technologies by January 1, 2025. The act also encourages the development of renewable and alternative energy generation sources on two levels: large, utility scale infrastructure development; and small, homeowner scale and commercial renewable energy use.

Before Hurricanes Maria and Irma, achieving the reduction goals of this policy was managed by USVI government via the Virgin Island Energy Office and WAPA, along with sponsorship of the U.S.

Department of Energy via the National Renewable Energy Laboratory and other stakeholders. While investments in the electrical power system have focused on restoration, recovery and mitigation since Maria and Irma, the ambitious fossil fuel reduction goals and policies still drive planning around reducing reliance on carbon-based energy sources.

The Revised PR1 Program includes battery energy storage systems (BESS) at critical substations, line reconditioning, transformer replacements, remote closures, grid capacitors and SCADA remotes. As a composite project these proposed activities can be optimized and deployed to support loads at critical periods of time, respond to interruption on the distribution and allow the WAPA operations to measure and respond to risks remotely. The BESS systems will reduce the reliance on traditional fuel-consuming generation to meet peak demand and will result in a net decrease in emissions from its power generating operations. It is also important to note that some level of traditional generation will always be required to help maintain grid stability despite the presence of renewables, however~~, the installation of new generators~~ and the BESS will help to facilitate the successful integration of renewables through better frequency control.

PR2 is in alignment and complies with Act 7075's promotion of small commercial renewable energy use by offering opportunities for eligible applicants to fund their transition to renewables through this program. (Sources: Public-Private Collaboration (usvienergy.com) Energy Transformation in the U.S. Virgin Islands | Department of Energy.) The USVI Energy Road Map, subtitled "Charting the Course to a Clean Energy Future," was developed through the Energy Development in Island Nation (EDIN) international partnership and published in 2011. It offers a series of recommendations regarding investments in energy efficiency and renewable energy sources. (Source: USVI Energy Road Map: Charting the Course to a Clean Energy Future (Brochure), EDIN (Energy Development in Island Nations), U.S. Virgin Islands (nrel.gov))

Additional efforts include customer education and energy consumption campaigns undertaken by WAPA. (Source:https://www.everycrsreport.com/files/20180214_R45105_9b5160fb94aad8b11a46c5471fc90ff9dc626e3b.html#_Toc506897564. and footnotes).

WAPA's Strategic Transformation Plan identifies system improvements to promote a reduction in the reliance upon fuel oil as the primary source of energy in the Territory, particularly in the third theme of its plan, Generation Section Transformation (recognizing the first two Themes as Financial and System Stabilization first and System Resiliency second). (Source: wapa-strategic-transformation-plan-2020----single-page-booklet.pdf (viwapa.vi.),

It is also anticipated that the PR1 will advance the Territory's goal through a more efficient grid resiliency improvements ~~power generation~~. PR1 is designed to benefit the electrical reliability of across the territory not only the island of St. Croix ~~through the development of an efficient generation facility~~. The combined effects of PR1 will improve WAPA's response measures to power interruptions, mitigate risks to the distribution services and lower base electricity costs, improve operational efficiency, and reduce air pollution.

2.9 Long-Term Infrastructure Plans as a Basis for Need

In preparing the unmet needs assessment, VIHFA relied on publicly available information from many sources. For a more comprehensive review of these various documents, please refer to Appendix A.12 Summary of Key Reports.

Available or Anticipated Sources of Funding

As a recipient of CDBG-DR EPSEI funds, VIHFA is required to identify the various forms of financial assistance that are available or anticipated to be available to cover the needs in the area of recovery and repairs, system improvements, resiliency and mitigation measures, and reductions in greenhouse-gas emissions all tied to electrical power system improvements using the most recent available data to estimate the amount of need unlikely to be addressed by sources of funds other than the Territory's $67,653,000 CDBG-DR EPSEI grant, such that those CDBG-DR funds can help address a portion of that identified unmet need.

2.10 Available or Anticipated Sources of Funding

FEMA Assistance

FEMA, through the Public Assistance program funded approximately $~~900M~~ $5,420M dollars of disaster recovery projects. Those projects previously required a local cost share of 10% which is expected to be met by CDBG-DR match funding. This cost share requirement was reduce to 5% in February 2024. Those projects are summarized in the table above . ~~In addition to the Public Assistance program, FEMA has also through the 404 Hazard Mitigation Grant Program award approximately $255 million consisting of $125,611,021 for the microgrid project at Estate Bovoni on St. Thomas, and $129,688,384 for the microgrid project at Adventure located on St. Croix~~.

CDBG-DR and CDBG-MIT

The following represents the total amount of CDBG-DR and CDBG-MIT assistance that VIHFA is receiving for all aspects of recovery and resilience work related to Hurricanes Irma and Maria, including resources which are available for housing, economic development, and infrastructure recovery work beyond just investments in electrical utility improvements:

Figure 12 CDBG-DR, CDBG-MIT Funding Allocated to USVI for Hurricanes Irma and Maria Recovery and Resilience

Federal Register (FR)	FR Date	Public Law	Funding	USVI Allocation
FR 6066-N-01	2018, Feb 09	115-56	CDBG-DR1	$242,684,000
FR 6109-N-01	2018, Aug 14	115-123	CDBG-DR2	$779,217,000
FR 6182-N-01	2020, Jan 27	116-20	CDBG-DR2a	$53,588,884
FR-6109-N-03	2019, Sep 10	115-123	CDBG-MIT	$774,188,000
FR-6261-N-01	2021, Jun 22	115-123	CDBG-DR EPSEI	$67,653,000
			Total	$1,917,330,884

The CDBG-DR Action Plan and the CDBG-MIT Action Plan (as amended) provide more details of the CDBG investments for energy infrastructure improvements. ~~Please see VIHFA's CDBG-DR Action Plan (see: US_VI_CDBG-DR_AMENDMENT_2_FINAL_11-20-2020.pdf (vihfa.gov)), particularly at:~~

- ~~4.5.1 Unmet Infrastructure Needs – Energy (p. 92-96)~~
- ~~5.2.3 Connection to Unmet Needs – Infrastructure (p. 134-138)~~
- ~~5.5 Infrastructure Programs (p. 169-192)~~
- ~~Appendix 7.4 CDBG-DR Projects List Effective May 31, 2020 (p. 253, 255)~~

It is important to note, too, that the Federal Register Notice from September 10, 2019, governing the use of CDBG-MIT funds (84 FR 47528 available at 2019-19506.pdf (govinfo.gov), section II.B.) stipulates a limitation on any CDBG-MIT funds for electrical power improvements until the determination is made that the funds are consistent with the requirements of both the CDBG-MIT notice requirements as well as the electrical power improvements requirements covered in the June 22, 2021, Federal Register Notice.

Insurance

WAPA has proceeds from insurance that have helped offset the costs of repairs and reconstruction of infrastructure damaged in Hurricanes Irma and Maria. These unmet needs assessment uses the amount that FEMA deducted from approved project worksheets due to WAPA insurance proceeds for the electrical system as the identified available funding, totaling $2.5 million. Specifically, that insurance is reflected as shown in Figure 9.

Figure 13 FEMA Funding by PW

PW#	1. FEMA Deduction for Insurance Received
86	$656,728
307	$1,556,962
227	$113,328
522	$ 330,837
548	$532,797
Total	**$2,533,924**

WAPA Finances

WAPA's financial position is particularly precarious as the Authority suffers from a legacy of questionable financial and operational decisions, coupled with a profound lack of data and analysis. The current ratelet structure is insufficient to cover its operating costs. The Authority addressed the constraints arising from its contractual agreement with its propane infrastructure supplier. This was achieved through the acquisition of the propane supply infrastructure in July 2024, funded by CDBG-MITIGATION. ~~faces an approximate monthly cash short fall of $5-6 million at current fuel prices, excluding Vitol infrastructure payments (+$2.6 million per month) Legacy critical vendor obligations of approximately $40 million in past due payables from previously deferred payments which does not $150 million Vitol infrastructure lease payments. Deferred maintenance has imperiled asset operational viability and constrained inventory imperils fuel supply and the fuel consumption is in fact approximately 30% worse than previous filings to the PSC.~~ WAPA continues to have cash short falls as meshortfallsthe Unmet Needs Assessment in Section 2.

~~The budget that WAPA presented for Fiscal Year 2023 is a significant departure in approach and structure from prior budgets, and WAPA had to adjust an initial budget by reducing projected expenditures such that personnel costs, operating expenses, and capital expenditures are reduced such that the proposed budget is in balance solely with projected revenues.~~

~~An unmet needs assessment of the $131,038,353 annual operating budget identified internally funded capital expenditures of $9,761,237 with $7,768,237 specifically committed to power production and transmission and distribution expenditures summarized in the following table. Due to the uncertainty of funds and no specific proposed budget at the current time, no funds beyond FY23 are captured in the unmet needs assessment.~~

Year over year, WAPA has demonstrated fuel cost above its income generation income. (Source: U.S. Virgin Islands Water and Power Authority Summary of Strategic Plan for 35th Legislature of the Virgin Islands April 2023)

~~*Figure 14 WAPA's Internal Capital Projects for FY2023*~~

~~Project~~	~~Category~~	~~Amount~~
~~Unit 19 Major Overhaul~~	~~Power Production~~	~~$ 2,000,000~~
~~Unit 15 Major Overhaul~~	~~Power Production~~	~~$ 3,000,000~~
~~Unit 19 Mark 6 Upgrade~~	~~Power Production~~	~~$ 600,000~~
~~Unit 23 Mark 6 Upgrade~~	~~Power Production~~	~~$ 650,000~~
~~BTT1 & T3 Transformers~~	~~Transmission & Distribution~~	~~$ 168,000~~
~~Service Lines, Overhead & Underground Installation~~	~~Transmission & Distribution~~	~~$ 268,360~~
~~Service Lines~~	~~Transmission & Distribution~~	~~$ 581,877~~
~~Metering Equipment~~	~~Transmission & Distribution~~	~~$ 500,000~~
-	~~Total~~	~~$ 7,768,237~~

(Source: www.viwapa.vi. 2023 Fiscal Year Budget Review Presentation on 2022, Jun 19).

Other Sources of Funding

A variety of private, philanthropic and community support sources of funding available in the U.S. Virgin Islands recovery and resiliency and electric energy improvements. Of particular note is a partnership investment between Bloomberg Partners, the Clinton Global Initiative, and the Expedia Group to provide funding in the form of $500,000 in donations for the installation of solar panels at community non-profits in the Territory. As more information on other funding sources for electric grid improvements, the Action Plan may be amended to reflect that information. (Source: Bill Clinton Helps Launch Solar Projects in St Thomas, St John (caribjournal.com) and USVI's-Energy-Transformation-Recovering-and-building-a-more-resilient-system-after-Hurricanes-Irma-and-Maria.pdf (bbhub.io))) Other funding sources are listed in Table 1.

2.11 Unmet Needs Assessment

Drawing from the different components of this chapter above, the unmet needs assessment identifies the resulting unmet needs for which CDBG-DR EPSEI funds may be available and considers the severe financial hardship that the Virgin Islands Water and Power Authority is experiencing. This remaining

unmet need is the result once damages sustained by the 2017 hurricanes, the costs of incorporating resilience and mitigation measures to address components of the system at risk from future disaster, and the costs of addressing long-term carbon reduction goals are compared to available sources of funding from other sources besides the CDBG-DR electrical system improvements grants.

Figure 15 Other Funding Sources

Funding Source for Energy Sector	Total Energy Need (per CDBG-DR Action Plan v3., p. 92)	Amendment No. 2 Total Funding Current	Current Unmet Energy Need (Total Need - Total Funding)
FEMA-406 Public Assistance		$807,783,127	
FEMA-404 HMGP		$255,299,405	
Insurance		$2,533,924	
CDBG-DR (Electrical)		$135,928,330	
CDBG-DR Local Match Awarded		$87,927,156	
CDBG-MIT (Action Plan's Covered Project)		**$145,000,000**	
WAPA Internal Capital (FY 2023)		$7,768,237	
Total	**$2,282,000,000**	**$1,442,240,179**	**$839,759,821**

Additional funding is currently being discussed, whether from FEMA, CARES Act or other resources, for additional investments in energy needs, particularly for work to advance solarization on St. Croix. Current amounts have not yet been finalized. Once they are, this table for unmet needs will be updated.

As of January 16, 202, FEMA has committed $205.9 million to support the Randolph Harley Power Plant on St. Thomas, including replacing two generation units and repairing seven others. St. Croix's Richmond Power Plant will receive $661 million to replace eight turbine generators, transformers, and critical substation infrastructure.

Brighter Outlook Emerges to Harden Power Grid Across U.S. Virgin Islands

Figure 16 FEMA Disaster Recovery Public Assistance Funding -WAPA by Island

FEMA Disaster Recovery Public Assistance Funding for WAPA							
PW#	**Island**	**Description**	**Total Project Cost**	**Mitigation Estimate**	**FEMA Federal Share**	**Local Cost Share**	**CDBG-DR Local Cost Share**
60	STJ	Electrical Distribution Perm Repair	$181,815,788	$162,371,693	$163,634,209	$18,181,579	Yes
86	STT	Harley E Randolph Power Plant Repair	$100,000	$0	$90,000	$10,000	
158	STT	WAPA Advanced Metering infrastructure System	$20,629,441	$15,964,978	$18,566,497	$2,062,944	
182	STT	Sarah Hill Complex	$75,756	$7,957	$68,181	$7,576	
183	STT	Damaged Vehicles, Water Distribution	$24,007	$0	$21,607	$2,401	
207	STT	PS Repairs	$51,209			$51,209	
226	STT	St Thomas WAPA Water Tanks	$240,930	$240,930	$216,837	$24,093	
240	STT	Randolph Harley Plant Repairs	$96,495		$86,845	$9,649	
307	STT	STT Permanent Work Repairs	$343,250,505	$170,792,727	$308,925,454	$34,325,050	Yes
522	STT	St Thomas WAPA Vehicle Repairs					
548	STT	STT Power Substations Permanent	$4,074,396	$2,398,749	$3,666,957	$407,440	
1034	STT	East End Substation	$11,153,166	$9,774,547	$10,037,849	$1,115,317	

1053	STT	Line Department Transmission & Distr	$118,618		$106,756	$11,862	
1315	STT	Repairs to the St. Thomas East End S	$371,530		$334,377	$37,153	
126	STX	St. Croix Electrical Distrribution Perm Repair	$317,883,610	$197,376,446	$286,095,249	$31,788,361	Yes
162	STX	Vehicle Repairs	$8,800		$7,920	$880	
193	STX	Tank Repairs	$27,128		$24,415	$2,713	
227	STX	STX Facility Repairs	$0	$0	$0	$0	
288	STX	Mon Bijou Road	$3,259		$2,933	$326	
1048	STX	Richmond Power Plant Historic Warehou	$553,852		$498,467	$55,385	
1054	STX	St Croix Estate Slob 1B/1C - STX Veh	$43,333		$39,000	$4,333	
1121	STX	Buildings and Equipmen	$1,037,602		$933,842	$103,760	
85	WTI	Elec Distri System Perm Repair	$16,405,212	$2,580,383	$14,764,691	$1,640,521	Yes
		Totals	**$897,964,638**	**$561,508,411**	**$808,122,087**	**$89,842,552**	

The proposed project includes the installation of new ~~conventional generation accompanied by~~ battery energy storage systems (BESS). The BESS offers both carbon footprint reduction and resiliency as it can be dispatched to support loads without producing emissions thus ultimately contributing toward long-term carbon reduction goals.

VIHFA requires all CDBG-DR applicants to certify all project funding and complete a Duplicate of Benefits form as part of the application process.

2.12 Amendments & Updates to Amendments

In recognition that unmet needs, particularly needs for electrical power system improvements, evolve over time, VIHFA will amend its unmet needs assessment and amend this CDBG-DR EPSEI Action Plan as additional resources become available, or additional needs become identified. VIHFA will update the action plan in line with the Citizen Participation Plan and other procedures as described elsewhere.

3.0 PROJECT & ACTIVITY ALLOCATIONS

3.1 Project and Activity Allocations

Background

VIHFA is allocating the $67,653,000 in CDBG-DR funding for electrical power system enhancements and improvements towards two program investments aimed at delivering electrical power system improvements described in FR-6261-N-01. The intended budget and breakdown between the two programs, as well as related planning and administrative costs as indicated in the table below:

Figure 17 Energy Program Budgets

Energy Program	Program Budget	Activity Delivery Cost*	% of Budget
~~**Generation Facility at Estate Richmond Program** (PR1)~~	~~$53,000,000~~	~~$3,710,000~~	~~78%~~
~~Community Electrical Innovations Application Program (PR2)~~	~~$10,000,000~~	~~$700,000~~	~~15%~~
~~**ADMINISTRATIVE**~~			
~~Administrative Budget~~	~~$3,382,650~~	~~$0~~	~~5%~~
~~PLANNING~~			
~~Planning~~	~~$1,270,350~~	~~$0~~	~~2%~~
~~**Total**~~	~~**$67,653,000**~~	~~**$4,410,000**~~	~~**100%**~~
Energy Program	Program Budget	Activity Delivery Cost*	% of Budget
Grid Resiliency Program (PR1)	$35,788,437		52.9%
Community Electrical Innovations Application Program (PR2)	$21,716,613	Based on Need	32.1%
ADMINISTRATIVE			
Administrative Budget	$3,382,650	$0	5%
PLANNING			
Planning	$6,765,300	$0	2%
Total	**$67,653,000**		**100%**

*Activity Delivery Cost already represented in the Program Budget column**

VIHFA took several considerations into account in terms of allocating funding across these amounts. First of all, in recognizing the overall unmet needs associated with restoring the U.S. Virgin Islands' electrical power systems following the impacts of Hurricanes Irma and Maria and in creating resilient systems that address the risks of climate threats and recognizing long-term carbon reduction goals, the Virgin Islands Water and Power Authority (WAPA), as the regulated public utility responsible for providing electricity to Virgin Islanders, plays a critical role in working towards filling that unmet need. As such, the majority of the CDBG-DR EPSEI funds, 78%, ~~are~~ were going towards a WAPA-managed project, the Richmond Estate Generating facility on St. Croix. VIHFA, as the CDBG-DR grantee receiving funding from HUD, will work closely with WAPA as a subrecipient for CDBG-DR EPSEI funds. These funds have been reallocated based on current unmet needs to a Grid Resiliency Program at 52.9% of grant funds.

In addition to providing funding to WAPA, VIHFA is funding a competitive application program for community organizations with innovative and smaller-scale electrical grid improvement projects, the Community Electrical Innovations Application program. This program ~~receives~~ received ~~15%~~ of VIHFA's total CDBG-DR ESPEI allocation. In the substantial amendment the program will received 31.1

Both investments of CDBG-DR program dollars totaling $63,000,000 go towards addressing remaining unmet needs associated with the electrical power systems in the USVI. The proposed programs will satisfy all requirements for electrical power system improvement activities as described in V.A.8.and meet the criteria for a national objective as established by the FR notice.

~~The Richmond Estate generating project was selected for CDBG-DR funding after~~ After assessing a full list of WAPA projects which were either planned or underway. This also included a look at available and anticipated sources of funding as described in the accompanying unmet needs assessment. Certain projects were eliminated from consideration where there was a verifiable need or deemed inadequate if the amount of funding in the CDBG-DR EPSEI allocation was unable to cover project costs. The criteria which led to the proposed ~~Estate Richmond project~~ Grid Resiliency project activities included overall availability of funds, financial benefits to the authority and to utility customers, benefits accrued to low- and moderate-income populations, the ability to implement hardening and resilience features, improvements in overall efficiencies and operations, timeline, and project viability in terms of being developed enough for funding consideration. The overall selection criteria were based on what VIHFA described in its CDBG-DR Action Plan for the Electric Power Systems Enhancements and Improvements Infrastructure program. They are described in the table below.

Substantial Amendment 3 to the CDBG-DR Action Plan reallocates the $53M funding for the Richmond Estate Generation Project to reflect the current unmet needs, prioritized project activities and administration of the grant. There is no duplicative scope for unmet need. Please refer to the amendment for additional details.

Figure 18 Project Prioritization Metrics

Metric	Description
LMI	Projects that benefit low- and moderate-income persons or communities;
Shovel-ready	Projects that are ready to begin rehabilitation or construction. A project is considered "shovel-ready" if environmental review and engineering have already been completed
Criticality	Based on the overall need of customers. Prioritization will be given to projects that have potential to reduce rates to customers, particularly in LMI areas;
Severity	Duration and frequency of outages in areas where the most strain on capacity, load and demand exists;
Resilience	Resilience measures considered in the project to improve and harden the electric line infrastructure to prevent vulnerability in the future;
Technical Feasibility	The degree of specialized equipment, and the use of innovative technology (e.g., industry standard vs. leading edge);
Sustainability	Degree to which green, LEED, Energy Star, sustainable materials, and other similar measures are taken into consideration for the project;
Execution timing	Project environmental study status, permitting, design and construction timeline ensure project meets CDBG-DR funding, disbursement, and drawdown requirements
Economics	Cost benefit analysis for the project.

To identify unmet needs during the selection of candidate projects, two major focus areas were identified when evaluating the overall system requirements:

1) investments made at the point of power generation;
2) investments made where distribution occurs (at feeder lines).

Much of the investment in undergrounding utility poles and installing composite poles, investments in power distribution assets, is being covered with FEMA funding, with non-grid CDBG-DR funds covering the local cost share of the FEMA funds. Investments in generation allow for long-term benefits to be realized by the public utility, as indicated through improvements in efficiency, financial savings, and reductions in the amount of fuel oil used. The Community Electrical Innovations Application program investment will address unmet needs by focusing on power systems components outside of the ownership of WAPA, particularly in advancing work that promotes resilience and decarbonization goals.

VIHFA's proposed expenditure of CDBG-DR funds for electrical power systems for this identified project and program are consistent with infrastructure plans and other investment plans, as well as with planning studies and policy recommendations from recovery and resilience studies. VIHFA took the recommendations of the Territory's 2021 Energy Assurance Plan, VIWAPA's 2019/2020 Integrated Resource Plan, the 2020 WAPA Strategic Transformation Plan, and excerpts from WAPA's 2022 Strategic Plan into account, and conferred with the relevant sponsoring organizations, in its advancement of proposals for electrical improvements. For additional details, please refer to the Summary of Key Studies section of this Action Plan. In consideration of project and concept proposals covered in these plans, and in consideration of funding already available, no CDBG-DR electrical grid funds are going towards the local cost share tied to FEMA funds.

~~Finally, VHIFA is allocating $1,270,350 towards Planning and $3,382,650, the 5% maximum under the grant, towards administrative costs.~~

Finally, VHIFA is allocating $6,765,300 towards Planning and $3,382,650, the 5% maximum under the grant, towards administrative costs.

The United States Virgin Island (USVI) has been impacted by various levels of hurricanes over the past two decades but the impacts of the two major hurricanes from 2017 are still being felt. Within the same year the islands were first hit by Hurricane Irma and then in the same season Hurricane Maria, leaving parts of the island without power for 51 days.

These events have wreaked havoc on the island's critical infrastructure including the power system and power grid, caused hardship for the residents, businesses and the public infrastructure required to serve the population of the islands of St Croix, St Thomas, and St. John.

The VIHFA has been selected to administer CDBG-DR funds for electric power system improvements for the US Virgin Islands territory. The United States Department of Housing and Urban Development (HUD) as directed by the Appropriations Act are providing funds in the form of a CDBG-DR funds for the electrical power system improvements in Puerta Rico and the USVI. This grant provides a unique opportunity for the VIHFA to manage funds that will contribute to much needed electric power system improvements.

3.2 Budget Summary

The electrical system enhancements and improvement programs proposed here consist of two initiatives with the aim of maximizing needs and updates to the electrical grid that have been previously unmet by prior Federal funding mechanisms. The Generation Facility at Estate Richmond Program (PR1) is designed to benefit the electrical reliability of the island of St. Croix through the development of an efficient generation facility. The combined effects of PR1 will lower base electricity costs, improve operational efficiency, and reduce air pollution. This will help to ensure the security, health, and welfare of all US Virgin Islanders. The Community Electrical Innovations Application Program (PR2) will serve the needs of communities by funding innovative and local projects that will benefit the electrical grid across the islands in the Territory that are not currently anticipated to be funded from other federal or local sources.

Figure 19 Proposed Use of Funds

Energy Program	Program Budget	% of Budget	LMI Goal	LMI Budget
PR1 – Grid Resiliency Program Generation Facility at Estate Richmond Program	$53,000,000 $35,788,437	78% 52.9%	70%	100%
PR2 Community Electrical Innovations Application Program				
Energy Vulnerable	$10,000,000 $19,010,493	15% 28.1%	TBD 100%	May Vary 100%
Solarized HUBs	$2.706,120	4.0%	TBD 100%	May Vary 100%
ADMINISTRATIVE				
Administrative Budget	$3,382,650	5%	N/A	
PLANNING				
Planning	$1,270,350 $6.765,300	2% 10%	N/A	
Total	$67,653,000	100%	70%	($53,000,000) ($35,788,437)

Energy Program	Program Budget Action Plan Version #2 Nonsubstantial Amendment	% Budget Action Plan Version #2 Nonsubstantial Amendment	Program Budget Amendment Version #3 Substantial Amendment	% Budget Version #3 Substantial Amendment	LMI Goal	LMI Budget
PR1–Grid Resiliency Program **Generation Facility at Estate Richmond Program**	$53,000,000	78%	35,788,437	52.9%	70%	100%
PR2 Community Electrical Innovations Application Program						
Energy Vulnerable	$10,000,000	15%	19,010,493	28.1%	TBD 100 %	May Vary 100%
Solarized HUBs			2,706,120	4.0%	TBD 100 %	May Vary 100%
ADMINISTRATIVE						
Administrative Budget	$3,382,650	5%	3,382,650	5%	N/A	
PLANNING						
Planning	$1,270,350	2%	6,765,300	10%	N/A	
Total	$67,653,000			100%	70%	($53,000,000) ($35,788,437)

The total program funding allocation is $67,653,000. Under Substantial Amendment Version #3, the budget for PR1 has been reduced by $17,211,563.

As part of the revised allocation, $11,716,120 has been directed toward PR2 Projects, including $9,010,493 for Energy Vulnerable initiatives and $2,706,120 designated for a subset of PR2 Solarized HUBs. Additionally, $5,494,950 has been allocated to planning costs. The administrative cost remains at $3,382,650.

3.3 System Components

The federal register requires that this action plan inform HUD of the planned disposition of components of the electrical power system acquired or improved with CDBG-DR funds. The federal register contains the following definition:

> "(i) An electrical power system shall be defined as an interconnected or autonomous set of transmission lines, distribution lines, substations, central power generation stations, other sources of power, distributed energy resources, or enabling technologies and services, such as industry standard billing, accounting information technology, cybersecurity enhancements, microgrids and fuel transfer delivery systems, that are necessary for the provision of reliable, resilient, stable, and cost- effective electrical service"

The components as defined above although distinct, are closely related to each other and in some cases are connected together to form a larger, complete functioning system. For example, a microgrid may include a generation source/station and transmission and distribution equipment including a substation. These individual components when put together comprise another identified component as defined by the FRN. To address this the components will be categorized into functional groupings to align with each program. The groupings are as follows:

1. Central Power Generation Station
2. Distributed Energy resources and/or Microgrids
3. Transmission and Distribution Lines
4. Substations
5. Enabling Technologies and Services

Since this funding allocation is smaller than previous tranches and there is only one public utility that operates and maintains the grid, we anticipate that funding will be used by the following groupings:

Figure 20 PR1 and PR2 Functional Grouping

Functional Grouping	PR1 Budget ~~$53,000,000~~ $35,788,437	PR2 Budget ~~$10,000,000~~ $21,716,613
1. Central Power Generation Station		
2. Distributed Energy Resources and/or Microgrids		100%
3. Transmission and Distribution Lines	38.56%	
4. Substations	39.85%	
5. Enabling Technologies and Services	21.59%	

VIHFA will reallocate budgets between components at 10% or less of the budget for each component. This will allow for minor adjustments in expenses between component categories without having to formally amend the Action Plan. Adjustments of more than 10% but less than 25% will trigger a non-substantial amendment; and greater than 25% in change between component budgets would require a substantial amendment. For the traditional CDBG-DR Action Plan process, the budget revision amendment process addresses a change in budgets between eligible CDBG-DR activities. In this Action Plan, all activities are Electrical Power System Improvements, thus the component categorization is a finer level of detail not related to the eligible activity.

3.4 Grid Resiliency Program ~~Generation Facility at Estate Richmond program~~ (PR1)

Figure 21 CDBG-DR ESPEI Propose Use of Funds PR1

Program Budget	Administering Entity	National Objective	Award	Start-End Date	Area
~~$53,000,000~~ $35,788,437	VIWAPA	LMI/UN 70% goal	~~Single Project~~ Multi Project	Duration of Grant	Territory-wide

Program Description

The newly established eligible activities presented in FR-6261-N-01 for the purpose of the CDBFG-DR EPSEI funds are presented in two categories:

Electrical power system: physical components, technology and services for generation and distribution of power from origination to end user. Implementation necessary for the provision of reliable, resilient, stable, and cost-effective electrical service

Improvements: activities that will extend, upgrade, and otherwise enhance and improve the cost-effectiveness, reliability, efficiency, sustainability, or long-term financial viability of the VI'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.

The ~~Estate Richmond Generation~~ project activities for (PR1) was selected for CDBG-DR electric power system improvement funds through consultation between VIHFA and WAPA. VIHFA reviewed a listing of candidate projects from WAPA, and the two organizations assessed the candidates based on the overall criteria indicated below. These priorities are also consistent with the goals and program considerations outlined in FR-6261-N-01 allocating the funding.

The Grid Resiliency projects ~~Richmond project~~ will follow a formal application process similar to other CDBG-DR-funded infrastructure investments, whereby the subrecipient enters into a formal agreement with VIHFA and additional project details, budgets, and roles and responsibilities are finalized. To the extent that a different candidate project needs to be identified, VIHFA and WAPA will follow the same prioritization procedure for project selection as indicated here:

1. Overall availability of funding: with $67.653 million of total CDBG-DR electrical power system improvements funds, certain projects that meet other criteria but have budgets larger than available funds, across CDBG-DR electrical grid funds and other sources, are removed from consideration to ensure investments lead to complete projects that fulfill a national objective.

2. Low- and moderate-income (LMI) benefits: projects that provide benefits to LMI households and communities, whether through rate savings or through reliability improvements in each Low-/mod-geographic area.

3. Criticality: assessing the extent to which customers who are anticipated to benefit from the project were impacted by Hurricane Maria or Irma and the extent to which customers are likely to lose power in the future or where vulnerabilities to future disasters remain significant.

4. Resilience and sustainability: the extent to which the project incorporates mitigation into the scope, including hardening, the elevation of equipment, and other protective measures, as well as the degree to which sustainable materials are incorporated into project scope, and the extent to which the project furthers decarbonization goals and promotes the use of sustainable energy sources.

5. Project execution and timing: Considerations of shovel-readiness, complexity of environmental review, and the extent to which site selection, permitting, planning and design work have been completed, with an overall focus on the schedule for completion for the project, and the timing for the disbursement of CDBG-DR funds.

6. Technical feasibility: the degree of specialized equipment, the use of innovative technologies, and other considerations that inform the way the project may be implemented.

7. Cost reasonableness: an assessment of the project's economics, including calculation of benefits, that expenditures are justified, and considerations of maintaining operating the project once completed.

For comparison, see also the prioritization criteria for the Electric Power Systems Enhancements and Improvements program funded with VIHFA's primary $1.075 billion CDBG-DR allocation, as described on pages 25-26 of the 3rd substantial amendment to the CDBG-DR Action Plan, as can be accessed here: https://cdbgdr.vihfa.gov/contracts/action-plan/

VIHFA will update the Action Plan, through a substantial or a non-substantial amendment, depending on the extent of updates and modifications and any changes to eligibility or national objective, to provide additional relevant details related to the project once determined.

~~The proposed project consists of installing new power generation up to a capacity of 40 MW at the Estate Richmond Power Plant (ERPP) facility on St. Croix. The project plan also includes a proposed Battery Energy Storage System (BESS) with up to 10 MW/20 MWh (2-hour) of capacity and other equipment needed to facilitate new generation use. The new generators will have multi-fuel capability, which means they can operate on either primary or secondary fuel source(s) or a combination of both. The multi-fuel capability provides greater resilience in that it allows for operation that is more flexible during emergencies and potential disruptions of either fuel supply and also will help reduce high fuel costs through the opportunity for selection of the lowest cost fuel.~~

The proposed project activities consist of a multiple proposed projects that are consistent with the grant requirement.

To mitigate the effects of future severe weather events, WAPA will ensure that assets acquired with this funding are installed in structures and/or housings that are designed to withstand hurricane force wind and seismic conditions per the current ASCE7 codes. Once the new generation becomes available for commercial operation, WAPA plans to retire a current set (18 units in total) of leased generators (currently supplied by Aggreko) which supply approximately 20MW of generation. This project will provide far-reaching benefits to all ratepayers in the target area of the St. Croix District through installation of more affordable, efficient, and reliable power generation technology. The planned project will reduce the cost of electricity production and will allow for improved coordination between system load and the dispatch of generation resources to minimize unnecessary use of fuel.

The combined effects of lower base electricity costs improved operational efficiency and reduced air pollution will help to ensure the security, health, and welfare of all US Virgin Islanders.

Background

~~The island of St. Croix has a population of approximately 50,600 and is situated approximately 40 miles south of the island of St. Thomas and St. John and is the agricultural and manufacturing center of the USVI.~~

~~The Estate Richmond Generating Facility is located at the Estate Richmond site near Christiansted on St Croix and aside from several small renewable plants, is the primary source of generation for the island. The facility has three operable permanent generating units consisting of three combustion turbine units with a total nameplate capacity of approximately 60 megawatts. The facility also has 18 leased reciprocating internal combustion engine generators (Aggreko units) with a total capacity of approximately 20 MW. Figure 16 lists the various units and their capacities.~~

~~This project activity will support the retirement of the leased Aggreko units with the commercial operation of the proposed new generation.~~

~~*Figure 22 Estate Richmond Power Plant Generation Units*~~

~~Unit Designation~~	~~Generation Type~~	~~MW Output~~
~~STX 17~~	~~Combustion Turbine~~	~~20~~
~~STX 19~~	~~Combustion Turbine~~	~~20~~
~~STX 20~~	~~Combustion Turbine~~	~~20~~
~~Aggreko~~	~~RICE (1)~~	~~19.8~~

~~(1) Reciprocating Internal Combustion Engine~~
~~Generator data from VIWAPA IRP Report, Black & Veatch Project NO. 402255, November 2019~~

The Territory continues to have reliability issues in the generation and transmission of electrical power. The proposed activities reflect the other investments to the territory for central power generation and distributed energy resources and/or micro grids. These include new electrical power systems at both generating plants as well as increases in the portfolio of generation to include renewables. There remains an unmet need to

improve the reliability of the electrical power systems. The proposed electrical improvements concentrate the use of funds allocated to VIWAPA for enhancements and improvement of its (1) transmission and distribution lines, (2) substations and (3) enabling technologies and services.

3.5 Customers and Critical Facilities Served ~~by the Estate Richmond Facility~~

~~The Richmond Estate Generating Facility serves all of St. Croix via 10 feeders serving approximately 28,632 customers, as shown in Figure 17. Note that a "customer" is a metered account where a single metered account may serve several residents.~~

~~*Figure 23 WAPA Feeders - St. Croix*~~

~~Feeder~~	~~1A~~	~~2A~~	~~3A~~	~~4A~~	~~5A~~	~~6A~~	~~10A~~	~~8B~~	~~9B~~	~~10B~~	~~Total~~
~~Customers~~	~~1,348~~	~~3,434~~	~~1,748~~	~~2,436~~	~~2,996~~	~~3,796~~	~~2,651~~	~~6,607~~	~~2,448~~	~~1,168~~	~~28,632~~

The Grid Resiliency Program will serve customers territory-wide. These will differ per project activities. Note that a "customer" is a metered account where a single metered account may serve several residents.

Figure 24 Customers by Feeder-Territory-Wide

STX Feeder	1A	2A	3A	4A	5A	6A	10A	8B	9B	10B	Total
Customers	1,348	3,434	1,748	2,436	2,996	3,796	2,651	6,607	2,448	1,168	28,632
STJ Feeder	7E	9E									
	1,304	2,175									
STT Feeder	5A	6A	7A	7B	7C	8A	8B	9A	9B	9C	
	22	3,394	3,282	3,969	4,192	2,092	1,923	N/A*	445	3,232	
STT Feeder	9D	10A	10B								
	N/A*	N/A*	1,809								

N/A: Represents a feeder being out of service with customers transferred to another feeder.

National Objective

Electrical Power Systems Improvements funded through the CDBG–DR program must satisfy at least one national objective. The national objectives are either LMI or Urgent Need. Electrical power system improvements will be considered to meet the criteria for activities benefitting low- and moderate-income persons—area benefit activities if, at grant closeout, 70 percent of the grant funds allocated, satisfy one of the following criteria:

Rate savings: (i) Provide at least fifty-one percent 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

Reliability: (ii) measurably improve the reliability of the electrical power system in low- and moderate-income areas that are primarily residential. For purposes of this paragraph, measurably improved reliability shall mean a documented decrease in power supply interruptions, excluding planned interruptions and interruptions caused by major events.

~~PR1 is intended to meet the *LMI area benefit* national objective alternative requirement for *reliability* because the target applicant, WAPA owns, operates, and maintains the grid infrastructure in the territory; thus, any improvement to the reliability of their local power generation operations will measurably improve the reliability of all residents on St. Croix. Explicitly, since St. Croix is divided into 15 census tracts and all but 2 tracts have greater than 51% of the population designated as LMI, improving WAPA's reliability will directly improve the reliability of the electrical power system in all low- and moderate-income areas on St. Croix that are primarily residential thus, directly benefitting LMI persons. WAPA is best positioned to satisfy the intended use of the funds as is outlined in the federal register. VIHFA intends to work with WAPA and HUD to establish key performance indicators and determine how best to measurably document the decrease in power supply interruptions since some of the data that would typically be used to measure performance is not available due to various system limitations, including but not limited to reduced GIS capabilities, AMI issues, etc.~~

PR1 is intended to meet the *LMI area benefit* national objective alternative requirement for *reliability* because the target applicant, WAPA owns, operates, and maintains the grid infrastructure in the territory; thus, any improvement to the reliability of their local power generation operations will measurably improve the reliability of all residents. Improving WAPA's reliability will directly improve the reliability of the electrical power system for all low- and moderate-income areas in the territory thus directly benefiting LMI persons. WAPA is best positioned to satisfy the intended use of the funds as is outlined in the federal register. VIHFA intends to work with WAPA and HUD to establish key performance indicators and determine how best to measurably document the decrease in power supply interruptions since some of the data that would typically be used to measure performance is not available due to various system limitations, including but not limited to reduced GIS capabilities, AMI issues, etc.

VIHFA may also use CDBG–DR funds allocated to meet the urgent need national objective, pursuant to the waiver and alternative requirement provided by HUD in FR-6261-N-01. Unless VIHFA has received prior approval from HUD, CDBG–DR funds for electrical power system improvements cannot meet the CDBG national objective for the elimination of slum and blight as provided at 24 C.F.R. § 570.208(b) and 24 C.F.R. § 570.483(c). For projects that that will meet an urgent need national objective, the applicant must provide support to document how the project responds to disaster-related impact.

3.6 The Need for the Projects

~~The current arrangement and condition of the Estate Richmond power generation plant on the island of St. Croix can be improved to provide more reliability and resilience on power generation with the cost-effectiveness, efficiency, sustainability, and long-term financial viability of the VI's electrical power system. The following are the areas that need to be considered for the system improvement~~.

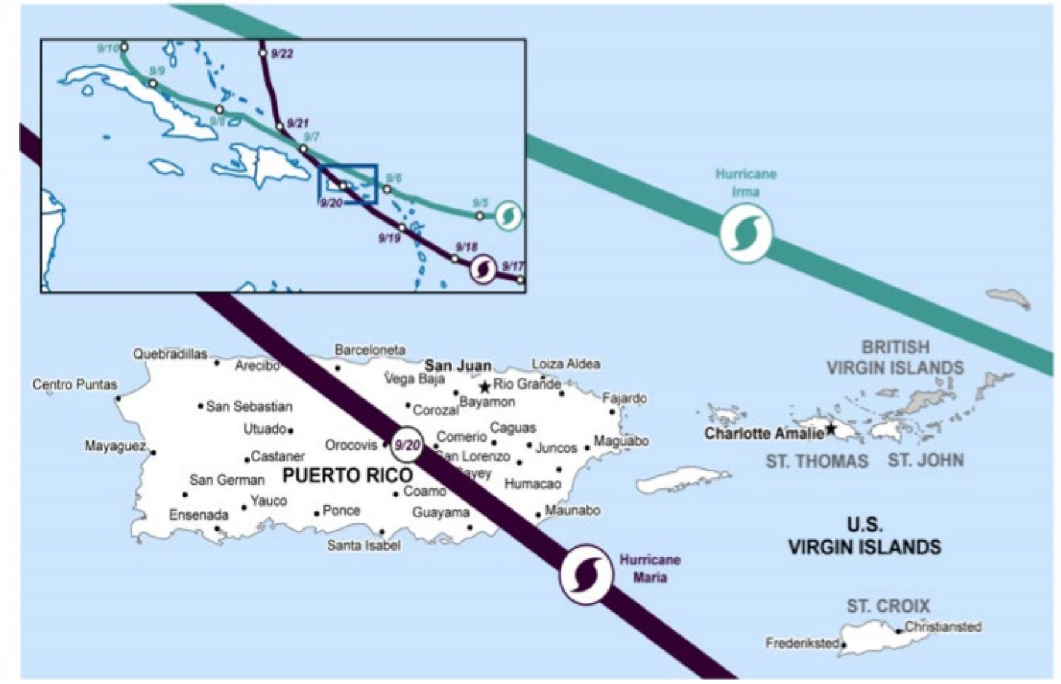
Drawing from Section 2, the different components mentioned in the unmet needs assessment for which CDBG-DR EPSEI funds may be available and consider the severe financial hardship that the Virgin Islands Water and Power Authority is experiencing. This remaining unmet need is the result once damages sustained by the 2017 hurricanes, the costs of incorporating resilience and mitigation measures to address components of the system at risk from future disaster, and the costs of addressing long-term carbon reduction goals are compared to available sources of funding from other sources besides the CDBG-DR electrical system improvements grants, reviews the current state of the VIWAPA electrical grid structure and conditions and factors that are affecting the reliability of the level.

The Grid Resiliency Program addresses electrical components that primarily address the reliability of services that are provided to rate payers. These improvements will ultimately result in cost savings for rate payers.

Frequency of Storms and Incurred Damage to Power Plant Stations

Due to its geographical location, the island of St. Croix is threatened every year by the possibility of tropical storms and hurricanes that can cause severe damage to its infrastructure, bringing widespread hurricane-force winds along with extremely hefty rainfall that produced significant catastrophic flooding and flash flooding. Figure 20 shows the Irma and Maria path in 2017.

Figure 25 Path of Hurricanes Irma and Maria in 2017



Path of Hurricanes Irma and María passed through Virgin Islands, September 2017 (Source: GAO Analysis of National Oceanic and Atmospheric Administration data: Map Resources / GAO-20-221)

The eighteen (18) Aggreko units are located outdoors and vulnerable to storms which impact system reliability. - Environmental data p for the past last 30 years point to four hurricanes that hit the islands and caused severe damage to power plant stations. The table below illustrates the impact of storms on St. Thomas power generating units. In this instance, three power generating units were damaged after the storm.

Figure 26 NOAA Tracking Major Storms in Territory

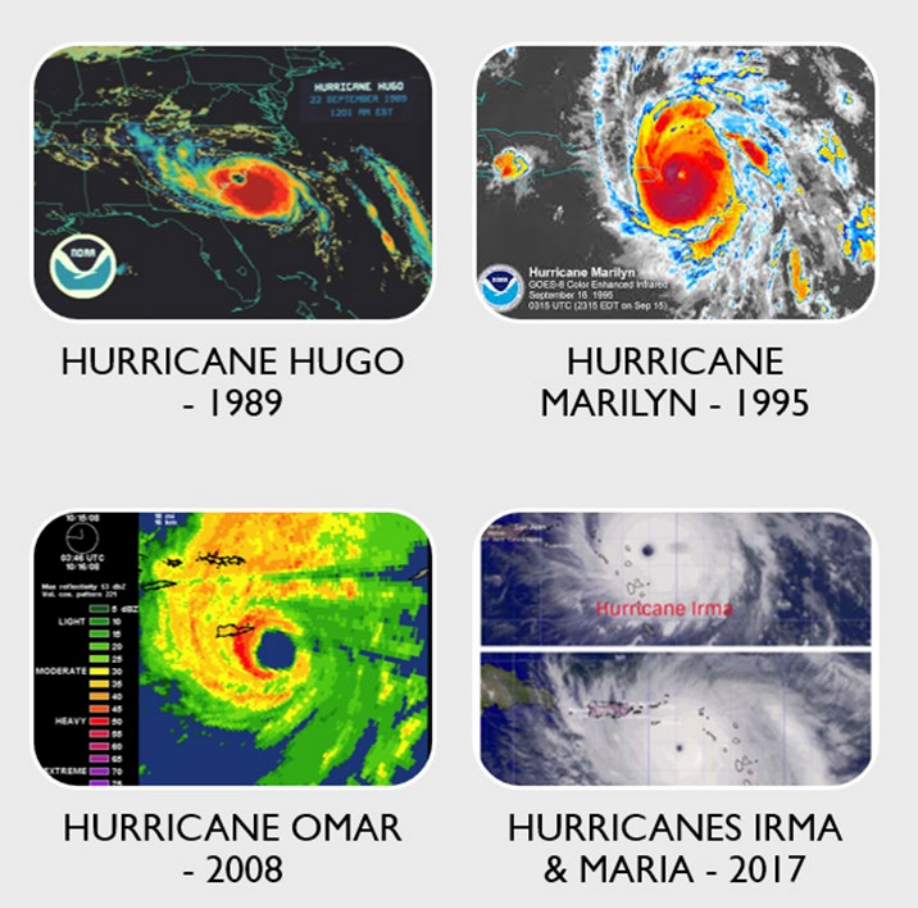


Figure 27 Pre and Post Storm Capacity

ST.THOMAS PRE-STORM

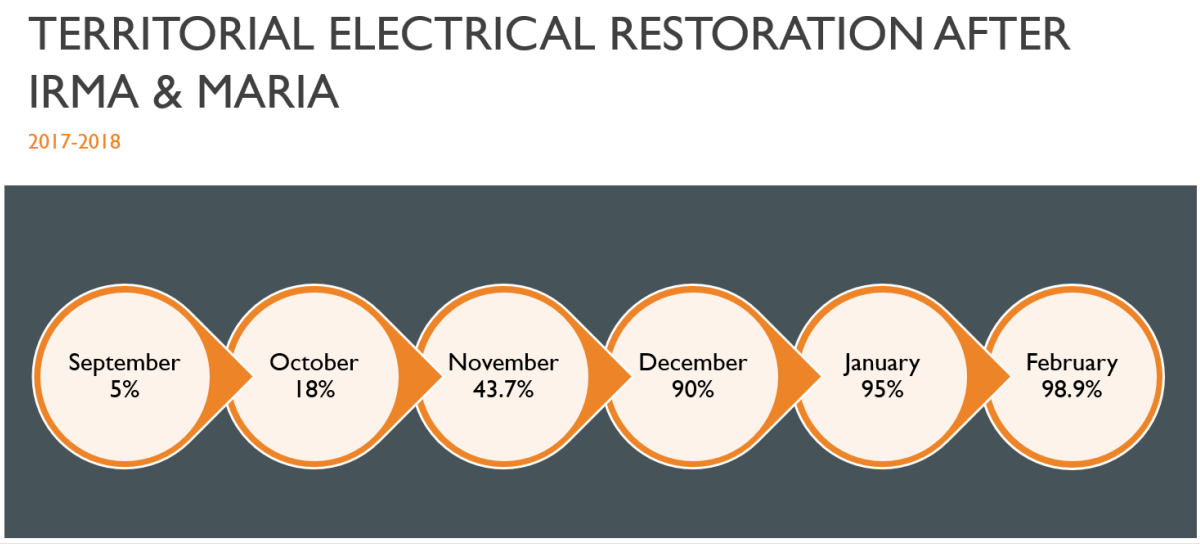
	CAPACITY (MW)	AVAILABILITY
Unit 14	13.6	Available
Unit 15	20.9	Available
Unit 18	22.3	Available
Unit 23	36.5	Unavailable
APR Unit 25	21.4	Available
APR Unit 26	26.0	Available

ST.THOMAS POST-STORM

	CAPACITY (MW)	AVAILABILITY
Unit 14	13.6	Damaged
Unit 15	20.9	Damaged
Unit 18	22.3	Damaged
Unit 23	36.5	Unavailable
APR Unit 25	21.4	Available
APR Unit 26	26.0	Available

In addition, the historical data show that, the restoration of power after storms can be a lengthy process. See the data below for the impact of IRMA and MARIA hurricane on power generating units in Virgin Island. As per USVI PR Power Grid Fed Reg 2021, following hurricanes Irma and Maria, five months of repairs were required to restore power to the USVI.

Figure 28 Restoration Percentages After 2017 Storms



The proposed project activities under PR1 will be designed, installed and built to ~~installation of power generating units inside~~ structures and/or housings that are designed to withstand hurricane force wind and seismic conditions per the current ASCE7 codes will significantly improve resiliency of power generation, expedite power restoration time, and significantly reduce the cost of storm associated damages.

~~Unstable Electrical Frequency with Aggreko Power Generating Units~~

~~One of the critical functions of a power generating facility is to monitor the demand load and adjust the generation output accordingly to maintain a balanced system where generation supply always equals the instantaneous demand. When the system is balanced, the system will provide an electrical frequency (60 Hz) but will deviate from 60Hz when there is an imbalance either above or below between supply and demand. Maintaining the desired frequency i.e., 60HZ for electrical power distribution system is crucial to prevent any damage to electrical equipment, especially for rotating equipment such as motors, electric pumps, electric compressors, etc.~~

~~The leased Aggreko units do not have the capability to follow increased customer demand, which results in unmatched load and generation and unstable electrical frequency. Due to the lack of inertia with the existing Aggreko units, they all trip simultaneously with the loss of a gas turbine resulting in island-wide outages. This results in poorer system frequency regulation, making the system less stable and resilient.~~

~~Electrical frequency instability may result in the internal equipment and machinery burning out or being degraded more quickly than anticipated. Additionally, the need to conduct repair or maintenance raises the overall operating costs of these assets.~~

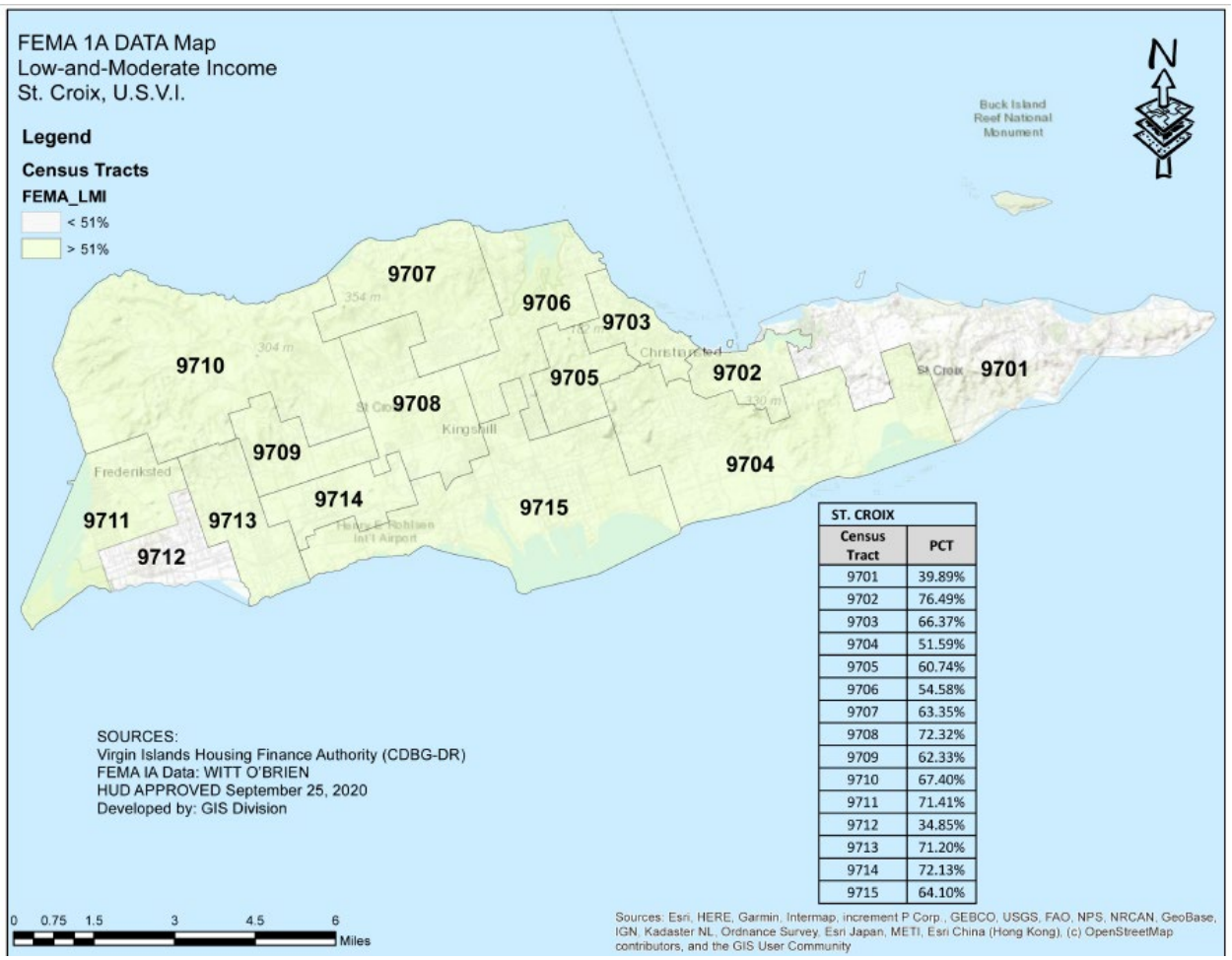
High Cost of Power Generation and Transmission

~~The island of St. Croix has a population of approximately 50,600 and the majority of population can be described as low- and moderate-income.~~ The prohibitive cost of electricity is burdensome on low- and moderate-income families in the territory and any increase beyond the current electrical rates would be

even more challenging. Importantly, Virgin Islanders pay amongst the highest electric utility prices in the Caribbean, and significantly more than U.S. mainland.

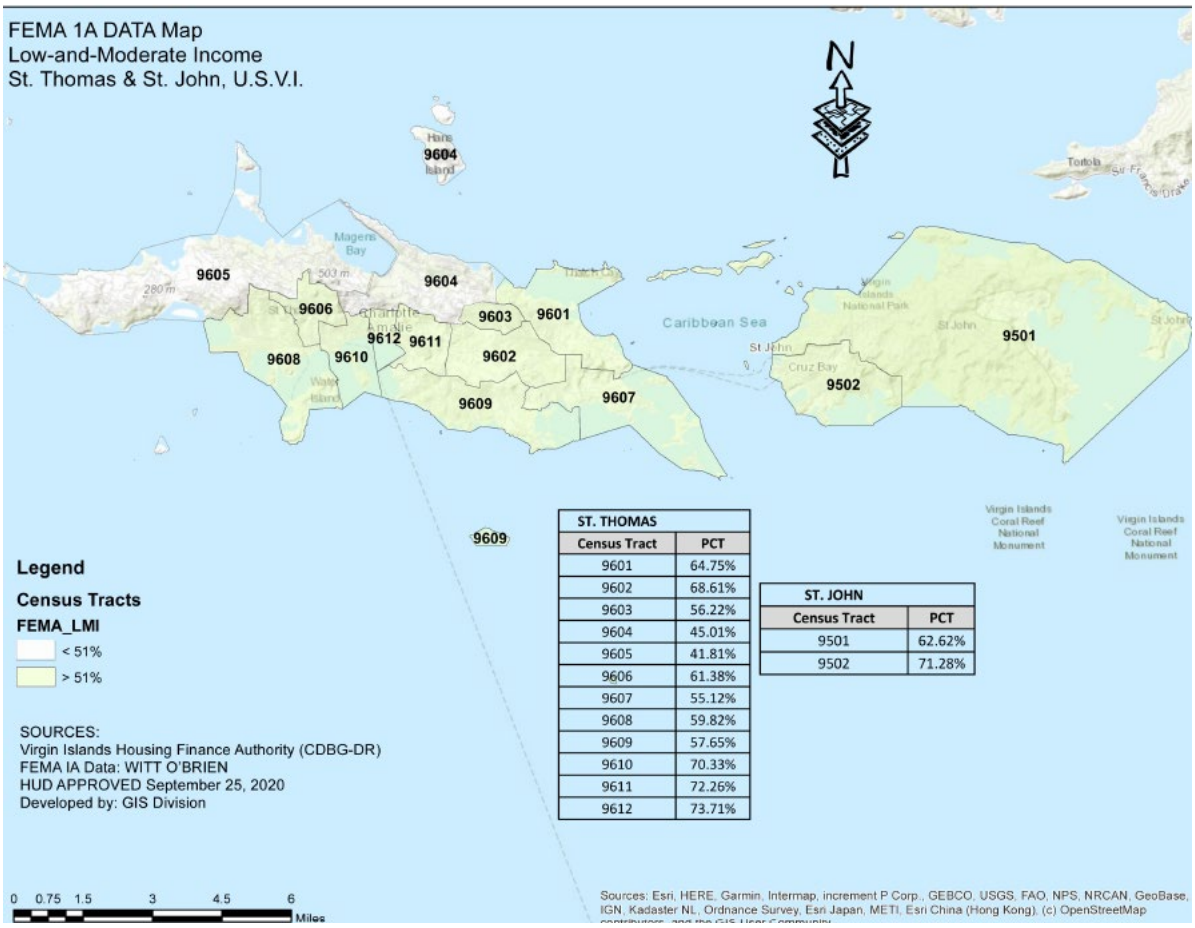
St. Croix is divided into 15 Census tracts as shown in below. St. Thomas and St. John is divided into 12 and 2 Census tracts respectively as shown in below. All but four census tracts have greater than 51% of the population designated as LMI.

Figure 29 St. Croix Census Data



ST. CROIX	
Census Tract	PCT
9701	39.89%
9702	76.49%
9703	66.37%
9704	51.59%
9705	60.74%
9706	54.58%
9707	63.35%
9708	72.32%
9709	62.33%
9710	67.40%
9711	71.41%
9712	34.85%
9713	71.20%
9714	72.13%
9715	64.10%

Using highly efficient and new technology electrical innovation ~~generating units with less fuel consumption and~~ will lessen maintenance operation costs will assure that at least 70% of the CDBG-DR electrical Power System improvements provides benefits to low- and moderate-income persons.



ST. THOMAS	
Census Tract	PCT
9601	64.75%
9602	68.61%
9603	56.22%
9604	45.01%
9605	41.81%
9606	61.38%
9607	55.12%
9608	59.82%
9609	57.65%
9610	70.33%
9611	72.26%
9612	73.71%

ST. JOHN	
Census Tract	PCT
9501	62.62%
9502	71.28%

Lack of Reliable Power Supply for Emergency Loads and Black Start after Hurricane Storms

In addition to the extra capacity generation installations those completed and planned the proposed ~~10MW/20MWh~~ battery energy storage system (BESS) will improve the overall generation facility's resiliency by supporting various power generating scenarios. Some examples of the multiple uses of the BESS include:

1. Backup power: ~~With a peak output of up to 10 MW/20MWh, the~~ The BESS can provide support for the grid in times of emergency to provide power supply to essential loads.
2. Frequency control: A BESS can help regulate the frequency on the grid, helping balance supply and demand in real time by filling in the discrepancies which could result in power failure or blackouts.
3. Renewable Generation Integration: As the potential for solar energy grows in ~~St Croix~~, energy storage can help fill in the gaps in generation for intermittent renewable energy sources.
4. Black-start capability- The BESS can lessen the output needed from central generation from ~~substitute~~ a diesel or gas generator used by power plants to help start up generators after blackouts.

In addition, there are many critical and emergency loads that need reliable backup power. These loads include hospitals, industries, water supplies, communication systems, schools, and housing authorities.

Power System Interdependencies

The electric power system supplies energy essential to many critical services, such as hospitals, industries, schools, water supplies, and communication systems. A fault in the electric power service could endanger the lives of many individuals, such as vulnerable patients in a hospital without a reliable backup power system and negatively affect the operation of commerce and industry. These interdependencies were widely documented in the aftermath of Hurricane María and compounded the long-term impacts on the population. When the electric power system suffers from an outage, connected critical services are hindered or cease to work until the situation is resolved. Frequent outages can cause a chain reaction resulting in the collapse of other essential services.

Financial Impact

WAPA's growing fiscal crisis caused a domino effect in its operational structure with a direct impact on the quality of service. The combination of lack of materials, deteriorated equipment, and the reduced technical workforce delayed the electric power system recovery and continues to impact it. The problem of continued outages due to the poor state of the generation facilities and transmission and distribution infrastructure is affecting the system's reliability, resulting in an unstable and inefficient service for Island residents.

Higher electricity rates in the territory have been another condition that makes stabilizing the economy difficult, across all spectrums, especially in terms of cost burden to vulnerable and low-to moderate-income families. According to the U.S. Energy Information Administration, in 2019, the average price of electricity for residential use -in the territory was higher than rates in 45 of the 50 states. WAPA had to rebuild almost all of its electricity infrastructure after the hurricanes in 2017. The current condition of the system infrastructure has a direct impact on the social fabric of communities and originated with the long history of limited financial capacity of the utility.

3.7. Summary of the Work to Be Done

The overall objective of the program is to identify generation improvements that will achieve a safe, adequate, and reliable supply of power at the lowest reasonable cost and in an environmentally acceptable manner.

- ~~The proposed project consists of installing several permanent generators to replace the leased Aggreko units along with a Battery Energy Storage System (BESS) with a capacity of up to 10 MW/20 MWh and other equipment needed to facilitate use of the new generators to provide environment friendly gas emitting, cost-effective, higher reliability, and resilience for Croix Island.~~
- ~~The generating units will provide core energy generation for the island while the BESS will improve the resiliency of the generation facility.~~
- ~~The types of power generators to be installed have not yet been selected but could include combustion turbines, combined cycle units or reciprocating engines. When the new generators become available for commercial operation, WAPA plans to retire the Aggreko leased generators. Further study and investigation will be implemented to identify the most reliable and cost-effective solution to new power generating units.~~

- ~~The new generating units will be resided in professionally designed buildings that withstand storms and suitable for local seismic activity to prevent and minimize damage to power generating units. Protecting power generating units from storms will provide higher reliability and safety for Island power distribution system.~~
- ~~The new power generating units will be equipped with the most effective load monitoring and controlling devices to maintain desired frequency even if only these generators are providing power to the Island.~~
- ~~Replace wooden power distribution poles with undergrounding cable design, composite poles, and submarine cable between Islands as much as possible under complementary project of FEMA BRIC and 406 HMP's to reduce the risk of incurred damage and interrupting power supply to the customers~~.

The proposed projects consist of the following:

Installing BESS at prioritized substations on St. Thomas and St. Croix. These units will be designed to provide a redundancy component to reduce the number and duration of power interruptions to mainly residential areas. The BESS will provide environmentally friendly, cost effectiveness, and resiliency on the grid.

- Enhanced Grid Stability: BESS can absorb excess energy when generation exceeds demand and supply it back to the grid when needed, helping to balance supply and demand and maintain grid stability1.
- Improved Reliability: By providing backup power during outages or peak demand periods, BESS can enhance the reliability of the power supply and reduce the frequency and duration of power interruptions.
- Cost Savings: BESS can defer the need for costly upgrades to transmission and distribution infrastructure by managing peak loads and providing additional capacity when needed1.
- Integration of Renewable Energy: BESS can store energy generated from renewable sources like solar and wind, which are intermittent by nature, and release it when needed, facilitating the integration of more renewable energy into the grid

Reconductoring transmission lines in areas with heavy vegetation is often done to improve the reliability and capacity of the power grid. Here are some key reasons:

- Increased Capacity: Reconductoring with advanced conductors can double the capacity of existing transmission lines, allowing them to carry more electricity without the need for new infrastructure.
- Improved Reliability: Advanced conductors are more resilient to environmental factors, such as extreme weather and vegetation interference, reducing the risk of outages2.
- Cost-Effectiveness: Upgrading existing lines is generally more cost-effective and faster than building new transmission lines, which can take years to complete1.
- Environmental Impact: By using existing transmission corridors, reconductoring minimizes the environmental impact compared to clearing new paths through heavily vegetated areas

Installing Grid Capacitors and Remote Reclosing Devices territory wide. The deployment of grid capacitors and remote reclosing devices on St. Thomas and St. Croix aims to enhance the reliability

and efficiency of the distribution networks, particularly in residential areas. These units will be strategically installed to reduce the frequency and duration of power interruptions while improving overall grid performance. This initiative offers a combination of operational resilience, cost-effectiveness, and adaptability to modern energy demands.

- Enhanced Grid Stability: Grid capacitors help regulate voltage levels by compensating for reactive power, ensuring a more stable and balanced electrical flow across the distribution network. This reduces strain on the system during peak demand and supports consistent power delivery.
- Improved Reliability: Remote reclosing devices act as automated switches that quickly isolate faults and restore power to unaffected areas. By minimizing the scope and duration of outages, these devices enhance the reliability of the power supply, especially in regions prone to disruptions.
- Cost Savings: By optimizing voltage and reducing energy losses, grid capacitors decrease the need for extensive infrastructure upgrades. Similarly, remote reclosing devices limit the operational costs associated with manual fault repairs and prolonged outages, offering a cost-effective solution for grid management.
- Support for Renewable Energy Integration: Grid capacitors enable smoother integration of renewable energy sources, such as solar and wind, by stabilizing voltage fluctuations caused by their intermittent generation. This ensures the grid remains robust as renewable adoption grows.

The installation of grid capacitors and remote reclosing devices mirrors the benefits seen in projects like Battery Energy Storage Systems (BESS) and reconductoring transmission lines but focuses on enhancing the distribution network. These technologies provide a proactive approach to modernizing the grid, ensuring it meets the needs of residential communities while maintaining efficiency and resilience.

3.8 Project Benefits

Improved Reliability and Resiliency

~~The new power generation units will improve the reliability and resiliency of the power plant~~. As discussed above, power plant reliability is measured using a metric forced outage rate, which is the percentage of scheduled operating time that a generating unit is out of service. The existing generating units have forced outage rates of between 15% and 20%. The higher the forced outage rate of generating units in a plan, the greater the chance of an instance where generation may not be sufficient to meet demand, as happened with the Randolph Harley Plant in June, 2022 on St. Thomas.[7] The new generation units have performance guarantees of forced outage rates of 3% per year and will likely operate with an outage rate closer to 1% per year according to WAPA subject matter experts.

[7] WAPA Issues Statement Regarding Rotational Outages in the St. Thomas / St. John District (viwapa.vi)

The territory wide Grid Resiliency program will not focus on one power plant. Rather the project activities to install electrical power system components improvements throughout WAPA's utility's distribution. These activities will support redundancy at critical substations, the ability to isolate faults from the central location, remove vegetation hazardous, and remove and upgrade grid capacitors, and transformers in the territory.

~~While the Estate Richmond power station plant is 30' above sea level it is not located in a flood zone. To mitigate the effects of future severe weather events, the proposed generators will reside in the newly constructed generator gallery building designed to withstand hurricane force wind and seismic conditions per the latest ASCE7 code.~~ All activity will follow construction standards and land-use decisions that consider responsible floodplain and wetland management and the continued sea level rise. This information will be based on FEMA's history of flood mitigation efforts and taking into consideration projected sea level rise and the frequency and intensity of precipitation events.

The activity will adhere to the following elevation requirements:

"Nonresidential structures must be elevated to the standards described in this paragraph or floodproofed, in accordance with FEMA floodproofing standards at 44 C.F.R. § 60.3(c)(3)(ii) or successor standard, up to at least two feet above the 100-year (or 1 percent annual chance) floodplain. In addition, structural or nonstructural methods may be used to reduce or prevent damage, and the structure may be designed to adapt to, withstand and rapidly recover from a flood event. All Critical Actions, as defined at 24 CFR 55.2(b)(3), within the 500-year (or 0.2 percent 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. Critical Actions are defined as an activity for which even a slight chance of flooding would be too great, because such flooding might result in loss of life, injury to persons or damage to property. For example, Critical Actions include principal utility lines, hospitals, nursing homes, police stations, and fire stations."188.

VIHFA and its subrecipients addressing flood risks, will describe how they will document their decision to elevate structures associated with the electrical power system improvements. Also, VIHFA will document how they evaluated and determined the elevation to be cost reasonable relative to other alternatives or strategies, such as the demolition of substantially damaged structures with reconstruction of an elevated structure on the same site or infrastructure improvements to reduce the risk of loss of life and property per FR-6261-N-01 namely the floodproofing standards of 44 CFR 60.3(c)(3)(iii) as outlined in V.B.1.FR-6261-N-01.

~~The BESS will improve the facility's resiliency by supporting black start capability or the ability to start up the plant after a complete blackout. With a projected peak output of10 MW, the BESS can also support the grid in times of emergency~~. The territory wide Grid Resiliency program will not focus on one power plant. Rather the project activities to install electrical power system components improvements throughout WAPA's utility's distribution. All improvements will be using undergrounding cabling design, composite poles and submarine cable between Islands will improve power distribution reliability from power generation plant to customers.

~~The proposed project will install generation that is "load following" and will thus provide frequency regulation support and in turn improve overall grid stability. The leased Aggreko units are not load following in that they cannot automatically adjust their output in response to changing customer demand.~~

~~The ability to follow changing demand is important to ensure a stable power system frequency which is fundamental in maintaining the reliable function of a power system. In the current configuration, the power system frequency is maintained by the other generating units but not having load following capabilities of the Aggreko units means that the system is less stable when one or more of the other generating units becomes unavailable.~~

Reduced Impact on the Environment

This project is anticipated to reduce emissions from the existing generation being replaced, improving the surrounding community's air quality. ~~Table 10 shows a representative comparison of nitrous oxide emissions for the existing G.E. Frame 5 units versus an example of using GE LM2500 DLE.~~

~~As per the table, the gas emission from existing GE Frame 5 units is between 40% less than that of a potential new replacement power generating unit.~~

~~*Figure 25 Emissions Comparison*~~

~~Unit Type~~	~~NOx~~
~~G.E. Frame 5~~	~~25 ppm [TO BE VERIFIED BY WAPA]~~
~~GE LM2500 DLE~~	~~15 ppm~~

~~GE data sourced from: GEA34340 LM2500 Power Plants 50Hz FS~~

In addition, the BESS will also reduce emissions. Installation of substation BESS will prove redundancy that does not rely on carbon-fuel generation. that must be tested weekly to verify their capability, resulting in emissions during testing. Since the BESS system is emission free, these weekly tests will not contribute to environmental emissions. Additionally, the BESS can be optimized and deployed to support loads at critical periods of time throughout the day thus reducing the reliance on traditional fuel-consuming generation to meet demand. This will reduce WAPA's net emissions from its power generating operations.

It is also important to note that some level of traditional generation will always be required to help maintain grid stability despite the presence of renewables, however, the installation of new generators and the BESS will help enhance WAPA's ability to successfully integrate renewable and clean energy sources by providing better frequency control to compensate for the lack of inertia from the renewable technologies. These efforts will ultimately contribute toward the territory accomplishing the goals outlined in Act 7075.

Integration with FEMA Hazard Mitigation Projects

This project is complementary to the resilience projects for the territory's ~~St. Croix~~ electrical distribution system performed under FEMA BRIC and 406 HMP's which included repairs to damaged transmission and distribution infrastructure including poles, primary and secondary wire, transformers, switches and capacitors, conversions of overhead distribution to underground distribution, replacement of wood pole with stronger, composite poles.

Integration with the USVI Energy Assurance Plan

The 2021 USVI Energy Assurance Plan (EAP), published by the USVI Energy Office outlines a plan for energy resiliency which includes generation transformation. The EAP references the 2019 WAPA Integrated Resource Plan which modeled generation transformation scenarios. For St. Croix, the most

economical scenario included termination of the Aggreko leases and construction of fixed generation units at the Estate Richmond facility.

The EAP focuses on strengthening energy resilience, ensuring reliable infrastructure, and preparing for disruptions. To align with this plan, the Revised PR1 efforts will address load shedding, equipment reliability, and distribution stability.

- Enhance energy security by integrating renewables, upgrading infrastructure, and optimizing demand-side management.
- Improve equipment reliability through proactive maintenance, modernization, and real-time monitoring.
- Mitigate forested-area risks with vegetation control, infrastructure hardening, and rapid emergency response.
- Strengthen distribution stability using smart grids, battery storage, and efficiency programs.
- Optimize crew operations with predictive maintenance, remote monitoring, and fleet improvements.

Cost Assumptions

WAPA utilized the Lazard Levelized Cost of Energy (LCOE) report dated October 2021 as a broad framework for determining capital cost estimates for several types of power generating units. Refer to Appendix A.7 for the Lazard report and more detail about assumptions, and summary of consideration.

As per Lazard's report, the capital cost of power generation for gas peaking and gas combined cycle as prime power generating unit is $925/kW and $1300/kW, respectively.

The unit cost rating includes capitalized financing during construction for generation types with over 12 months for construction time.

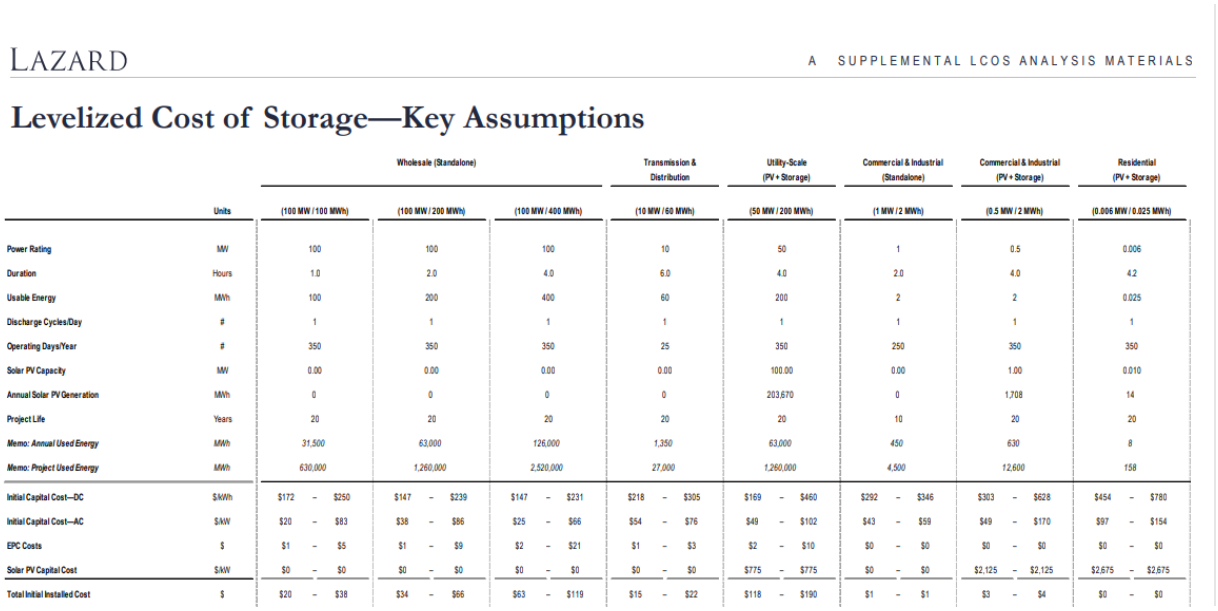
LAZARD

LAZARD'S LEVELIZED COST OF ENERGY ANALYSIS—VERSION 15.0

Levelized Cost of Energy—Key Assumptions (cont'd)

	Units	Gas Peaking		Nuclear (New Build)		Coal (New Build)		Gas Combined Cycle (New Build)	
		Low Case	High Case	Low Case	High Case	Low Case	High Case[3]	Low Case	High Case
Net Facility Output	MW	240	50	2,200	2,200	600	600	550	550
EPC Cost	$/kW	$675	$875	$6,100	$10,025	$2,375	$4,925	$650	$1,175
Capital Cost During Construction	$/kW	$25	$50	$1,675	$2,775	$575	$1,300	$50	$125
Total Capital Cost[1]	$/kW	$700	$925	$7,800	$12,800	$2,950	$6,225	$700	$1,300

The capital cost for BESS units ($/kW) are extracted from the following Levelized Cost of Storage (October 21) report:



LAZARD

A SUPPLEMENTAL LCOS ANALYSIS MATERIALS

Levelized Cost of Storage—Key Assumptions

		Wholesale (Standalone)			Transmission & Distribution	Utility-Scale (PV + Storage)	Commercial & Industrial (Standalone)	Commercial & Industrial (PV + Storage)	Residential (PV + Storage)
	Units	(100 MW / 100 MWh)	(100 MW / 200 MWh)	(100 MW / 400 MWh)	(10 MW / 60 MWh)	(50 MW / 200 MWh)	(1 MW / 2 MWh)	(0.5 MW / 2 MWh)	(0.006 MW / 0.025 MWh)
Power Rating	MW	100	100	100	10	50	1	0.5	0.006
Duration	Hours	1.0	2.0	4.0	6.0	4.0	2.0	4.0	4.2
Usable Energy	MWh	100	200	400	60	200	2	2	0.025
Discharge Cycles/Day	#	1	1	1	1	1	1	1	1
Operating Days/Year	#	350	350	350	25	350	250	350	350
Solar PV Capacity	MW	0.00	0.00	0.00	0.00	100.00	0.00	1.00	0.010
Annual Solar PV Generation	MWh	0	0	0	0	203,670	0	1,708	14
Project Life	Years	20	20	20	20	20	10	20	20
Memo: Annual Used Energy	*MWh*	*31,500*	*63,000*	*126,000*	*1,350*	*63,000*	*450*	*630*	*8*
Memo: Project Used Energy	*MWh*	*630,000*	*1,260,000*	*2,520,000*	*27,000*	*1,260,000*	*4,500*	*12,600*	*158*
Initial Capital Cost—DC	$/kWh	$172 – $250	$147 – $239	$147 – $231	$218 – $305	$169 – $460	$292 – $346	$303 – $628	$454 – $780
Initial Capital Cost—AC	$/kW	$20 – $83	$38 – $86	$25 – $66	$54 – $76	$49 – $102	$43 – $59	$49 – $170	$97 – $154
EPC Costs	$	$1 – $5	$1 – $9	$2 – $21	$1 – $3	$2 – $10	$0 – $0	$0 – $0	$0 – $0
Solar PV Capital Cost	$/kW	$0 – $0	$0 – $0	$0 – $0	$0 – $0	$775 – $775	$0 – $0	$2,125 – $2,125	$2,675 – $2,675
Total Initial Installed Cost	$	$20 – $38	$34 – $66	$63 – $119	$15 – $22	$118 – $190	$1 – $1	$3 – $4	$0 – $0

The actual project cost estimation will be evaluated in the next phase of the project based on the type of most cost-effective power generation, power generating equipment ratings, and through official quotation from approved vendors.

3.9 Other Considerations

Plans to Minimize Displacement and Ensure Accessibility (V.A.2.a 5)

N/A

Construction and Resiliency Standards (V.A.2.a 6)

VIHFA will assure that subrecipients 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. Specifically, PR1 will be implemented in accordance with the following standards to satisfy the corresponding FRN language:

National Electrical Codes (NEC) – the most complete set of electrical code requirements that lead electrical installation, in the most safety way for property and individuals.

• Institute of Electrical and Electronics Engineers (IEEE) Code – commitment to the highest standards of integrity, responsible behavior and ethical and professional conduct.

• Virgin Islands Building Code 2021 – this code includes hazard resistant provisions that provide for safer construction in USVI that also follows 2021 International Building Codes, the model codes and standards used to construct safe, sustainable, affordable and resilient structures.

ASCE 7

ASCE 24

Elevation

As required in FRN 6162-N-01, paragraph V.B.1, VIHFA will apply elevation standards for nonresidential structures construction located in the Effective or Advisory (whichever reflects the highest Base Flood Elevation (BFE)) 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 flood proofed (in accordance with the FEMA standards) to the higher of the 500-year floodplain elevation or three feet above the 100year 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 flood proofed at least three feet above the 100-year floodplain elevation.

Although the Richmond plant is located in an area considered to be of minimal flood hazard (Zone X), to determine whether to elevate structures and their cost reasonableness relative to other alternatives, VIHFA will assure subrecipient(s) will evaluate:

- 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) plus three feet is feasible when considering the potential for transferring flood risk to the surrounding area.

Operation and Maintenance Plans (V.A.2.a 7)

Awardees will describe their plan for ensuring the long-term operation and maintenance (O&M) of the electrical power system improvements funded with CDBG–DR funds. Awardees selected by VIHFA will specify the non-CDBG sources of funding to be used for the O&M of the electrical power system improvements. They must also undergo a capacity assessment to determine their capacity to finance O&M costs and to determine the staff levels necessary to properly maintain the new assets. WAPA intends to contract with a third-party maintenance provider to initially provide support & training and technical assistance during major maintenance events: however, it anticipates that it currently has adequate workforce to support the new assets.

Subrecipients are responsible for the operations and maintenance costs for the electrical power systems improvements funded with CDBG–DR funds. VIHFA will specify in the subrecipient agreement that non-CDBG-DR funding sources shall be used for the operation and maintenance of the electrical power improvement. Subrecipients will describe to VIHFA how they will use reserve funds, borrowing authority or retargeting of existing financial resources to support the O&M plan, and how the Subrecipient plans to ensure that public utility resources and other funding sources, as applicable, are committed to the O&M of the CDBG-DR-funded improvements over the useful life of the improvements.

VIHFA will require all applicants to provide sufficient data to ensure that O&M expenses for the funded activities are budgeted and made available. During the grant cycle, VIHFA will require all subrecipients to provide, annually:

- budgets with five-year actual versus projections of O&M costs for the completed project.
- copies of all O&M agreements that the subrecipients execute for the servicing of assets that were secured through funded activities.

These submissions will be monitored by the Infrastructure Program staff assigned to the subrecipient. Submissions will commence upon the approved application and end at the end of the grant cycle and if subsequent extension of the grant cycle.

Under this O& M requirement, WAPA must describe any proposed changes to existing taxation policies or collection practices, or changes to public utility revenue billing and collection and other financing policies that are to be used to support the O&M plan. VIHFA will expressly include in the Action Plan whether operations and maintenance plans are reliant on any proposed changes in existing taxation policies, tax collection practices, or changes to utility revenue billing and collection. Additionally, VIHFA will describe any State, local, or other resources (e.g., public utility financing) identified for the operation and maintenance costs of electrical power system improvements assisted with CDBG–DR funds.

Cost Verification (V.A.2. 8)

Per FR-6261-N-01, VIHFA will assure that subrecipients programs will be vetted independently with cost verification for programs funded by CDBG-DR funds for electrical system improvements. VIHFA will secure cost verification of each component within the stated programs once project design and approvals have been finalized.

(FR-6261-N-01): “Each grantee must describe its controls for assuring that electrical power system improvement costs, including acquisition and construction costs, are reasonable and consistent with market costs at the time and place of the acquisition or construction. Grantees are encouraged to consider the use of an independent, qualified third-party engineer, construction manager, or other professional (e.g., a cost estimator) to verify the planned project specifications and costs and any significant changes to the specifications or costs of the contract (e.g., change orders) during implementation are reasonable. The method and degree of analysis may vary dependent upon the circumstances surrounding a particular project (e.g., project type, risk, costs), but the description, at a minimum, must address controls for CDBG–DR EPSEI above a certain total project cost threshold identified by the grantee’s cost verification requirements.”

At all times, construction costs must remain reasonable and consistent with market costs at the time and place of construction. If Covered infrastructure projects are implemented in a future change to the Action Plan, the VIHFA will establish specific cost controls for infrastructure, in accordance with accepted HUD standards. The VIHFA will review projects and test for compliance with financial standards and procedures including procurement practices and adherence to cost reasonableness for all operating costs and grant-funded activities. All program expenditures will be evaluated to ensure they are:

- Necessary and reasonable
- Allocable according to the CDBG grant
- Authorized or not prohibited under territory/local laws and regulations.
- Conform to limitations or exclusions (laws, terms, conditions of award, etc.)

- Consistent with policies, regulations, and procedures
- Adequately documented.
- Compliant with all Cross-Cutting Federal Requirements including Uniform Administrative Requirements at 2 CFR 200

Climate Considerations (V.A.2.a 12)

Reduced Impact on the Environment

(FR-62612-N-01): "Climate Considerations. Grantees must describe how the electrical power system improvements will be designed and implemented to address the impacts of climate change, including any nature-based solutions and other improvements that will enhance the ability of the grantee to implement renewable and clean energy sources and strategies, and align with long-term goals for decarbonizing the electricity sector. Nature-based solutions and improvements shall mean natural processes or systems, or engineered systems that mimic natural systems and processes, that are integrated into investments in electrical power system improvements to enhance the resilience of the electrical power system to future disasters.

PR1will address the impacts of climate change by resulting in a net decrease in the volume of WAPA's emissions due to improved efficiency of the newer units as opposed to the 20 MW of generation being replaced. This will also improve the air quality in the surrounding community because the BESS does not produce emissions when supplying energy. ~~Table 11 shows a representative comparison of nitrous oxide emissions for the existing Aggreko units vs. an example of using GE LM2500 DLE. As per the table, the gas emission from existing Aggreko units is between 11 to 18 times that of a potential new replacement power generating unit.~~

~~*Figure 30 Emissions Comparison 2*~~

~~Unit Type~~	~~NOx~~
~~Aggreko Units~~	~~307-489 mg/m3 (170 - 271 ppm based on molecular weight of 44.013)~~
~~GE LM2500 DLE~~	~~15 ppm~~

~~*GE data from: GE LM2500 Power Plants 60Hz*~~

(FR-6261-N-01): "Climate Considerations. Grantees must describe how the electrical power system improvements will be designed and implemented to address the impacts of climate change, including any nature-based solutions and other improvements that will enhance the ability of the grantee to implement renewable and clean energy sources and strategies, and align with long-term goals for decarbonizing the electricity sector. Nature-based solutions and improvements shall mean natural processes or systems, or engineered systems that mimic natural systems and processes, that are integrated into investments in electrical power system improvements to enhance the resilience of the electrical power system to future disasters.

3.10 Community Electrical Innovations Application Program (PR2)

Program Description

The historical lack of reliability in WAPA infrastructure has on occasion left many consumers alone to deliver their own power. Consumers with low to moderate income generally are unable to afford

consideration or installation of a distributed energy resource that can alleviate the service interruptions and can benefit from a significant program funding that aims to secure or provide alternative energy supply to low to moderate income electricity consumers.

To meet the needs of these consumers, VIHFA aims to administer an application program entitled the CDBG-DR Community Electrical Innovations Program ("Innovations Program") for funding innovative ideas for electric power system improvements. The primary focus of the program is to foster community partnerships by identifying organizations that are closest to and best positioned to address local needs. These organizations include daycares, head starts, homeless shelters and retirement homes. The Innovations Program will mitigate electric power supply interruptions to entities that assist vulnerable populations in low- and moderate-income areas. This will support projects that reduce consumption or promote reliability of electricity supply in census tracts with large low- and moderate-income consumers and lower the effects of unstable distribution/generation.

The Innovations Program will address ongoing electrical power grid needs in the Territory. The intent is to allow nonprofit organizations, educational institutions, small businesses, and other interested groups to demonstrate innovative ideas around electrical grid improvements can strategically address vulnerabilities in the Territory's electric grid exposed by the impacts of Hurricanes Maria and Irma. The Innovations Program through its Energy Vulnerability Initiative will enable eligible entities to access emergency generation in an electrical interruption. Entities will have the opportunity to install distributed renewable energy assets such as solar and battery storage that will enable them to function off grid in the event of an electrical outage and/or a severe weather event. These installations also reduce the energy burden on the Low to Moderate Income population.

PR2 -VIHFA intends to facilitate the goals of the Innovations Program through the use of one competent subrecipient. ~~To that end VIHFA will set-aside the entire PR2 funding for the Virgin Islands Energy Office (VIEO) to carry out the Energy Vulnerability Initiative under the Innovations Program due to their experience in undertaking similar projects as well as its role in the Net Energy Billing process~~. To that end VIHFA has engaged the Virgin Islands Energy Office (VIEO) to carry out the Energy Vulnerability Initiative under the Innovations Program due to their experience in undertaking similar projects as well as its role in the Net Energy Billing process. VIEO will administer approximately $10 million of the grant. Under this initiative, VIEO will be responsible for determining beneficiary eligibility, site feasibility, applicant evaluation, national objective compliance, and establish a pool of eligible installers. Upon approval, VIEO will also provide technical support on distributed energy resources such as energy efficiency improvements (according to their Weatherization Assistance Program guidelines), equipment warranties and minimum payback periods.

The VIHFA will increase the PR2 Allocation with a separate allocation for large-scale low to moderate income service providers who will have the additional requirement to act as solarized hubs. These are established entities that have and allow pedestrian and vehicle traffic to their sites and are willing to accommodate public engagements during adverse conditions of service interruptions.

This program is designed to enhance electrical system improvements being implemented with other financial investments. VIHFA will review project applications under this program to ensure that projects address remaining unmet needs, meet CDBG-DR EPSEI program eligibility requirements, and do not result in a duplication of benefits.

VIHFA will ensure all documents which relate to the Innovations Program, including but not limited to program descriptions, program eligibility requirements, applications, the application process, procedures, intake sites, and the appeals process will be made available in a manner consistent with VIHFA's Language Access Plan and Citizen Participation Plan governing these CDBG-DR funds. This is to ensure that any resident can access the information on this program as they need. VIHFA will also conduct outreach and utilize the citizen participation process to promote the program and encourage community organizations and other stakeholders to apply and promote the program.

Program Funding

Funding for Program

Figure 31 CDBG-DR EPSEI PR2 Program Funding

Program Budget	Administering Entity	National Objective	Award	Start-End Date	Area
~~$10,000,000~~ **$19,010,493**	VIHFA	~~Will vary~~ LMI	**Applicant Program**	Duration of Grant	Territory
$2,706,120	VIHFA	~~LMI~~	**Applicant Program**	Duration of Grant	Territory

Application Criteria

The Innovations Program will be open to requests for funding of $150,000 or more that address remaining unmet needs, considering other electrical grid improvements. Several factors will be used to evaluate applications for funding:

Evaluation Criteria

VIHFA has already developed a draft scoring criterion for electric grid project applicants applying for the Community Electrical Innovations Application Program based on the following eight priority policy factors:

1. **National Objective & Grant Objective** - the extent to which projects support LMI versus urgent needs Scoring preference will be given to innovative projects that meet an LMI national objective. Projects that benefit LMI Persons will be given max points for this priority factor, while Urgent Need projects will not receive any points.
2. **Electrical Service -** The extent to which activities address duration and frequency of outages in the project area.
3. **Schedule -** An assessment of whether the overall schedule can be completed in grant cycle, including activities such as environmental permitting, design, and construction. 100% of the fund allocation must be expended within six years of HUD's execution of the grant agreement.
4. **Sustainability -** To what degree green or sustainable methods be incorporated into the project, such as promotion of energy efficiency or renewable sources of generation.
5. **Resilience -** The extent to which resiliency and mitigation measures are incorporated. Funded projects are required to mitigate vulnerabilities through hardening and other measures.
6. **Project Requirements -** The extent to which specialized equipment, or innovative technology, is incorporated.
7. **Institutional Capacity -** The applicant's ability to carry out the project, including staff, budget, ROI, leverage, future revenue, and resources to fund maintenance and improvements.

8. **Cost Reasonableness -** An assessment of the accuracy of states costs. This includes questioning environmental assessments, the future maintenance or self-maintenance of improvements, and future ownership.

Timeline

Each project will develop its own timeline, which will be incorporated into the relevant subrecipient agreements.

Goals of Program

The overall goal of the program is to enhance other electrical power system improvement projects that may be currently being implemented with other financial investments, with the scope including community outreach and engagement, inclusion, and partnerships.

The VIHFA is targeting several goals through the implementation of its Community Electrical Innovations Application Program:

i. Fostering community partnerships by identifying organizations that are closest to and best positioned to address local needs. Conduct outreach with various organizations and engage with them in project implementation and serving the needs of various programs and stakeholder groups.
ii. Ensuring inclusion of vulnerable populations and organizations who might not otherwise have as direct access to resources that facilitate electrical improvements, or who have been historically disengaged from recovery efforts. The needs of vulnerable populations, populations with disabilities, and individuals with limited proficiency in English or having other language access considerations, may be able to be better addressed through the services of partner organizations and committed stakeholders instead of through government agencies directly.
iii. Providing benefits and empowering execution at a local community or organization level beyond just providing funding on an individual-by-individual basis. Local communities may be better able to innovate or be fit as pilot projects in ways that do not fit for public utilities, or local communities may be better able to implement nuts-and-bolts, straightforward projects that are a smaller scale than what larger authorities may be able to advance efficiently. Many community organizations have their missions promoting climate resilience, greenhouse gas emissions reductions, or solar or renewable energy projects. And many community organizations are involved in work, whether workforce development, the restoration of housing, the provision of services for elderly or disabled populations, that are complemented and enhanced by potential investments in electrical power systems, including through project implementation, planning assistance, and capacity building efforts.
iv. Advancing projects that improve electrical power systems and address remaining unmet needs. VIHFA recognizes that not all potential projects may be currently identified by organizations who have received funding for such projects. Some potential projects may exist at a local or community level and may not be on the radar of governmental entities or regulated utilities.

VIHFA will manage a competitive process for eligible applicants to submit applications for energy resilience, electrical power systems improvements, and other innovative projects that advance resiliency of power systems based on the prioritization criteria described in this Action Plan.

Reduced Impact on the Environment

As per V.A.2.1.12 of (FR-6261-N-01): "Climate Considerations. Grantees must describe how the electrical power system improvements will be designed and implemented to address the impacts of climate change, including any nature-based solutions and other improvements that will enhance the ability of the grantee to implement renewable and clean energy sources and strategies, and align with long-term goals for decarbonizing the electricity sector. Nature-based solutions and improvements shall mean natural processes or systems, or engineered systems that mimic natural systems and processes, that are integrated into investments in electrical power system improvements to enhance the resilience of the electrical power system to future disasters.

PR2 will address the impacts of climate change by reducing the amount of energy consumed that is generated by fossil fuels as the smaller facilities served by this activity will be implementing renewable technology to meet their energy demand.

Eligible Applicants

Public, private, for-profit, or nonprofit entities, including, but not limited to educational organizations, affordable housing developers, social services providers, community organizations, public authorities and governmental organizations, and organizations with experience working with low- to moderate-income populations or vulnerable populations or other groups whose participation promotes equity and engagement. For private businesses, only small businesses employing 100 or fewer employees are eligible to apply.

Eligible Activity

The Community Electrical Innovations Application Program encourages innovation at a community level in achieving improvements to electrical systems. Funding is primarily made available for 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 U.S. Virgin Islands' electrical power systems. This includes activities to increase the resilience of system features to future disasters and to address the impacts of climate change. VIHFA will encourage applications that provide the most advance technology and support innovations that maximize and are aligned with the US Virgin Islands Renewable and Alternative Energy Act of 2009 (Act 7075) along with other technologies that address and respond to the territory's needs to reduce future risk.

Project Funding Structure

Funding for operational, administrative, and overhead costs that are not direct project costs will be limited to 5% of the total grant award for a given application.

The CDBG-DR Electrical Grid Improvements program requires funds to be used for necessary expenses for enhancement or improvement of the electrical power system. The Federal Register Notice established a waiver and alternative requirement that creates electrical power system improvements as a CDBG-DR eligible activity.

The activity must be CDBG eligible or allowed via a waiver, address a disaster-related impact in a Presidentially declared county, and meet a national objective. Disaster related activities are those that demonstrate:

i. A logical connection to the disaster, and
ii. How the activity will contribute to long-term recovery

Note: Grantees must determine what documentation is sufficient and reasonable to show how activities respond to a disaster-related impact. Figure 28 gives a sample subset of potential projects that can fulfill unmet needs under the Community Electrical Innovations Applications Program to provide affordable and reliable electricity to vulnerable LMI customers.

Figure 32 Community Innovations Application Program Sample Projects

Consumer-Side	1. Local renewables generation, community backup clean energy (including biofuel compatible generators) 2. Community/independent/institutional resilience through self-generation, redundancy, hardening, and backup supply 3. Microgrid solutions 4. Energy efficiency improvements
Local Distribution	1. Covering conductors 2. Undergrounding 3. Substation / other infrastructure elevation 4. Resilience-as-a-Service

Ineligible Activities

- Operation and Maintenance Costs of a public utility
- Costs of fuel or energy purchase contracts in effect prior to the applicability date of the Federal Register Notice
- Activities on private land that do not demonstrate a public benefit
- Equipment Purchases

Available Assistance for Capacity Building

If identified as a need, technical assistance will be made available and capacity building resources to selected organizations to ensure grant awardees have the capacity and knowledge to manage the CDBG-DR funding and meet requirements. The technical assistance provided will help organizations with navigating program requirements by equipping them with the knowledge, skills, and tools to successfully implement the Community Electrical Innovations program. VIHFA staff will work closely with program applicants selected for capacity building technical assistance to determine the level of need for full program participation and implementation. Applications will call for workforce capacity and development components.

National Objective

Electrical Power Systems Improvements funded through the CDBG–DR program must satisfy at least one national objective. The national objectives are either LMI or Urgent Need. Electrical power system improvements will be considered to meet the LMI objective for activities benefitting low- and moderate-

income persons if, at grant closeout, 70 percent of the grant funds allocated, satisfy one of the following criteria:

- Rate savings: (i) Provide at least fifty-one percent 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

- Reliability: (ii) measurably improve the reliability of the electrical power system in low- and moderate-income areas that are primarily residential. For the purposes of this paragraph, measurably improved reliability shall mean a documented decrease in power supply interruptions, excluding planned interruptions and interruptions caused by major events.

PR2 is intended to meet the *LMI area* benefit national objective alternative requirement for *reliability* by targeting applicants with experience working with low- to moderate-income populations or vulnerable populations or other groups whose participation promotes equity and engagement. This is reflected in the aforementioned evaluation criteria above. This program will make it possible for them to implement improvements to the electrical infrastructure of their facilities to make them more resilient, reliable and energy efficient so that the LMI populations that they serve will yield the direct benefits. VIHFA intends to work with awarded entities to establish key performance indicators and determine how best to measurably document the decrease in power supply interruptions.

VIHFA may also use CDBG–DR funds allocated to meet the *urgent need national objective*, pursuant to the waiver and alternative requirement provided by HUD in FR-6261-N-01. Unless VIHFA has received prior approval from HUD, CDBG–DR funds for electrical power system improvements cannot meet the CDBG national objective for the elimination of slum and blight as provided at 24 C.F.R. § 570.208(b) and 24 C.F.R. § 570.483(c). For projects that that will meet an urgent need national objective, the applicant must provide support to document how the project responds to disaster-related impact.

Operation and Maintenance

Awardees will describe their plan for ensuring the long-term operation and maintenance (O&M) of the electrical power system improvements funded with CDBG–DR funds. Awardees selected by VIHFA will specify the non-CDBG sources of funding to be used for the O&M of the electrical power system improvements. They must also undergo a capacity assessment to determine their capacity to finance O&M costs. Subrecipients are responsible for the operations and maintenance costs for the electrical power systems improvements funded with CDBG–DR funds. VIHFA will specify in the subrecipient agreement that non-CDBG-DR funding sources shall be used for the operation and maintenance of the electrical power improvement. Subrecipients will describe to VIHFA how they will use reserve funds, borrowing authority or retargeting of existing financial resources to support the O&M plan, and how the Subrecipient plans to ensure that public utility resources and other funding sources, as applicable, are committed to the O&M of the CDBG-DR-funded improvements over the useful life of the improvements.

VIHFA will require all applicants to provide sufficient data to ensure that O&M expenses for the funded activities are budgeted and made available. During the grant cycle, VIHFA will require all subrecipients to provide, annually:

- budgets with five-year actual versus projections of O&M costs for the completed project.

- copies of all O&M agreements that the subrecipients execute for the servicing of assets that were secured through funded activities.

These submissions will be monitored by the Infrastructure Program staff assigned to the subrecipient. Submissions will commence upon the approved application and end at the end of the grant cycle and if subsequent extension of the grant cycle.

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PR2 Cost Verification

In accordance with the guidance in V.2.a.8 of FR-6262-N-01, VIHFA will assure that subrecipients programs will be vetted independently with cost verification for programs funded by CDBG-DR funds for electrical system improvements. VIHFA will secure cost verification of each component within the stated programs once project design and approvals have been finalized. At all times, construction costs must remain reasonable and consistent with market costs at the time and place of construction. If Covered infrastructure projects are implemented in a future change to the Action Plan, the VIHFA will establish specific cost controls for infrastructure, in accordance with accepted HUD standards. The VIHFA will review projects and test for compliance with financial standards and procedures including procurement practices and adherence to cost reasonableness for all operating costs and grant-funded activities. All program expenditures will be evaluated to ensure they are:

- Necessary and reasonable
- Allocable according to the CDBG contract
- Authorized or not prohibited under territory/local laws and regulations.
- Conform to limitations or exclusions (laws, terms, conditions of award, etc.)
- Consistent with policies, regulations, and procedures
- Adequately documented.
- Compliant with all Cross-Cutting Federal Requirements including Uniform Administrative Requirements at 2 CFR 200

(FR-6262-N-01): “Each grantee must describe its controls for assuring that electrical power system improvement costs, including acquisition and construction costs, are reasonable and consistent with market costs at the time and place of the acquisition or construction. Grantees are encouraged to consider the use of an independent, qualified third-party engineer, construction manager, or other professional (*e.g.,* a cost estimator) to verify the planned project specifications and costs and any significant changes to the specifications or costs of the contract (*e.g.,* change orders) during implementation are reasonable. The method and degree of analysis may vary dependent upon the circumstances surrounding a particular project (*e.g.,* project type, risk, costs), but the description, at a minimum, must address controls for CDBG–DR electrical power system improvements above a certain total project cost threshold identified by the grantee’s cost verification requirements.”

Geographic Location

As required in FR-6262-N-01, the geographic location for deploying Community Electrical Innovations Application Program will be governed by the following factors:

i. Locations with unmet needs from existing programs, such as the execution of the "~~Generation Facility at Estate Richmond~~ Grid Resiliency program." This will be considered when assessing a grantee's application's geographic location.
ii. The focus of geographic locations will be Vulnerable Populations, Underserved Communities, and Low- and Moderate- Income Persons *(V.A.2.a Action Plan)*. The extent to which activities benefit LMI persons, require project maps and census tract data to determine the number of people under 50% and 80% median area income and other demographic information fulfilling V.A.8.c. from the federal register, i.e., 70% of the grant funds allocation, not including planning and administration costs
iii. Locations that sufficiently demonstrate accounting for climate considerations to enhance the resilience of the electrical power system to future disasters *(V.A.2.a Action Plan)*.

Construction and Resiliency Standards

VIHFA will assure that subrecipients 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. Specifically, PR2 will be implemented in accordance with the following standards to satisfy the corresponding FRN language:

National Electrical Codes (NEC) – the most complete set of electrical code requirements that lead electrical installation, in the most safety way for property and individuals.

• Institute of Electrical and Electronics Engineers (IEEE) Code – commitment to the highest standards of integrity, responsible behavior and ethical and professional conduct.

• Virgin Islands Building Code 2021 – this code includes hazard resistant provisions that provide for safer construction in USVI that also follows 2021 International Building Codes, the model codes and standards used to construct safe, sustainable, affordable and resilient structures.

3.11 Infrastructure and Other Non-Residential Structures

Per the requirements in FR-6262-N-01, grantees applying for funds must address the following requirements:

V.B.1 Construction Standards and Elevation Requirements

VIHFA will follow construction standards and land-use decisions that consider responsible floodplain and wetland management and the continued sea level rise. This information will be based on FEMA's history of flood mitigation efforts and taking into consideration projected sea level rise and the frequency and intensity of precipitation events, adhering to the following requirement:

> "Nonresidential structures must be elevated to the standards described in this paragraph or floodproofed, in accordance with FEMA floodproofing standards at 44 C.F.R. § 60.3(c)(3)(ii) or successor standard, up to at least two feet above the 100-year (or 1 percent annual chance) floodplain. In addition, structural or nonstructural methods may be used to reduce or prevent damage, and the structure may be designed to adapt to, withstand and rapidly recover from a

flood event. All Critical Actions, as defined at 24 CFR 55.2(b)(3), within the 500-year (or 0.2 percent 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. Critical Actions are defined as an activity for which even a slight chance of flooding would be significant because such flooding might result in loss of life, injury to persons or damage to property. For example, Critical Actions include principal utility lines, hospitals, nursing homes, police stations, and fire stations."

Each grantee must describe how it plans to: (a) Emphasize quality, durability, resiliency, energy efficiency and sustainability in its electrical power system improvements; (b) promote sound, sustainable long-term recovery planning informed by a post-disaster evaluation of hazard risk, especially construction standards and land-use decisions that reflect responsible floodplain and wetland management and take into account continued sea level rise—this information should be based on the history of FEMA flood mitigation efforts and take into account projected increase in sea level (if applicable) and the frequency and intensity of precipitation events; and (c) adhere to the elevation requirements established in section V.B.1. of this notice, if applicable. For grantees addressing flood risks, the grantee must describe how it will document its decision to elevate structures associated with its electrical power system improvements and how it evaluated and determined the elevation to be cost reasonable relative to other alternatives or strategies, such as the demolition of substantially damaged structures with reconstruction of an elevated structure on the same site or infrastructure improvements to reduce the risk of loss of life and property.

VIHFA may, in the alternative, use a FEMA-approved flood standard when each of the following conditions is in place: (i) CDBG–DR funds are used as the non-federal match for FEMA assistance; (ii) the FEMA-assisted activity, for which CDBG–DR funds will be used as match, commenced prior to HUD's obligation of CDBG–DR funds to the grantee; and (iii) the grantee has determined and demonstrated with records in the activity file that implementation costs of the required CDBG–DR elevation or flood proofing up to two feet (or three feet for critical actions) is not reasonable as that term is defined in the applicable cost principles at 2 CFR 200.404. Under this provision and criterion (ii) above, HUD considers the FEMA-assisted activity to have ''commenced'' on the date on which the HUD grantee has incurred a project cost that has been or will be charged to an approved FEMA PW. This may include pre-award costs if FEMA determines that the costs are eligible.

V.B.2 Limitation of use of eminent domain

"CDBG–DR funds may not be used to support any Federal, state, or local projects that seek to use the power of eminent domain, unless eminent domain is employed only for public use. For this paragraph's purposes, public use shall not be construed to include economic development that benefits private entities. Any use of funds for mass transit, railroad, airport, seaport or highway projects, as well as utility projects which benefit or serve the general public (including energy related, communication-related, water related, and wastewater-related infrastructure), other structures designated for use by the general public or which have other common-carrier or public-utility functions that serve the general public and are subject to regulation and oversight by the government, and projects for the removal of an immediate threat to public health and safety or brownfields as defined in the Small Business Liability Relief and Brownfields Revitalization Act (Pub. L. 107–118) shall be considered."

V.B.3 Refinancing or payment of dept for acquisition

“Pursuant to the definition of electrical power system improvements established in section V.A.8.a.(ii) of this notice, 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, and a demonstration by the grantee that such acquisition is critical to the improvement of the grantee’s electrical power system and to long term financial stability of the grantee’s public utility and will allow the grantee to meet a low- and moderate-income national objective as established by this notice.”

V.B.4 HUD consultation on use of other CDBG-DR and CDBG-MIT funds

“The unprecedented levels of HUD and other federal funding for disaster recovery and mitigation provided to Puerto Rico and the USVI and the specialized nature of the electrical power system improvement activity funded pursuant to this notice, warrant additional consultation by HUD with its federal partners when a grantee proposes to use other CDBG–DR funds or CDBG–MIT funds for electrical power system improvement to ensure that all funds are used for necessary expenses, as required by the Appropriations Act.

Accordingly, grantees are prohibited from using CDBG–DR funds previously obligated for recovery from a 2017 disaster or CDBG–MIT funds for activities to enhance or improve electrical power systems until HUD properly consults and coordinates with its Federal members through the TCT on other Federally funded investments for this purpose. This limitation includes a prohibition on the use of CDBG–DR or CDBG–MIT funds to meet the matching requirement, share, or contribution for any Federally funded project that is providing funding for electrical power systems until HUD completes its consultation. HUD will inform the grantee when its consultation has been completed.”

V.B.5 Prohibiting assistance to private utilities

“Funds made available under this notice 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 demonstrated to be necessary to implement the project.”

4.0 COORDINATION & STAKEHOLDER ENGAGEMENT

4.1 Background & Introduction

Background

The stakeholder engagement process involves the efforts undertaken as part of the Action Plan draft development process by VIHFA; and the outreach and public input activities conducted as part of the Action Plan public comment period. Island government, WAPA, VIHFA and the local communities were considered critical stakeholders for the development of the plan, and the future implementation of such plan by phases, as will be described herein.

~~In addition,~~ Originally, VIHFA ~~is~~ was required by FR-6262-N-01 to consult with the federal members of the Energy Technical Coordination Team (TCT) in the development of the Action Plan providing guidance and comments through periodic meetings and formal interaction with VIHFA. DOE is the leading federal agency responsible for coordinating with other agencies such as FEMA, U.S. Army Corps of Engineers (USACE), and U.S. Environmental Protection Agency (EPA) through the creation of an Energy TCT. Importantly, citizens and other affected entities will also participate and provide valuable feedback on the Action Plan draft. Pursuant to FR 6412-N-01, the TCT consultation requirement will no longer apply; however, at HUD's request, VIHFA shall engage with its TCT to provide updates on the implementation of CDBG-DR, CDBG-MIT, and other federal funding for electrical power system improvements until grant closeout.

Introduction

The U.S. Department of Housing and Urban Development (HUD) is allocating $67,653,000 in CDBG-DR funds to support Electrical Power System Improvements in the Virgin Islands recovery from Hurricane Irma and María. CDBG-DR EPSEI Funds will be used to address remaining systems restoration and improvements costs not already covered through other sources of funding.

4.2 About Coordinating Partners

The coordinating partners include WAPA, the USVI Public Service Commission, US HUD, FEMA, ICF, USVI Energy Office, University of the Virgin Islands, ICF, USVIHFA, Department of Energy, and community partners. The coordinating partners provide the subrecipient with technical expertise and assist with the planning phase of CDBG DR. The partnership provides a coordinated effort that will ensure CDBG DR funds for the electrical grid are spent in the most effective manner possible. The primary coordinating partners are described in more detail as follows.

VIHFA

VIHFA oversees and operates programs to create an adequate supply of affordable housing to meet the needs of low- and moderate-income families in the Territory. The Authority was established in 1981. VIHFA is the lead agency for the Territory's allocation of CDBG-DR and CDBG-MIT funding following Hurricanes Irma and Maria in 2017.

Agency website: www.vihfa.vi.gov

In its administration of the $67.653 million CDBG-DR funds for electrical power systems improvements, VIHFA has coordinated with other local agencies and stakeholders in the USVI on assessing the impacts of the storms on the electrical power system, sharing policies and data, and evaluating funding options in consideration of various strategic resource plans and the recommendations of various reports and studies related to storm recovery and energy transformation. VIFHA has coordinated with the following local governmental agencies and stakeholder organizations:

WAPA

About: WAPA is an autonomous agency of the Virgin Islands Government which produces and distributes electricity and drinking water to residential and commercial customers in the territory. WAPA was created in 1964 through Act No. 1248. WAPA owns and operates the territory's electric power systems and is pursuing reductions in fuel costs and improvements to generating efficiencies and to organizational and operational cost structures.

Agency website: https://viwapa.vi

Virgin Islands Energy Office (VIEO)

About: The VIEO was established under the Office of the Governor in 1974 under executive Order 182-1974. It is charged with planning, overseeing, and coordinating energy programs, implementing energy policy and coordinating across the Executive Branch and the Central Government. VIEO's mission includes the promotion of sustainable energy policies in the USVI. Amongst other programs, VIEO is piloting a Real-Time Energy Monitoring (REM) program that allows residents and small businesses to monitor their energy usage with the goal of gaining a better understanding of energy usage and increasing energy equity in across the community.

Agency website: https://energy.vi.gov

Virgin Islands Territorial Emergency Management Agency – (VITEMA)

About: VITEMA has the primary responsibility for ensuring the territory's resilience to disasters. VITEMA takes an all-hazards approach to emergency management and works to ensure the Territory have the ability recovery rapidly from disasters by assessing and mitigating risks, promoting preparedness, coordinating response, and building recovery capacity. VITEMA partners with federal, state, and local government agencies, and with members of the private sector.

Agency website: www.vitema.vi.gov

Public Services Commission (PSC)

About: The PSC regulates all public utilities operating in the U.S. Virgin Islands, including electric. The PSC consists of seven voting members and two ex-officio members. The Commission sets utility rates that balance reasonableness for customers while allowing regulated utilities to provide adequate and reliable service and earn a return on investment. PSC is also involved in establishing regulatory standards and ensuring their broad and fair enforcement.

Agency website: www.psc.vi.gov

Office of Disaster Recovery (ODR)

About: The ODR, within the Virgin Islands Public Finance Authority, serves as the center of coordination for federal funds for recovery efforts in the territory. ODR administers broad oversight of funds and ensures full compliance of regulations in the management and disbursement of project funds, expenditures, and timelines. The ODR plays a critical role in coordination, integration, and oversight to ensure the efficient and effective use of federal disaster aid and to foster accountability and transparency in government spending.

Agency website: www.usiodr.com

UVI Caribbean Green Technology Center

About: The Caribbean Green Technology Center (CGTC) is an initiative of the University of the Virgin Islands (UVI). Its mission is to teach, develop, and help implement the use of green technologies to enhance the social and economic transformation of the U.S. Virgin Islands and the Caribbean. CGTC staff are part of the USVI Comprehensive Energy Strategic Plan (CESP) leadership team, who are incorporating community input with data and analytics to create an energy plan that reduces the Territory's dependence on fossil fuels. The UVI has also furnished data on social vulnerability that has helped inform investment decisions.

Agency website: https://cgtc-usvi.org

4.3 Technical Coordination Team

During the development of the Electric Power System Improvements Action Plan, VIHFA consulted with stakeholders of the energy sector, including affected local governments, public utilities (WAPA), rural electrical cooperatives, commercial and industrial users of the system through the different associations and representatives, and residential customers and public interest groups representing residential customers of the system.

These engagement efforts also included the required consultation with the Federal Energy Technical Coordination Team (TCT) members on the Electric Power System Improvement Action Plan development. The Energy TCT was established to:

- Coordinate across local and federal agencies on the use of economic assistance provided for electrical power system improvements
- Provide support through technical assistance and other planning resources
- Review the Action Plan and provide feedback on implementation

These are the local and federal members of the Energy TCT that participated in the consultation meetings for the development of the Electrical Power System Improvement Action Plan:

- HUD
- FEMA
- DOE
- WAPA
- VIHFA
- ICF
- ODR
- Public Service Commission
- Virgin Islands Energy Office
- University of Virgin Island

In the development of the publication of the Action Plan, VIHFA consulted with the TCT on the following areas:

- VIHFA's proposed budget for electrical power system improvements to be funded with CDBG-DR funds; and
- The technical evaluation of proposed electrical power system improvements using models and other sources of expert assistance available from TCT Federal members.

Upon HUD's approval of the Action Plan, VIHFA shall consult with the TCT in the following areas:

- The evaluation of the financial and operational capacity of any public utility that will receive a subaward or otherwise carry out a portion of the grant and the mitigation of risk associated with the public utility's use of CDBG–DR funds; and
- To request recommendations for appropriate controls to mitigate the fiscal management, program, and other risks of noncompliance related to the public utility's use of Federal funding for electrical power system improvements.

Pursuant with FR 6412-N-01, January 22, 2024, the VIHFA no longer required the consult with the TCT. (Source: Federal Register V0lume 89, No. 14.)

4.4 Long Term Planning

With Electric Utility and FEMA Infrastructure Plan, Energy Sectors, and Alignment with Other Grid Improvements and Infrastructure Projects

USVI Local government officials, through WAPA, have worked with FEMA and other Federal Agencies to allocate funds for the reconstruction of local utility infrastructure and Public Facilities.

Previous FEMA funds and CBDG-DR Funding have been allocated to Hazard Mitigation Projects in the territory. Those include the upgrade of underground infrastructure for critical facilities and densely populated area, install composite poles to strengthen overhead distribution system, replace aging generation units with smaller, more efficient generation and to integrate renewable energy, smart controls, and battery storage.

The Funds from CDBG-DR EPSEI Funds address pending system restoration and improvement costs not already covered through other sources of funding. The driver for these new funds is to incorporate mitigation and resiliency into projects, to promote the use of renewable energy and storage and to reduce emissions of greenhouse gas emitting sources by efficiency measures. These funds present the opportunity for community investments, distributed generation, solar, wind and localized power projects throughout the territory. All the projects included in this Action Plan are aligned with the US Virgin Islands Renewable and Alternative Energy Act of 2009 (Act 7075) plans to reduce the use of fossil fuels by 60% by the year 2025.

4.5 How Rates Work

USVI residents and businesses pay one of the highest electrical rates in the U.S due to its dependence on imported fossil fuels for electricity generation. As of March 01, 2022, the rates for residential customers established by WAPA were $0.408479/kWh for the first 250 kWh, and $0.434677 for all other kWh. For Commercial customers, the rate is $0.473556. A breakdown of the rate is described as follows:

Sample Calculations	First 250kWH	All Other kWH
Residential Energy Charge:	$0.181456	$0.181456
Fuel Charge:	$0.2222496	$0.222246
Pilot Surcharge:	$0.000686	$0.000686
Self-Insurance Surcharge:	$0.001925	$0.001925
OPEB Surcharge:	$0.002166	$0.002166
Total Residential Surcharge:	$0.408479 / kWH	**$0.408479 / kWh**

In addition to the kWh rates, all customers are assessed a flat rate customer charge.

Residential:	$4.86
Commercial:	$6.33 / Single Phase
Commercial: OBJ	$12.65 / Three Phase

Recently, WAPA presented a Situation Overview and Strategic Plan Update that presents a dire financial situation due to higher cost of operation and past due balances. To avoid critical vendors cutting off service and rolling blackouts due to insufficient fuel purchases, two options were presented to raise rates to cover the cash shortfall in the short term. The first scenario would raise rates to $0.57/kWh from the current $0.41/kWh to cover existing costs of operations but would not cover payment for past due invoices; or raise rates to $0.62/kWh to cover costs and past due payment to critical vendors. Assuming sufficient revenue generation, the rates would go back to $0.57/kWh after 12 months.

It is possible that the infusion of CDBG funding into the USVI electrical grid may result in lower rates for residential service. However, the impact of CDBG investment on residential electric rates is unknown.

4.6 Consultation with Local Governments, Indian Tribes, & Public Housing Authorities

The VIHFA is committed to robust public participation for all programs, including CDBG DR. As such, the VIHFA has developed a Citizen Participation Plan in accordance with applicable rules and the Federal registers that guide specific funding allocations.

Citizen Participation

It has been the primary goal of the public hearing process to create an environment to receive feedback and guidance from citizens and stakeholders throughout the Territory to shape project and program design, allocation amounts, and community needs. Further, the driver of community engagement and impacted jurisdictions is to course-correct the Plan and to include elements that may have been overlooked. It is difficult to gauge reactions on sometimes divisive issues, such as new construction or

development, which has both significant supporters and understandable hesitance. VIHFA will work to incorporate feedback into program development to ensure that the programs that are funded effectively meet the needs of the affected individuals.

VIHFA in all planning efforts and in the delivery of disaster-related programs and services will ensure that all residents have equal access to information about the programs, including low- and-moderate income persons, persons with disabilities, the elderly, and those with limited English proficiency (LEP).

The VIHFA has a commitment to providing meaningful participation opportunities to all its residents. During the development of the Action Plan, community organizations as well as WAPA were engaged to both identify needs and suggest programmatic activities to assist disaster-impacted vulnerable populations.

The grantee is required to plan at least two public hearings on the proposed Action Plan, with at least one of these public hearings occurring prior to the grantee's publication of its Action Plan on its website for public comment. Unless the grantee conducts a virtual hearing pursuant to section V.A.3.b., all hearings are to be convened at various locations that reflect geographic balance and ensure maximum accessibility. Virtual hearings (alone, or in concert with an in-person hearing) are permissible if the virtual hearing allows for questions in real time, with answers coming directly from the grantee's representatives to all attendees. (86 FR)

Initial Action Plan

The VIHFA convened two (2) public hearings prior to posting the Draft Action Plan (Draft), as well as one (1) public meeting following to announce the upcoming publication.

First Public Hearing: Thursday, September 15, 2022, at 5:30 PM
Second Public Hearing: Tuesday, September 20, 2022, at 3:00 PM
Third Public Hearing: Wednesday, November 9, 2022, at 6:00 PM

All the sites were handicapped accessible and VIHFA provided sign language interpretation for the hearing impaired as requested.

Non-Substantial Action Plan Amendment

The VIHFA convened three (3) public town halls prior to posting the Non-Substantial Amendment Action Plan (NSAP), to announce the upcoming publication.

STX Townhall – April 16, 2024 – VIPA Conference Room at the Henry Rohlsen Airport – 6pm-7pm
STT Townhall – April 17, 2024 – UVI SBDC Training Facility – 6pm-7pm
STJ Townhall – April 18, 2024 - Julius Sprauve School – 6pm-7pm

Substantial Action Plan Amendment

The VIHFA will convene a public hearing on ##.##.### to reflect and comply with the requirements of the Grant.

Going forward, VIHFA intends to continue with this level of public outreach for all substantial amendments to the Action Plan, using the public meetings and thirty -day public comment period or other timeline consistent with the relevant Federal Register Notice.

In addition, the VIHFA has a strong history of continuous engagement with the individuals and households it serves. It is their intent to continue this with the CDBG- DR Electrical Power System Improvements implementation, using mobile intake centers, community meetings, radio information, and continuing engagement with organizations and advocacy groups that represent vulnerable populations.

IHFA also intends to publish in English, Spanish and any other languages identified in the VIHFA's Language Access Plan, all vital documents which will include program descriptions; program eligibility requirements; applications; application process, procedures, and intake sites, appeal process. In addition, with the completion of the Language Access Plan, additional detail will be provided regarding other language needs that will need to be addressed to ensure that any resident with Limited English proficiency is able to access the programs they need.

The Virgin Island's outreach and citizen participation process will continue throughout the program planning and recovery process. Staff from VIHFA, the Governor's office and task force, and other territorial departments will continue to solicit input from all constituencies, and to use that input to inform program priorities.

Consideration of Public Comments

VIHFA will consider comments on the Action Plan or substantial amendments received in writing, via email, verbally via or expressed in-person. Additionally, to permit public examination and accountability, VIFHA will make formal comments regarding Action Plans or substantial amendments publicly available in English and Spanish at www.vihfa.gov. VIHFA responses to comments regarding Action Plans, or substantial amendments, will also be posted to the website.

The Action Plan will be posted on the VIHFA website for at least forty-five (45) days. Copies must be made available if requested. Locations for copies include the VIHFA offices, and at public libraries, public agencies that will be involved in the CDBG- DR Electrical Power System Improvements program and will be delivered upon request for persons that are homebound.

Written comments will be accepted throughout the 45-day public comment period, and oral comments will be captured and maintained at the public hearings. All comments and views will be considered, and a summary of all comments will be included in the Draft Action Plan.

Citizen Involvement in the Substantial Amendment Process

Substantial amendments are subject to a thirty (30) calendar day public comment period and shall be posted to the VIFHA website, where citizens will also be able to submit electronic comments or follow instructions for submitted written comments by alternative means listed on the website. Citizen participation for substantial amendments to the Action Plan will follow the VIHFA Citizen Participation Plan, available in English and Spanish at www.vihfa.gov. Changes made via substantial amendments to

the Action Plan will be highlighted or otherwise identified within the context of the entire Electrical Power System Enhancements and Improvements Action Plan. As required by FR-6262-N-01 p.32688, every substantial amendment will include the following:

- A section that identifies the content being added, deleted, or changed;
- Chart or table that clearly illustrates where funds are coming from and where they are moving to; and
- A revised budget allocation table that reflects all funds.

A substantial amendment is defined as an amendment that contemplates one (1) or more of the following:

- Any Change in a program benefit or eligibility criteria.
- Addition or deletion of an activity or a component of the electrical power improvements; or
- Allocation or reallocation of more than 10% of grant funds.

Non-substantial Amendments to this Action Plan are not subject to a public comment period and will, therefore, follow HUD procedure requiring VIHFA to notify HUD at least five (5) business days before the amendment becomes effective. All non-substantial amendments will be posted to the VIFHA public website.

Citizen Participation Plan

HUD programs require that subrecipients develop, maintain, and follow Citizen Participation Plans.

As set forth in the FR 626-N-01, p. 32689, Section V.A. 3.a. as well as in VIHFA's Citizen Participation Plan Version 3, revised on 10-13-2022; the VIHFA was required to convene at least two (2) public hearings in the HUD identified MID areas (the entire USVI is a HUD MID area) to obtain citizen views; and to respond to proposals and questions. The Notice further requires that one of the public hearings be held prior to the publication of public comment of its Plan on the website; and that all hearings are convened in various locations to ensure geographic balance and maximum accessibility.

The Citizen Participation Plan as revised on 10-13-2022 reflects the requirements of FR-6261-N-01 and may be found at Citizen Participation - Virgin Islands Housing Finance Authority (vihfa.gov).

4.7 Funding Leverage

In the wake of the hurricanes that devastated the electrical grid of the USVI, several funding sources have been identified to repair current damage, enhance reliability, and mitigate against future damage. Leveraged funding for the entire electrical grid includes the following:

Figure 33 Funding Leverage

Total $1,402,215,179					
FEMA	**$1,063,082,532**	**WAPA**	**$10,302,161**	**CDBG**	**$328,830,486**
Public Assistance:	$807,783,127	Capital (2023)	$7,768,237	DR:	$87,927,156
HMGP:	$255,299,405	Insurance:	$2,533,924	DR:	$95,903,330
				MIT:	$145,000,000

The ~~two projects~~ three proposed programs in this Action Plan, ~~Estate Richmond~~ Grid Resiliency, and the Community Innovations Application program, have no leveraged resources, and if not for this allocation of CDBG DR, would not be implemented.

5.0 GENERAL REQUIREMENTS

5.1 Low- and Moderate-Income Priority

The anticipated benefits from the projects and activities described in this CDBG DR EPSEI Action Plan will accrue to LMI residents in the Territory, as mandated by HUD regulations. This allocation of CDBG DR funds is unique in that it allows assistance to be granted to public utilities for the purpose of enhancing the reliability of the electric grid.

In addition to serving the LMI community, the electrical grid activities funded must either:

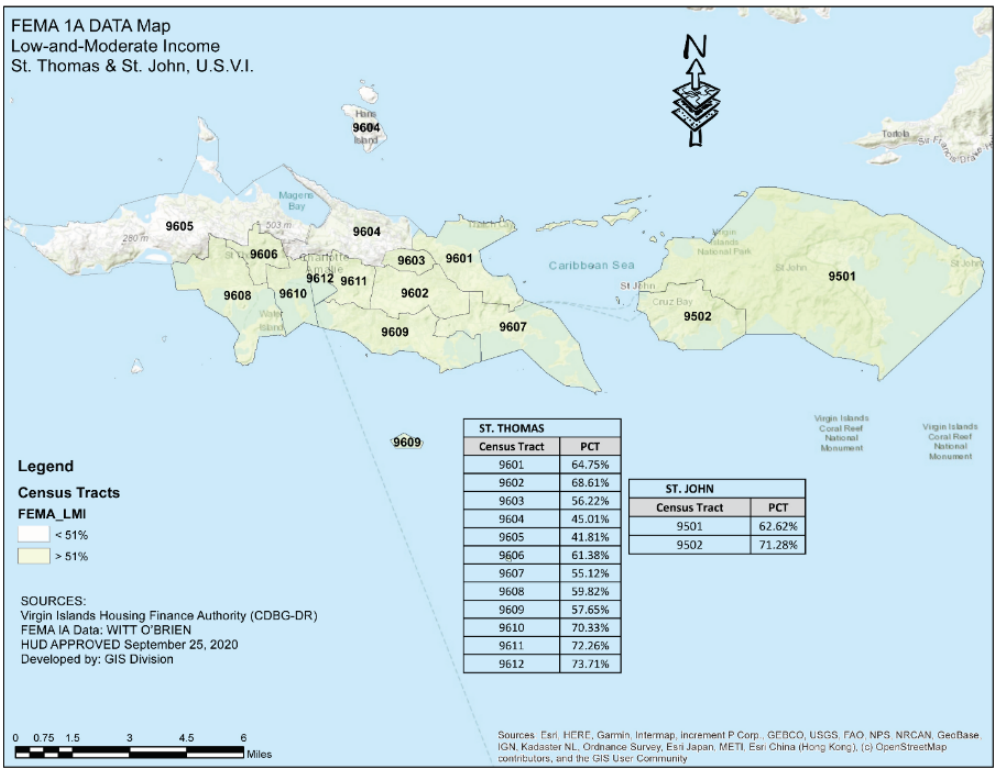
- Subsidize or lower the rate for electricity charged for residential use, or
- Measurably Improve the reliability of the electrical power system in low-and-moderate income areas that are primarily residential.

Census provides the dataset used for analyzing the demographic profile for the Territory, as the census tract level given that the American Community Survey is not conducted in the Territory. However, to ensure a more accurate and comprehensive view of the socioeconomic characteristics of the U.S. Virgin Islands' population, 2010 data were supplemented with insights from the most recent U.S. Virgin Islands Community Survey conducted by the University of the Virgin Islands (available at the island level) and various U.S. Virgin Islands government agencies, including the Bureau of Economic Research and the Department of Labor, including the most recently available FEMA Data Maps, which are included below. Taken together, the three main islands show a similar demographic profile, with high percentages of Low to Moderate Income (LMI) Individuals. In 2020 HUD approved the USVI use of FEMA IA data to determine LMI residents on an area basis under a survey methodology as set forth in the CDBG regulations under 24 CFR 570.483(b)(1)(i).

The anticipated benefits from the projects and activities described in this CDBG DR Electrical Grid Action Plan will accrue to LMI residents in the Territory, as mandated by HUD regulations. The median household income in the Territory is 25% lower than the national median ($37,254 compared to $51,914), and 22% of the population is below the poverty level (compared to 14.4% nationally). Of the three principal islands, St. Croix faces the more severe economic vulnerability with 26% of residents living below the poverty line, with an island-wide median household income of $36,042. The poverty rate is 7% higher than in St. Thomas and 11% higher than in St. John (United States Virgin Islands Housing Finance Authority, 2018). According to the US Virgin Islands Community Survey, approximately 25% of all persons in the Islands live in poverty, and income per capita is $20,156. The following table shows the percent of low and moderate income (LMI) households for each Census Tract based on 2010 Census data. Just over half (52%) of households in the Virgin Islands are LMI households, though this figure varies slightly between the Islands and more significantly between Census Tracts. In analyzing prior census data, the VIHFA previously encountered findings that did not align with pre-storm and current conditions within the Territory. Specifically, the data utilized for income designation of households was not indicative of the current economic and income profile of residents of the U.S. Virgin Islands. Given discrepancies between the prohibitive costs of living in the U.S. Virgin Islands (including the fair market rents that do not align with the wages, the higher construction costs, and the exceptionally high average costs of electricity paid by Territory residents, and the income limits set by HUD), the VIHFA developed an alternative method of

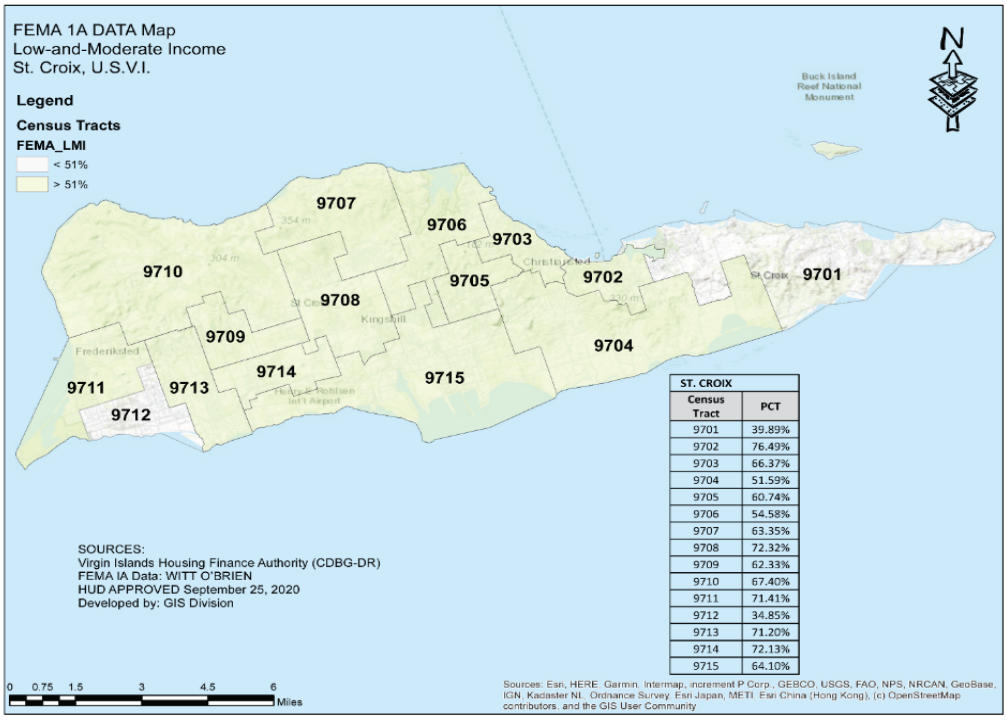
documenting income using information from the FEMA Individual Assistance income data that more accurately represents incomes in the Territory. The VIHFA received a waiver from HUD in 2020 that permitted use of that more recent data to capture Virgin Island residents' income status more accurately, which is reflected on the following pages.

Figure 34 LMI St. Thomas, St. John and St. Croix



ST. THOMAS	
Census Tract	PCT
9601	64.75%
9602	68.61%
9603	56.22%
9604	45.01%
9605	41.81%
9606	61.38%
9607	55.12%
9608	59.82%
9609	57.65%
9610	70.33%
9611	72.26%
9612	73.71%

ST. JOHN	
Census Tract	PCT
9501	62.62%
9502	71.28%



While the use of 2010 Census Bureau data for evaluating the projected income status of the beneficiaries within the existing established geographical boundaries unfairly represents the pre-storm and current community characteristics of the USVI, utilizing the FEMA IA data collected immediately after the storm provides a more comprehensive and representative income data set. To address the extent of. the storms' impact, it is necessary to examine their effects first on LMI populations and the most vulnerable households, given the planned scope of the MIT-AP, with a high LMI population existing in the Territory even before the two storms made landfall, as shown in the 2010 Census data, and reflected below:

Figure 35 Percent of Low- and Moderate-Income Households in the USVI

Census Tract (Subdistrict)	% LMI Households	Census Tract	% LMI Households
USVI	**52%**		
St. Croix	**46%**		
9701 (East End)	29%	9709 (Northwest)	69%
9702 (Christiansted)	59%	9710 (Northwest)	42%
9703 (Sion Farm)	58%	9711 (Frederiksted)	56%
9704 (Anna's Hope Village)	32%	9712 (Southwest)	44%
9705 (Sion Farm)	37%	9713 (Southwest)	50%
9706 (Sion Farm)	31%	9714 (Southcentral)	48%
9707 (Northcentral)	42%	9715 (Southcentral)	40%
9708 (Southcentral/Northcentral)	59%		
St. John	**55%**		
9501 (Central/Coral Bay)	54%	9502 (Cruz Bay)	55%
St. Thomas	**58%**		
9601 (East End)	59%	9607 (East End/Red Hook)	55%

9602 (East End)	59%	9608 (Charlotte Amalie West)	60%
9603 (Tutu)	56%	9609 (Southside)	58%
9604 (Northside)	42%	9610 (Charlotte Amalie)	70%
9605 (Northside/West End)	38%	9611 (Charlotte Amalie East)	72%
9606 (Northside/Charlotte Amalie)	61%	9612 (Charlotte Amalie)	74%
Source: US Census – 2010. Cited in 2018 CDBG-DR Action Plan.			

The following figures illustrate the distribution of low-income households (those earning less than $30,000 per year) across the islands. Both Frederiksted and Christiansted on St. Croix see higher proportions of low-income households. Charlotte Amalie on St. Thomas is similarly comprised of low-income households, with approximately one-third earning less than $30,000.

Figure 36 St. Croix Low-Income Household Percentages

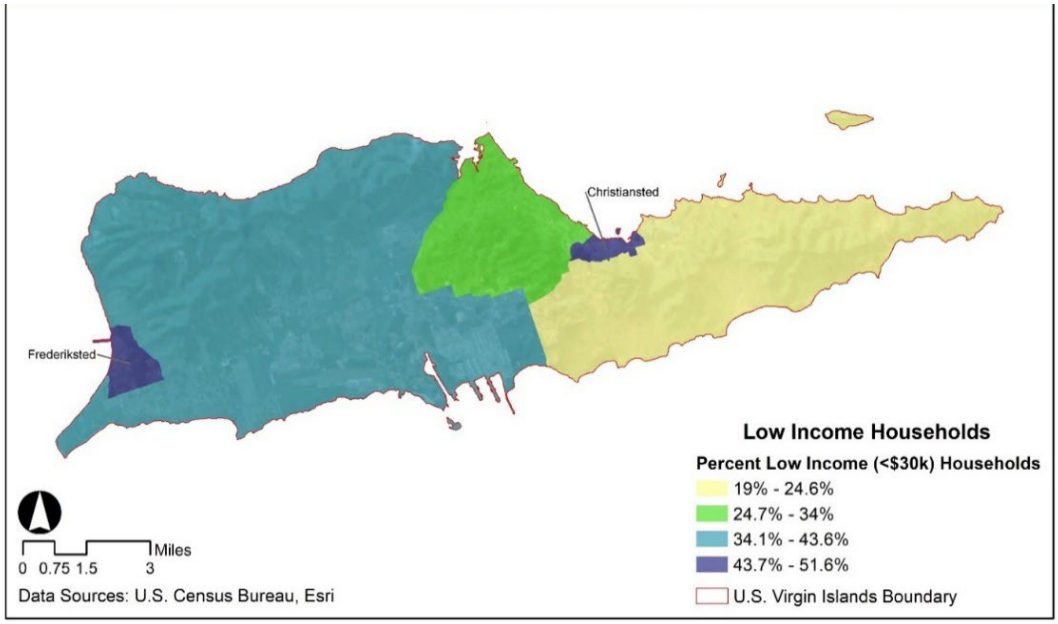


Figure 37 St Thomas Low Income Household Percentages

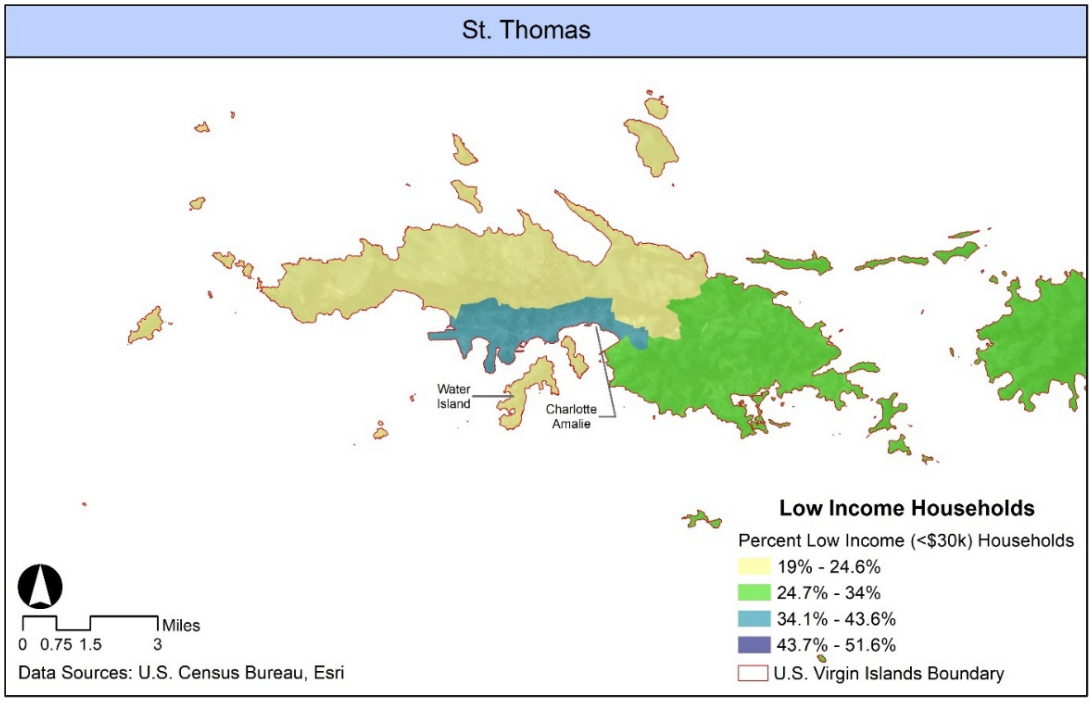
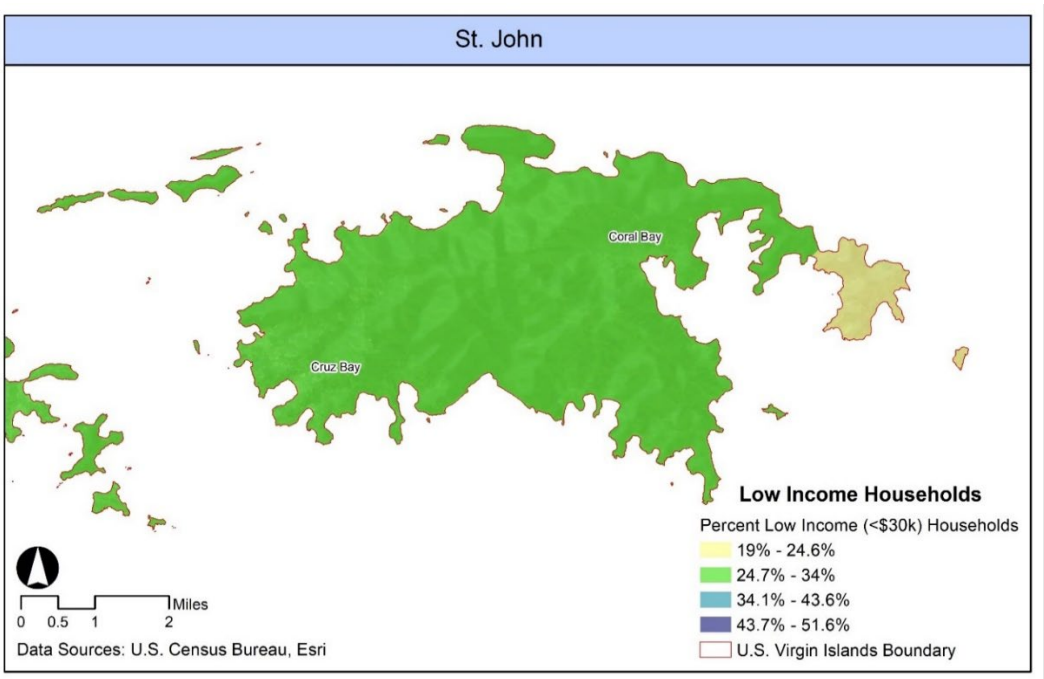


Figure 38 St. John Low Income Household Percentages



5.2 Technical Coordination Team

The Federal Register 6261-N-01 ~~requires~~ required a Technical Coordination Team (TCT) to help with the planning and implementation of CDBG DR Electrical Power System Enhancements and Improvements Action Plan development (page 32682). The TCT was established to:

- Coordinate across local and federal agencies on the use of economic assistance provided for electrical power system improvements
- Provide support through technical assistance and other planning resources
- Review the Action Plan and provide feedback on implementation

During the development of the initial CDBG-DR EPSEI Action Plan, VIFHA consulted with stakeholders of the energy sector, including affected local governments, public utilities (WAPA), local universities (particularly the University of the Virgin Islands), and other stakeholder associations and representatives, and residential customers and public interest groups representing residential customers of the system, particularly through the scheduled public hearings and throughout the public comment process.

The TCT ~~is~~ was fully staffed and operational at ~~this~~ that time. Members include local and federal members of the Energy TCT that participated in the consultation meetings for the development of the initial CDBG-DR EPSEI Action Plan:

- HUD
- FEMA
- DOE
- WAPA
- VIHFA
- ICF
- ODR
- Public Service Commission
- Virgin Islands Energy Office
- University of Virgin Island

These engagement efforts also included the required consultation with the Federal Technical Coordination Team (TCT) members on the Action Plan development. VIHFA was a participant, amongst other parties, of quarterly TCT meetings. VIHFA requested and received Technical Assistance from the TCT and utilized the TCT as a source of information on planning and coordination endeavors. The TCT established an Action Plan Working Group at VIHFA's request, through which regular meetings were held in May, June, and September 2022. Through continued collaboration with the TCT, VIHFA gathered the information and documents needed to prepare the initial CDBG-DR EPSEI Action Plan.

Pursuant to FR 6412-N-01, the TCT consultation requirement will no longer apply; however, at HUD's request, VIHFA shall engage with its TCT to provide updates on the implementation of CDBG-DR, CDBG-MIT, and other federal funding for electrical power system improvements until grant closeout.

5.3 Addressing Needs of Vulnerable Populations

The VIHFA will address the needs of vulnerable populations by locating electrical grid enhancements and improvements projects in areas of greatest need. The ~~Estate Richmond Project will benefit ST. Croix~~, ~~which is majority low-income~~ Grid Resiliency Program will cover LMI beneficiaries territory-wide. The Community Innovation Program is a competitive application that will emphasize improved electrical resiliency to the most vulnerable communities, such as housing authority properties, health care facilities, and long-term care housing.

In addition, the VIHFA has adopted a robust Citizen Participation Plan as part of the CDBG DR EPSEI program. The plan allows for active public participation to ensure that the whole community is involved with the planning, selection, and implementation of projects for our most vulnerable residents.

5.4 Fair Housing and Civil Rights Protected Classes

The Fair Housing Act (42 U.S.C. § 3601 et seq.) protects people from discrimination when renting or buying a home, getting a mortgage, seeking housing assistance, or engaging in other housing-related activities. Specifically, the Fair Housing Act prohibits housing discrimination based on race, color, national origin, religion, sex, familial status, or disability. Additional protections apply to federally assisted energy projects for housing, including certain CDBG-DR funded activities, including consideration of racially and ethnically concentrated areas and concentrated areas of poverty. Understanding where different racial and ethnic populations and others with pre-existing social vulnerabilities reside across disaster impacted areas can be useful for emergency response, recovery, mitigation planning, and program development.

The VIHFA is committed to driving an equitable recovery and serving all residents, particularly the most vulnerable in the Territory where the entire territory has been designated as a Most Impacted and Distressed or "MID" area, which means that the great majority of the funding will be spent in LMI. We understand that while income is not a factor in the fair housing statute, the low-income requirement overlays protected classes.

VIHFA continues to take actions to ensure that the public is aware of their rights; and that they have convenient and immediate access to filing complaints of discrimination in all areas impacted by the Act, these are described in detail in the CDBG-DR Action Plan and the CDBG-Mitigation action plan. Under the CDBG DR EPSEI Action, VIHFA will continue its promotion, education and technical services to require training for all employees and recipients of federal funds on the Fair Housing and Civil Right

Protected Classes. See also the VIHFA Citizen Participation Plan. https://cdbgdr.vihfa.gov/wp-content/uploads/2022/11/Final-Revise-VIHFA-Citizen-Participation-Plan_ENG.pdf.

Demographics

Due to the unique demographics and small land areas of the islands, coupled with the fact that approximately 80% of the population in the Territory is African or Hispanic, racially and ethnically concentrated areas as well as concentrated areas of poverty are not segregated as is often the case in the continental United States. Additionally, there is a lack of data describing and delineating protected classes as opposed to such data which is normally readily available in the continental US. Nevertheless, VIHFA reported in the earlier version of its Analysis of Impediments that Public Housing presents an issue of concentration.

Figure 39 Race and Ethnicity Data

Area	St. Thomas		St. Croix		St. John		USVI	
	Count	%	Count	%	Count	%	Count	%
RACE								
Total population	51,634	100.0	50,601	100.0	4,170	100	106,405	100.0
One Race	50,914	98.6	49,177	97.2	4,111	98.6	104,202	97.9
Black or African American	41,310	80.0	37,236	73.0	2,362	56.6	80,908	76.0
White	7,814	15.1	7,232	14.3	1,600	38.4	16,646	15.6
Other races	1,790	3.5	4,709	9.3	149	3.6	6,648	6.2
Two or More Races	720	1.4	1,424	2.8	59	1.4	2,203	2.1
Race alone or in combination with one or more								
Black of African American	41,855	81.1	38,167	75.4	2,404	57.6	82,426	77.0
White	8,236	16.0	7,925	15.7	1,641	39.4	17,802	16.7
Other races	2,330	4.5	6,046	11.9	187	4.5	8,563	8.0
HISPANIC OR LATINO ORIGIN AND RACE								
Hispanic or Latino (of any race)	5,787	11.2	12,280	24.3	437	10.5	18,504	17.4
Not Hispanic or Latino	45,847	88.8	38,321	75.7	3,733	89.5	87,901	82.6

(Source US Census Data 2010.)

Majority Minority

The Territory has a population comprised of a majority-minority. This minority concentration presents a unique scenario when reviewing the FHEO governing guidelines. Based on this minority-majority. VIHFA will look at the US Virgin Islands' CDBG-DR EPSEI Plan at case scenarios around the country that have been previously approved by FHEO, along with the rules, and will work directly with FHEO to resolve any concentration issues.

Socio-Economic Vulnerabilities

The population of the US Virgin Islands is considerably more vulnerable than that of the U.S. mainland in several trackable statistics including:

- poverty levels,
- cost of rent,
- higher density per square mile,
- access to critical infrastructure and municipal services,
- median income,

- median age, and
- population with disabilities.

In terms of poverty levels, it is estimated that 22% of the Territory's population is below the poverty level, compared to 14.4% of the overall U.S. population. A large share of households lack access to critical water and telecommunications infrastructure: only 47% of households are connected to the municipal potable water network (instead, many residents rely on cisterns for their primary water supply), and 14% do not have internet access.

Figure 40 2010 Demographic Statistics for the US Virgin Islands

Census Tract	Total Households	% of Household damaged*	% Below Poverty Level	Avg. Population per Sq Mi	% Single Parent Families	% Population with Disabilities	Median Rent	% Homes Built before 1990	Homes Using Public Water	Homes w/o Internet
USVI	**43,214**	**12%**	**22%**	**1,605**	**48%**	**15%**	**$621**	**67.80%**	**47%**	**14%**
St. Croix	**19,765**	**9%**	**26%**	**885**	**47%**	**15%**	**$535**	**67.20%**	**50%**	**14%**
9701	894	3%	12%	171	22%	17%	$861	67.60%	25%	10%
9702	1,346	40%	34%	1,640	59%	20%	$433	85.20%	80%	19%
9703	1,996	1%	36%	2,251	60%	11%	$395	84.90%	78%	20%
9704	1,842	1%	15%	427	39%	15%	$675	64.70%	29%	11%
9705	1,297	1%	17%	1,464	45%	13%	$686	70.10%	32%	9%
9706	1,705	3%	13%	824	34%	15%	$722	64.40%	27%	11%
9707	934	0%	20%	369	41%	13%	$603	75.90%	39%	10%
9708	1,492	12%	37%	810	56%	11%	$402	54.70%	56%	20%
9709	807	14%	49%	865	70%	24%	$305	66.00%	70%	21%
9710	822	34%	23%	140	37%	21%	$535	56.60%	21%	13%
9711	1,589	15%	36%	1,087	60%	19%	$435	73.10%	68%	16%
9712	1,729	9%	23%	1,813	48%	19%	$582	69.40%	54%	14%
9713	1,260	13%	26%	978	44%	11%	$501	58.40%	51%	15%
9714	730	3%	26%	963	48%	11%	$370	19.10%	65%	14%
9715	1,322	1%	18%	360	42%	14%	$514	54.60%	42%	14%
St. John	**1,894**	**30%**	**15%**	**364**	**40%**	**13%**	**$835**	**44.80%**	**22%**	**15%**
9501	676	64%	15%	85	44%	13%	$811	39.30%	13%	14%
9502	1,218	11%	15%	1,007	38%	12%	$858	47.60%	26%	15%
St. Thomas	**21,555**	**13%**	**19%**	**2,778**	**49%**	**15%**	**$693**	**71.30%**	**47%**	**13%**
9601	1,532	1%	18%	1,577	44%	16%	$743	64.10%	37%	13%
9602	1,672	18%	18%	1,627	53%	14%	$719	71.60%	30%	16%
9603	1,768	0%	17%	6,601	54%	17%	$687	85.00%	29%	13%
9604	2,061	32%	11%	1,042	36%	22%	$795	60.60%	22%	9%
9605	2,459	2%	10%	603	33%	14%	$901	62.50%	7%	11%
9606	1,753	0%	19%	3,248	50%	16%	$669	67.90%	56%	11%
9607	1,545	5%	16%	1,632	46%	23%	$791	66.70%	34%	16%
9608	1,559	5%	21%	1,387	53%	11%	$636	78.20%	64%	14%
9609	1,934	4%	21%	1,550	46%	15%	$642	65.80%	49%	11%
9610	2,256	3%	27%	6,436	59%	11%	$614	78.70%	85%	17%
9611	1,860	22%	27%	3,210	64%	15%	$579	83.00%	85%	13%
9612	1,156	92%	28%	7,200	68%	14%	$545	81.10%	88%	15%

* Based on FEMA Individual Damage assessments and including all homes with major or severe damage as defined by HUD in 83 FR 5869.
Source: 2010 US Census Data, (excludes Census tract 9900, uninhabited bodies of water).

Annual surveys conducted by the University of the Virgin Islands Eastern Caribbean Center have shown a consistent downward trend in the US Virgin Islands median income year after year. between 2010 and 2014 the Territory's median income decreased by about $5,000 and fell below the US Mainland's. (Source: Eastern Caribbean Center, July 2017. 2014 US Virgin Islands Community Survey). A comparison of the 2010 median income for the Territory and US mainland is below.

Figure 41 Median Income US Mainland v. US Virgin Islands

Year	US Mainland	Territory	Variance US to Territory
2010	$50,046	$37,254	$14,660 or 25.56%
2014	$51,503	$31,585	$19,918 or 38.67%

In the immediate aftermath of Hurricanes Irma and Maria, thousands of residents left the USVI, particularly those with homes located in the hardest hit parts of St. Croix and St. Thomas. The population of the Territory has been steadily decreasing since 2000, largely due to emigration to the mainland U.S. By 2019, the population is projected to have decreased by 5% since 2010. In addition to emigration, the decrease in population can be attributed to declining birth-rates and overall aging. In fact, while individuals over the age of 65 made up 8.4% of the population in 2000, they made up 13.5% of the population in 2010, and 17.5% in 2014.

Due in part to a general scarcity of high-paying jobs in the USVI, out-migration from the territory has been heavily concentrated among the working-age population. As a result, the median age has risen sharply relative to the United States. From 2000 to 2010, the median age in the USVI rose from 33.4% to 39.2%, an increase of 5.8 years, while the median age for the United States rose from 35.3% to 37.2%, an increase of only 1.9 years (See Statistical Comparison US to US Virgin Islands). That trend continued into the early 2010s, with significant job losses further limiting opportunities for skilled workers. As of 2014, the median age in the territory was 43.5 years, nearly 6 years older than the median age of 37.7 years in the United States (2014 Virgin Islands Community Survey and 2014 American Community Survey. The hurricanes further exacerbated the out-mitigation trend of working age and skilled laborers.

Figure 42 Statistical Comparison US to US Virgin Islands

	US Virgin Islands			US Mainland		
	2000	2010	2014	2000	2010	2014
Median Age	33.4	39.2	43.5	35.3	37.2	37.7
Median Household Income	$24,704	$37,254	31,585	$41,851	$50,046	51,503

The CDBG-DR EPSEI will follow the Program plans of VIHFA including its efforts in CDBG-DR, CDBG-MIT programs which have identified the most vulnerable populations based on available data, as well as input from relevant Territorial departments, organizations and agencies, the needs of vulnerable populations include:

- Assisting providers of housing for the vulnerable to repair or replace their damaged units;
- Supporting the expansion or new development of units for the vulnerable, especially for the aged and the mentally ill; and
- Enabling providers to support the most vulnerable through provision of services including those for mental health and crisis counseling, legal counseling, and case management, enabling individuals to access the programs they need.

In October 2017, the Governor created an expert advisory committee to help guide short- and long-term recovery efforts for the Territory. This Task Force included representatives from territorial departments and agencies that serve low-income residents, the elderly, children, and persons with physical and developmental disabilities. While these individuals face the most barriers, they may be the least able to advocate on their own behalf. The involvement of groups and agencies that represent them ensures that these vulnerable individuals and households are not forgotten in the recovery. The vulnerable population is estimated by the Governor's Recovery and Resilience Task Force to be approximately 63,000 people; 56,500 supported through financial programs, 6,300 elderly, 1,100 children and 400 persons with

disabilities (USVI Hurricane Recovery and Resilience Task Force, 2018). This number represents roughly 60% of the Virgin Island's total population (US Census Bureau, n.d.).

Through the consultation process and Task Force involvement, the organizations helped to make sure the needs of these populations were recognized and addressed in both the CDBG-DR Action Plan and the CDBG-DR MIT Action Plan. VIHFA will continue to encourage citizen participation and engagement with community leaders through dialogue and media to support vulnerable populations.

Figure 43 LMI Household Damage Analysis St. Croix

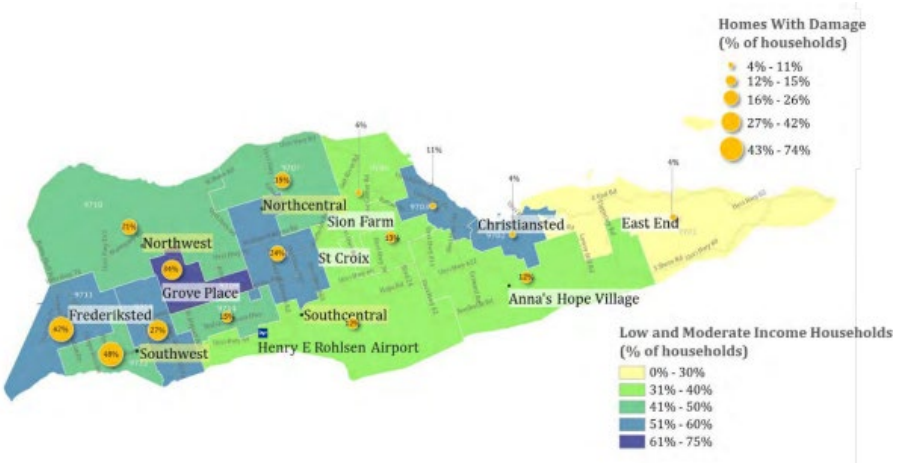
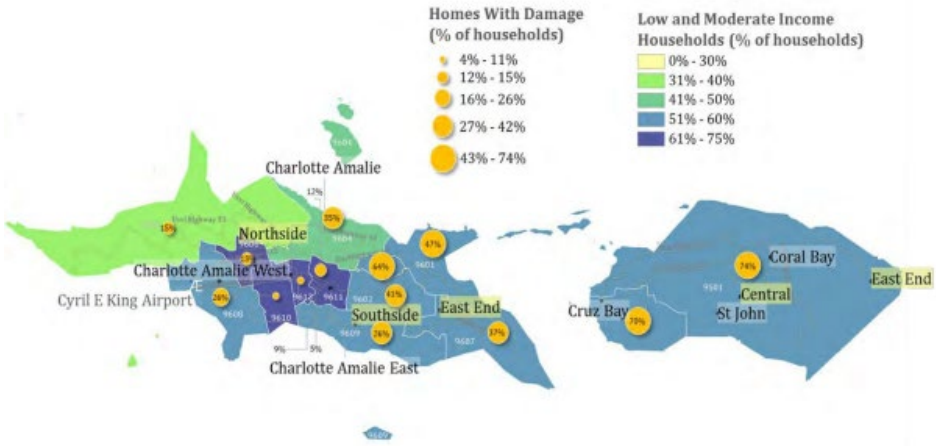


Figure 44 LMI Household Damage Analysis St. Thomas/St. John



The proposed projects--PR1 and PR2 will have area-wide benefit to LMA/LMI households although the projects will benefit all residences of the community regardless of income.

VIHFA will review all applications and projects to ensure that applicants comply with the federal cross-cutting requirements including Section 3 and Davis Bacon in employment, training, contracting, and other economic opportunities to the greatest extent feasible.

5.5 Economically Distressed and Underserved Communities

The entire USVI is over 50% LMI, and the economic distress of its residents has been amplified since the landfall of Hurricanes Irma and Maria. The ~~Estate Richmond~~ Grid Resiliency and the Community Innovations Application Program will provide enhanced electrical resiliency to the economically distressed and underserved communities of the USVI in accordance with CDBG regulations and Federal Register Volume 86, No. 117, issued June 22, 2021.

5.6 Geographic Concentrations

The USVI population is over 50% low-to-moderate income. All activities contemplated by the CDBG DR EPSEI program will benefit geographic concentrations of LMI residents, as shown in Section 5.1.

5.7 Overall LMI Benefit

The primary objective of the HCDA is the "development of viable urban communities, by providing decent housing and a suitable living environment and expanding economic opportunities, principally for persons of low and moderate income." (42 U.S.C. § 5301(c)). Consistent with the HCDA, VIHFA shall comply with the overall benefit requirements established in the HCDA and 24 C.F.R. § 570.484(a), which require that 70% of CDBG funds be used for activities that benefit low- and moderate-income persons.

For purposes of this grant, HUD establishes an alternative requirement that the overall benefit test shall apply only to the use of CDBG–DR funds provided under Pub. L. 115–123 (Appropriations Act), for electrical power system improvements and related program income, and not to all CDBG funds received by VIHFA during another period selected. CDBG–DR electrical power system improvements will be considered to meet the criteria for activities benefitting low- and moderate-income persons- area benefit activities at 24 C.F.R. § 570.483(b)(1) if, at grant closeout, they meet the criteria described below. VIHFA shall appropriately ensure that activities that meet these criteria do not benefit moderate-income persons in the exclusion of low-income persons.

The criteria are that at least 70% of the grant funds allocated by the Federal Register notice, not including planning and administrative costs, have been used to: Provide at least 51% of the grantee's low- and moderate-income (LMI) 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.

For this paragraph's purposes, measurably improved reliability shall mean a documented decrease in power supply interruptions, excluding planned interruptions caused by major events. To document compliance with this national objective criterion, a grantee's policies and procedures shall provide for the measurement of improved reliability in low- and moderate-income areas.

VIHFA will ensure that the CDBG–DR EPSEI program projects meet the criteria for activities benefitting low- and moderate-income persons—area benefit activities at 24 CFR 570.483(b)(1).

The VIHFA is committed to serving the LMI population of the impacted areas of the Territory. At least 70 percent of the entire CDBG-DR EPSEI grant must be used for activities that benefit low- and moderate-income persons. The VIHFA is committed to ensuring that the requirement to expend 70 percent overall of CDBG funds on activities that benefit low- and moderate-income persons as set forth by the Federal Register Notice is met through the CDBG electric grid funding program.

5.8 Minimizing Displacement of Persons and Providing Assistance

The CDBG-DR EPSEI proposed projects are not anticipated to result in any displacement of US Virgin Islanders. Although eligible, VIFHA does not plan to use any CDBG-DR electrical improvements funds for buyouts or property acquisitions now. Projects funded with CDBG-DR EPSEI funds will focus, to the greatest extent possible, on enhancements to existing systems, installation of equipment on property that does not require acquisition nor the relocation of residents, such as on government-owned or vacant land.

To the extent possible, VIHFA will not undertake any activities that cause the displacement of people from their homes and/or businesses. Should any displacement become a possibility, VIHFA will work to minimize displacement of persons from any CDBG-DR ESPEI activity or program. If displacement occurs in the implementation of the activities proposed in the Action Plan, VIHFA will ensure that the assistance and protections afforded to persons, businesses, and entities under the Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA) and Section 104(d) of the Housing and Community Development Act of 1974, are available. This includes temporary or permanent relocation of persons resulting from public and private acquisition intended for public use and voluntary rehabilitation of private property with funds from CDBG, HOME, or any other federal assistance program.

Uniform Relocation Assistance and Real Property Acquisitions Polices Act of 1970, as amended (Title 49 CFR Part 24) (42 U.S.C. 4601 et seq.) (URA) applies to all acquisitions of real property or displacements of persons resulting from federal or federally assisted program projects. URA's objective is to provide uniform, fair, and equitable treatment of persons whose real property is acquired or who are displaced in connection with federally funded projects. Although URA mostly applies to residential displacements in involuntary (49 CFR Subpart B) and acquisition or multifamily damaged/occupied activities that require the relocation of tenants, displacement resulting from federally funded economic development will be in accordance with HUD Handbook 1378.

Specific activities and programs proposed to be funded with CDBG, CDBG-DR, CDBG-MIT, ESG, HOME, HTF or other HUD-funded programs that may result in acquisition, relocation or displacement are:

- Acquisition of real property;
- Owner-occupied and rental housing rehabilitation;
- New construction or reconstruction of housing;
- Voluntary buyouts of high-risk properties;
- Public and affordable housing development;
- Affordable and mixed-used rental housing development;
- Development of supportive housing;
- Infill development, including addition of units to existing properties; and

- Hazard mitigation activities.

Prior to pursuing each activity, VIHFA will consider the potential that the activity will trigger relocation or displacement and will explore options to avoid relocation or displacement of persons and entities. Additionally, should displacement activities become necessary, VIFHA will also take into consideration the functional needs of persons with disabilities in the process, which "may include providing reasonable accommodations to persons with disabilities in the provision of comparable replacement housing, non-housing facilities, relocation and moving expenses, and other policies. The VIHFA will take the following steps to minimize the disruption due to relocation and to minimize displacement:

1. Facilitate, to the greatest extent possible, new construction on government-owned, vacant land.
2. Stage rehabilitation of apartment units in a manner such as to allow tenants to remain in the building or complex during and after the rehabilitation – i.e., by working with vacant units first.
3. Arrange for facilities to house persons who must be relocated temporarily during rehabilitation.
4. Adopt policies which provide reasonable protections for tenants faced with conversion of their housing to a condominium, cooperative, or single-family ownership, such as working closely with the local PHA to identify alternative housing for those tenants who choose to vacate rather than participate in the conversion initiative.

Temporary relocation and permanent replacement housing payments will be provided in accordance with the Uniform Relocation Act.

For activities funded with CDBG-DR or CDBG-MIT, VIHFA will exercise the waivers set forth in 83 FR 5844, dated February 9, 2018, pertaining to URA and Housing and Community Development Act given its priority to engage in voluntary buyout and optional relocation activities to avert repeated flood damage and to improve floodplain management. However, should activities undertaken through this plan result in the need for one-for-one replacement of housing units should VIHFA demolish or convert properties that do not meet the definition of "Not Suitable for Rehabilitation" in these cases, VIHFA will follow one-for-one replacement requirements as described in HUD's guidance.

Permanent relocation is not anticipated under the projects covered in this Action Plan; however, if invoked, temporary relocation and permanent replacement housing payments will be provided in accordance with the Uniform Relocation Act.

5.9 Federal Accessibility

All CDBG-DR EPSEI projects will meet accessibility standards, including the Fair Housing Act, Section 504 of the Rehabilitation Act, and Titles II and III of the Americans with Disabilities Act. The Uniform Federal Accessibility Standards (UFAS) can be accessed at UFAS (1984) (access-board.gov).

CDBG-DR EPSEI funded programs will be accessible to all persons with special needs and will operate in a manner that does not discriminate or limit access to program services and benefits to persons with disabilities.

5.10 Cost Verification

One purpose of CDBG–DR funds is to improve the cost–effectiveness, reliability, resilience, efficiency, sustainability, and long–term financial viability of its electrical power systems.

This Action Plan explains the steps undertaken to extend, upgrade, and otherwise enhance and improve elements such as the cost-effectiveness, reliability, efficiency, sustainability, or long [1]-term financial viability of the 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. The CDBG-DR EPSEI Action Plan identifies VIHFA as the lead agency responsible for implementation of the CDBG–DR grant. As part of project evaluation, VIHFA will evaluate budget estimates to perform operation and maintenance activities for the useful life of the project. It is a VIHFA requisite for applicants to document their Operation and Maintenance approach to receive funding. The TCT may be consulted for specific technical evaluations on feasibility, as needed.

Federal guidelines require that project costs funded with CDBG-DR EPSEI are necessary and reasonable. FR-6262-N-01, p 32681provides additional details as to how grantees can demonstrate and verify costs: '8. Each grantee must describe its controls for assuring that electrical power system improvement costs, including acquisition and construction costs, are reasonable and consistent with market costs at the time and place of the acquisition or construction.

Grantees are encouraged to consider the use of an independent, qualified third-party engineer, construction manager, or other professional (e.g., a cost estimator) to verify the planned project specifications and costs and any significant changes to the specifications or costs of the contract (e.g., change orders) during implementation are reasonable. The method and degree of analysis may vary dependent upon the circumstances surrounding a particular project (e.g., project type, risk, costs), but the description, at a minimum, must address controls for CDBG–DR EPSEI above a certain total project cost threshold identified by the grantee's cost verification requirements."

VIHFA has established its Procurement Policy which will govern the cost reasonableness related to all procurement actions for each project activity. This is to ensure cost reasonableness of construction costs as well as other goods and services:

- First a fair and open procurement action, which surveys the market and welcomes competition from available, capable bidders, is the preference of VIHFA and will support and determine what is "reasonable." A key objective in undertaking a full and open procurement is to establish at what price the market is currently willing to provide whatever goods and services are being procured considering all market factors in the current post disaster environment for the specific geography.
- As part of establishing cost reasonableness during procurement, a cost estimate will be prepared before issuing the procurement as a benchmark for evaluating proposals received. This benchmark might include market research that considers current post disaster capacity and capability in the market, or a review of financial aspects of a previously let contract which considers providing goods or services in a remote geography which has been significantly impacted by multiple recent storms. Input will also be sought from subject matter resources resident in VIHFA and implementing agencies and subrecipients including but not limited to employees and pre-existing contractors with specific knowledge of the requirements of what is being procured.

- VIHFA, implementing agencies and other subrecipients will also review proposed prices with historical data from previous similar pre-disaster construction projects against cost estimates for projects in the current post-disaster setting.

VIHFA understands that it must develop controls to assure that construction costs are reasonable and consistent with market costs at the time and place of construction. Cost estimating is difficult for the Territory given its position at the end of the supply chain from the mainland. This is a primary driver of the high cost of imported goods and materials, which mean higher-than-average costs of reconstruction—with construction costs 1.4 times the U.S. national average—and contributes to the prohibitive cost of power, almost three times the U.S. average.

Construction costs can be prohibitively high due to both a lack of skilled labor and the excessive cost of shipping materials to the islands, which sit at the end of the supply chain. On St. Thomas, the cost to build can exceed $250 per square foot according to the Global Property Guide.

In addition to these challenges, costs vary by island.

Source: USVI_CDBG-DR_AMENDMENT_2_FINAL_11-20-2020.pdf (vihfa.gov)

5.11 Administrative Capability

Timely Distribution of Funds in accordance with Federal Register Notice FR-6066-N-01 and under Public Law 114-113, the definition of timely expenditures is within six (6) years from the date that HUD signs the grant agreement. In addition, there are requirements surrounding the obligation, timely draw down and payment within that six-year timeline as a requirement of the fiscal management of the CDBG-DR funds. In addition to HUD's review of the progress made in the drawdown of Grant funds, VIHFA will maintain its own review of all expenditures to ensure grant compliance. Timelines will be established to ensure that obligations and requirements are met.

There are four types of program costs:

- ***Project Costs*** are the direct costs of undertaking the project.
- ***Activity Delivery Costs*** (ADCs) are costs incurred by a grantee or subrecipient related to delivery of specific CDBG-DR Electrical Power System Improvements or service by a beneficiary. Developers, property owners, businesses & other beneficiaries cannot have ADC.
- ***Planning Costs*** are costs incurred where the "end product" of a Planning Activity is the Plan; and
- ***Program Administration Costs*** (PACs) are costs incurred for the general management, oversight, and coordination of the CDBG-DR grant.

Source: USVI_CDBG-DR_AMENDMENT_2_FINAL_11-20-2020.pdf (vihfa.gov)

5.12 Pre-Agreement Costs

The provisions of 24 C.F.R. § 570.489(b) and 570.200 (h) permits a grantee to reimburse itself for otherwise allowable costs incurred by itself or its recipients, subgrantees or subrecipients on or after the incident of the covered disaster prior to the execution of a grant agreement with HUD. These costs include but are not limited to activities supporting program development, action plan development and

stakeholder involvement support, and other qualifying eligible costs incurred in response to an eligible disaster covered under Pub. L. 115–123. Reimbursement of pre-agreement costs is contingent on the outcome of the corresponding environmental review, which must be completed by VIHFA in accordance with HUD regulatory requirements at 24 C.F.R. Part 58.

5.13 Section 3

Section 3 of the Housing and Urban Development Act of 1968 is intended to ensure that, to the extent feasible, low- and very low-income persons receive benefit in employment and related economic opportunities when such opportunities are generated by funding from the HUD). It also encourages economic opportunities for households who receive government housing assistance. The Section 3 program requires that recipients of HUD CDBG-DR funds, to the greatest extent feasible, provide (a) employment and training and (b) contracting opportunities for low- or very-low-income residents in connection with construction projects in their neighborhoods. The VIHFA and all administering entities will follow and require relevant contractors to follow Section 3 requirements in contracting. The Action Plan includes an overview of programs and initial prioritization and criteria. Program policies and procedures will be developed for each program which will describe in more depth the process and criteria for project selection, and the relevant Section 3 requirements for each program. Section 3 is triggered when the award of CDBG-DR funds for new construction and rehabilitation projects creates the need for new employment, contracting, or training opportunities.

Section 3 requirements that apply to CDBG-DR Programs:

Section 3 applies to the U.S. Virgin Islands, as recipient of HUD funding, as well as to subrecipients receiving HUD funding exceeding $200,000. Whenever any portion of HUD funding is invested into projects involving housing construction, demolition or rehabilitation, commercial/private improvements for economic development, or other public construction (e.g., roads, sewers, community centers, and public facilities), the requirements of Section 3 apply.

Section 3 requirements that apply to CDBG-DR Projects:

In conjunction with construction activity, Section 3 applies to projects that are fully or partially funded with CDBG-DR assistance, including projects that are financed in conjunction with territory, local or private matching or leveraged funds, provided that the Section 3 monetary threshold requirements are met. In particular:

In conjunction with construction activities, Section 3 applies to contractors or subcontractors that receive contracts of more than $100,000 for Section 3 covered projects/activities. Once it is determined that Section 3 applies to a project, the requirements apply to all contracts for construction work arising in connection with that project exceeding $100,000, including those not funded with CDBG-DR assistance. Contractors or subcontractors are required to comply with the Section 3 regulations in the same manner as the Territory; and “Section 3 covered contract” includes professional service contracts, provided that the work to be performed is generated by the expenditure of funds in furtherance of Section 3 covered work (e.g., housing construction, housing rehabilitation and other public construction), arising relating to construction projects. Professional service contracts that may constitute Section 3 “covered contracts” include construction contract oversight, engineering, architectural, environmental and property

evaluation, construction progress and construction draw inspection and prevailing wage labor compliance. The regulations pertain to new hires required to complete covered projects and activities. If the expenditure of funding for an otherwise covered project and activity does not result in new employment, contracting, or training opportunities, Section 3 reporting will still be required.

5.14 Environmental Review

The Appropriations Act goes beyond the Prior Appropriation and authorizes recipients of CDBG-DR funds under the Appropriations Act that use such funds to supplement Federal assistance provided under section 408(c)(4) as well as sections 402, 403, 404, 406, 407 or 502 of the Stafford Act may adopt, without review or public comment, any environmental review, approval, or permit performed by a Federal agency to satisfy responsibilities with respect to environmental review, approval, or permit. Such adoption shall satisfy the responsibilities of the recipient for environmental review, approval, or permit required by the HCD Act. VIHFA will notify HUD in writing of its decision to adopt another agency's environmental review. VIHFA will also retain a copy of the review in its environmental records.

(Source: https://cdbgdr.vihfa.gov/wp-content/uploads/2022/08/CDBG-DR-AMENDMENT-3-v4-8.19.docx)

The U.S. Congress promulgated the National Environmental Policy Act (NEPA) in 1969. Its purpose was to address the public concern regarding the environmental impacts of major projects, and to ensure safe, healthy, productive, and environmentally pleasing surroundings.

Before HUD can grant an applicant request for Community Development Block Grant (CDBG) funds, that applicant must complete an environmental review of the proposed project. VIHFA as the "responsible entity" is required to ensure that environmental information is available before decisions are made and before actions are taken. To achieve this objective, 24 CFR Part 58 prohibits the commitment or expenditure of CDBG funds until the environmental review process has been completed. To achieve this objective, 24 CFR Part 58 prohibits the commitment or expenditure of CDBG funds until the environmental review process has been completed and has received from HUD the Authority to Use Grant Funds (AUGF) form, as applicable.

HUD has developed requirements and guidelines (24 CFR Part 58) for the environmental review process to analyze the effect a proposed project will have on the people and the natural environment within a designated project area and the effect the material and social environment may have on a project. A required element of that review is the applicant's certification that compliance with any applicable requirements related to historic preservation, floodplain management, endangered species, air quality, and farmland protection have been considered. This review is required to meet NEPA obligations and ensure that the project being funded does not violate other applicable laws.

VIFHA, as the Responsible Entity (RE) will ensure compliance with NEPA and the Federal laws and authorities has been achieved, for issuing the public notification, for submitting the request for release of funds and certification, when required, and for ensuring the Environmental Review Record (ERR) is complete. VIHFA currently has the staffing capacity to successfully complete Environmental Reviews in house (See Implementation Plan) VIHFA has performed a staffing capacity assessment to identify and

determine the necessary required to complete the Environmental Review Report as required the Authorized Use of Grant Funds.

Following HUD's guidance, VIHFA may adopt FEMA and other federal agency environmental reviews when feasible.

Environmental Review Record (ERR)

The ERR shall contain all the environmental review documents, public notices with proof of their publication, and written determinations or environmental findings required by 24 CFR Part 58 as evidence of review, decision making and actions pertaining to a particular project. The document shall:

- Describe the project and each of the activities comprising the project, regardless of individual activity funding source; and
- Evaluate the effects of the project or the activities on the human environment; and
- Document compliance with applicable statutes and authorities; and
- Record the written determinations and other review findings required by 24 CFR Part 58

Each project will be assessed for its appropriate level of environmental review. The four environmental classifications are:

- *Exempt Activities* - Proposed activities that are fully addressed by the 12 categories of exempt activities under 24 CFR Part 58.34 (i.e., activities that are by their nature highly unlikely to have any direct impact on the environment) are not subject to most of the procedural requirements of environmental review.
- *Categorically Excluded Activities*
    - Categorically Excluded Activities Not Subject to Part 58.5 - Proposed activities that are fully addressed by the definition of CENST activities and the 7 categories of CENST activities (activities that are strictly financial, where no construction or hard costs are to take place) under 24 CFR Part 58.35(b) and are not subject to Section 58.5 compliance determinations.
    - Categorically Excluded Activities Subject to Part 58.5 – Proposed activities that do not fit the classifications above and are categorically excluded activities found at 24 CFR Part 58.35 are excluded from NEPA requirements. However, the state must nevertheless demonstrate compliance with the laws, authorities and Executive Orders listed in 58.5.
- *Activities Requiring an Environment Assessment* – Proposed activities which are neither exempt nor categorically excluded (under either category) will require an environmental assessment (EA) documenting compliance with NEPA, HUD and with the environmental requirements of other applicable Federal laws.
- *Activities Requiring an Environmental Impact Statement* - Proposed activities with potential for significant impacts (i.e., impacts that cannot be mitigated below the level significance) require the preparation of an Environmental Impact Statement (EIS). The prescribed steps in the preparation, filing and review of an Environmental Impact Statement (See 24 CFR 58, Subpart G, and 40 CFR 1500-1508) must be followed. EISs are rare under the CDBG program.

Conducting the Environmental Review may involve examining compliance with several Federal laws and authorities (Sec. 58.5) for their potential relevance to a project. These include Clean Air Act (40 CFR Parts 6, 51, and 93), Coastal Zone Management, Floodplain Management (24 CFR 55), Historic

Preservation (36 CFR 800), Noise Abatement (24 CFR 51, Subpart B), Hazardous Operations (24 CFR 51, Subpart C), Airport Hazards (24 CFR 51, Subpart D), Protection of Wetlands, Toxic Chemicals and Radioactive Materials (Sec. 58.5(i)(2), Endangered Species 6, Sole Source Aquifers (40 CFR Part 149), and Wild and Scenic Rivers (Wild and Scenic Rivers Act).

In addition, for an EA, the Environmental Review document will need to examine a number of other environmental factors including socioeconomic demographics and environmental justice; unique natural features and areas; site suitability, access and compatibility with surrounding development; soil stability, erosion and drainage; nuisances and hazards (natural and built); water supply/sanitary sewers; solid waste disposal; schools, parks, recreation and social services; emergency health care, fire and police services; commercial/retail and transportation access and availability; climate change, and energy efficiency.

Similar projects and projects in adjacent locations may be aggregated into a single ERR. Projects that design, footprint, or location change after approval of the ERR, will have to be re-evaluated and may have to amend the existing ERR or have a new ERR prepared.

Additional Discussions Related to Electrical Infrastructure

As part of repairing and improving infrastructure, the ERR should also discuss any improvements to resiliency to storm events.

Floodplains

Infrastructure (i.e., nonresidential structures) must be elevated to the standards described in this paragraph or floodproofed, in accordance with FEMA floodproofing standards at 44 CFR 60.3(c)(3)(ii) or successor standard, up to at least two feet above the 100-year (or 1 percent annual chance) floodplain. In addition, structural or nonstructural methods may be used to reduce or prevent damage, and the structure may be designed to adapt to, withstand and rapidly recover from a flood event.

As electrical infrastructure often qualifies as a critical project under HUD criteria, issues regarding flood elevation and resiliency to storms need to be evaluated in greater detail. Critical Actions are defined as an “activity for which even a slight chance of flooding would be too great, because such flooding might result in loss of life, injury to persons or damage to property.” For example, Critical Actions include principal utility lines, hospitals, nursing homes, police stations, and fire stations.

All Critical Actions, as defined at 24 CFR 55.2(b)(3), within the 500-year (or 0.2 percent 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.

Hazards and Nuisances

While HUD guidelines do not have design or siting requirements for electrical infrastructure, they do have siting requirements for new housing in relation to overhead high voltage transmission towers and lines. This requirement concerns keeping the housing outside of the fall distance for the powerlines and towers. The ERR for any proposed electrical infrastructure should discuss any dwellings or structures of long-term occupancy (e.g., workshops, offices) that are within the fall distance.

5.15 Monitoring and Compliance

VIHFA will oversee all activities and expenditures in connection with the CDBG-DR Electrical Power System Improvements funds. In addition to the existing VIHFA employees, additional personnel and contractors will be hired to aid in the administration of, and to carry out, the recovery programs. These partners will ensure that the programs meet all requirements, including: the disaster threshold, eligibility, national objective, compliance, fair housing, labor standards, nondiscrimination, environmental regulations, and procurement regulations at Part 85. VIHFA will create a monitoring plan in accordance with CDBG-DR requirements so that each activity funded will meet the disaster threshold and one of HUD's three national objectives, with emphasis on eligible activities achieving the primary national objective of benefiting low- and moderate-income persons. All projects must comply with applicable federal laws and regulations and effectively meet their stated goals. VIHFA will monitor funds using the HUD Disaster Recovery Grant Reporting (DRGR) system. In accordance with HUD requirements, VIHFA will submit a Quarterly Performance Report (QPR) through DRGR no later than thirty days after each calendar quarter ends. QPR's will be posted on a quarterly basis until all funds have been expended and all expenditures have been reported. U.S. Virgin Islands will utilize the HUD-provided contract reporting template (for PL 113-2) for upload to the DRGR on a quarterly basis: https://www.hudexchange.info/resource/3898/publiclaw-113-2-contract-reporting-template/

Source: US_VI_CDBG-DR_AMENDMENT_2_FINAL_11-20-2020.pdf (vihfa.gov)

5.16 Subrecipient Management

A Subrecipient may be a public or private nonprofit agency, authority, or organization which receives CDBG-DR funds from USVI to undertake eligible activities. 24 C.F.R. § 570.500(c). It is further defined at 2 C.F.R. § 200.1 as an entity, usually but not limited to non–Federal entities, that receives a subaward from a pass-through entity to carry out part of a federal award.

VIHFA, as the grantee, is responsible for ensuring Subrecipient compliance and performance per 24 C.F.R. § 570.501. Subrecipient management is necessary to comply with Federal regulations and improve service delivery to USVI communicates. CDBG-DR funds invested in the USVI communities must be meticulously managed through practices that ensure federal and local compliance,

VIHFA will ensure that monitoring standards and procedures are sufficient to ensure program requirements including nonduplication of benefits are met and provide for continual quality assurance and investigation. In addition to these monitoring standards, VIHFA will maintain the required internal audit function with an organizational diagram showing that responsible audit staff report independently to the chief officer or board of the organization designated to administer the CDBG-DR award. See Implementation & Capacity Plan for additional details.

5.17 Program Income

The CDBG DR activities proposed by this Action Plan are not intended to produce program income. In the event program income is received, it will be tracked and allocated in accordance with the Subrecipient Agreement between HUD and the USVI and in accordance with Federal guidelines.

5.18 Action Plan Amendments

Amendments to the action plan will be made to update its needs assessment, modify or create new activities, or reprogram funds, as necessary. HUD requires amendments to be included in a contiguous document to make tracking of program and budget changes easier. Substantial Amendments are characterized by any change in the program benefit or eligibility criteria; either an addition or deletion of an activity of component of the electrical power system improvements, or any funding change greater than 10% of the total allocation. Substantial amendments will be available on the U.S. Virgin Islands CDBG- Electric Grid Action Plan website (https://cdbgdr.vihfa.gov/home/cdbg-electrical/.) for public review and comment for at least 30 days. Technical Amendments are minor changes that do not materially alter the activities or eligible beneficiaries. The grantee must notify HUD five business days before the effective date of any technical amendments. Technical amendments are not subject to public notification and public comment requirements.

Source: US_VI_CDBG-DR_AMENDMENT_2_FINAL_11-20-2020.pdf (vihfa.gov)

5.19 Website

VIHFA will maintain a comprehensive website dedicated to the U.S. Virgin Islands' CDBG-DR Electrical Power System Improvements, which provide information accounting for how funds for electrical power system improvements are used, managed, and administered. The webpage can be found on VIHFA's website: https://cdbgdr.vihfa.gov/home/cdbg-electrical/. The website will include the following:

1. CDBG-DR EPSEI Action Plan, including all amendments.
2. The current approved DRGR Action Plan.
3. All QPRs created in DRGR.
4. Citizen participation requirements.
5. Procurement policies and procedures.
6. Program policies and procedures.
7. A description of services or goods currently being procured using CDBG-DR funds.
8. All executed contracts that will be paid with CDBG-DR EPSEI funds; and
9. A summary of all procured contracts, including those procured by the U.S. Virgin Islands, recipients, or subrecipients (e.g., a summary list of procurements, the phase of the procurement, requirements for proposals, and any liquidation of damages associated with a contractor's failure or inability to implement the contract, etc.).

Source: US_VI_CDBG-DR_AMENDMENT_2_FINAL_11-20-2020.pdf (vihfa.gov)

5.20 Reporting

In accordance with HUD requirements, VIHFA will submit a Quarterly Performance Report (QPR) through DRGR no later than thirty days after each calendar quarter ends. QPR's will be posted on a quarterly basis until all funds have been expended and all expenditures have been reported. Within 3 days of submission to HUD, each QPR will be posted on the grantee's official website. Each QPR will include information about the uses of funds in activities identified in the DRGR action plan during the applicable quarter.

U.S. Virgin Islands will utilize the HUD-provided contract reporting template (for PL 113-2) for upload to the DRGR on a quarterly basis: https://www.hudexchange.info/resource/3898/publiclaw-113-2-contract-reporting-template/

5.21 Prevention of Duplication of Benefits

The requirements the Robert T. Stafford Act (Stafford Act), as amended, prohibit any person, business concern, or other entity from receiving federal funds for any part of such loss for which they have already received financial assistance under any other program, private insurance, charitable assistance, or any other source. This duplicative funding is called Duplication of Benefit (DOB). Any government entity that provides disaster recovery assistance must both prevent and correct any DOB by the establishment and implementation of policies and procedures to identify and adjust for such duplicative assistance payments. HUD released Docket No. FR-6169-N-01, "Updates to Duplication of Benefits Requirements Under the Stafford Act for Community Development Block (CDBG) Disaster Recovery Grantees," (Updates to Duplication of Benefits Requirements Under the Stafford Act for CDBG-DR Grantees (hudexchange.info) This notice provided clarifications regarding how duplication of benefits calculations and the documentation requirements. VIHFA and all subrecipients will follow the guidance issued in FR-6169-N-01.

VIHFA established procedures and policies on duplication of benefits. See https://cdbgdr.vihfa.gov/wp-content/uploads/2021/02/2232021-Duplication-Of-Benefits-signed.pdf

Source: US_VI_CDBG-DR_AMENDMENT_2_FINAL_11-20-2020.pdf (vihfa.gov)

5.22 Fraud, Waste, and Abuse

All contractors, vendors and subrecipients must demonstrate they have procedures and systems to identify and report fraud, waste, and abuse. If suspected fraud is identified it should immediately be reported to the Program Manager, who will refer the issue to the HUD Office of the Inspector General (HUD OIG) and other law enforcement agencies as appropriate. VIHFA will make every effort to ensure the proper reporting and communications of CDBG-DR EPSEI grant funds on the webpage.

Source: USVI_CDBG-DR_AMENDMENT_2_FINAL_11-20-2020.pdf (vihfa.gov)

5.23 Financial Controls

The VIHFA certifies that it has in place proficient financial controls and procurement processes and has established adequate procedures to prevent any duplication of benefits as defined by section 312 of

Stafford Act, 42 U.S.C. 5155, to ensure timely expenditure of funds, maintain a comprehensive website regarding all disaster recovery activities assisted with these funds, and detect and prevent waste, fraud, and abuse of funds.

5.24 Operations and Maintenance Plans

VIHFA, in cooperation with the local electric utility, WAPA, and community partners selected through the Community Innovations Program, will require operations and maintenance plans for all proposed projects. VIHFA understand that CDBG funds cannot be utilized for maintenance activities, and that any electrical grid resiliency project will have to be operated and maintained using other sources of revenue.

See details related to O&M in Section 3.9 for PR1 and Section 3.10 for PR2.

Operations and maintenance are discussed in greater detail under Chapter 3. Project and Activity Allocations.

5.25 Application Status

VIHFA and potential subrecipients or partners are required to maintain adequate means of informing applicants on the status of applications for program assistance at all phases of program activities. VIHFA employs multiple methods of communication to ensure applicants receive timely and accurate information regarding their applications. Communications are standardized for each program and include the VIHFA CDBG-DR website, email address, telephone number, postal address, and letters. When VIHFA accepts applications from potential subrecipients, the contact with subrecipients is managed at the program-level. Specific methods for application status updates will be clarified in the Program Guidelines.

Communications on the Application Status

The VIHFA understands the importance of providing current, accurate, and clear program information for CDBG-DR EPSEI activities, as such the program-wide information and applications will be posted on the VIHFA website.at https://cdbgdr.vihfa.gov- /programs/cdbg-electrical/. VIHFA will use the CDBG-DR page on its website to share all related grant updates, publication of the Action Plan, action plan amendments, and critical grant communications.

In addition, VIHFA will implement a data management system where applicants will be able to access their status online. An applicant will be able to view their application status at any time with customized login information. The grant management system will provide 24/7 access to application status in addition to email notifications when an application status changes. Additionally, an applicant can contact the Program Manager if the applicant has questions about their application status.

Access to information about documentation requirements and grant status will be a high priority with the VIHFA, with communications conducted via mail, email, or phone during normal business hours. Parameters will be set so that applicants will understand their expected return response times. Printed

status updates will be provided to applicants who do not have access to electronic media and phone services.

VIHFA will notify the registrant or applicant that the registration or application has been received. This will be an automatic response generated through the grant management system. Approval or denial notification will be sent to the applicant through the provided email and mailing address. VIHFA has established protocols for protecting personal information.

All applications requesting CDBG-DR EPSEI funds must meet the specific Programs' priorities and application requirements, which will be posted on VIHFA's website. The designated VIHFA Program Manager will be responsible for application oversight and communication. The Program Manager will complete an eligibility review of every application. Through this process the Program Manager confirms the application is complete and all proposed activities are program eligible. All applications will be reviewed to determine if (1) each application is complete, (2) proposed activities are eligible, (3) meets a national objective, and (4) meets program requirements. If the application does not include all the required information, the program staff will contact the applicant and explain the deficiencies that have been discovered and how they must be addressed. Applicants will have an opportunity to appeal any eligibility determination and grant award and provide additional documentation to support their appeal through an appeal process that will be provided to all and posted on the VIHFA website. Information and guidelines on the appeal process will be posted on the VHFA website.

The VIHFA understands the importance of providing current, accurate, and clear program information for CDBG-DR EPSEI activities. Program information and applications will be posted on the VIHFA website (https:cdbgr.vihfa.gov)- Program information and applications will be posted on the VIHFA website on its "Electrical" page. Additionally, VIHFA is in the process of moving towards identifying a data management system that allows for real-time status application updates. This is system, applicants will be able to access and view their application status online with customized login information. The grant management system will provide 24/7 access to application status in addition to email notifications when an application status changes. Printed status updates will be provided to applicants who do not have access to electronic media and phone services. Furthermore, an applicant will be able to contact a Program Manager if they have questions about their application status. Contact information will be provided on VIHFA EPSEI program website. website.

Timely information about application documentation requirements and status will be a high priority. VIHFA applicants' communications methods will include mail, email, or phone during normal business hours. Parameters will be set so that applicants will understand their expected return response times.

VIHFA anticipates implementing the following status updates:

1. VIHFA will notify the registrant or applicant that the registration or application has been received via an automatic response generated through the grant management system.
2. Email and or printed notification will be provided for printed applications received.
3. Electronic and/or printed status updates will be sent to applicants when an application status changes.
4. Electronic and/or printed status notifications on application status will be sent to within 60 days of review.
5. Application Status will be available to applicants throughout the processing of the application, until the eligibility determination is made, and the grant award is determined.

6. If an applicant does not respond to their application submission and relevant processing requested information within 60 days, a member of the CDBG-DR EPSEI Program Team will make an appointment to work with the applicant to determine if the applicant still wishes to participate in the program and to solve any impediments to the applicant's progress.
7. Approval or denial notification will be sent to the applicant through the provided email and/or mailing address.
8. VIHFA will maintain documentation that supports each application decision, both funded and unfunded.
9. After-hours voicemail will be monitored daily and return calls within 24-hours of voicemail receipt.
10. Program manager email contact information will be provided to applicants.

All applications requesting CDBG-DR EPSEI funds must meet the specific Programs' priorities and application requirements, which will be posted on VIHFA's website. The designated VIHFA Program Manager will be responsible for application oversight and communication. The Program Manager will complete an eligibility review of every application. Through this process the Program Manager confirms the application is complete and all proposed activities are program eligible. All applications will be reviewed to determine if each application is complete, (2) proposed activities are eligible, (3) meets a national objective, and (4) meets program requirements. If the application does not include all the required information, the program staff will contact the applicant and explain the deficiencies that have been discovered and how they must be addressed. Applicants will have an opportunity to appeal any eligibility determination and grant award and provide additional documentation to support their appeal through an appeal process that will be provided to all and posted on the VIHFA website. Information and guidelines on the appeal process will be posted on the VHFA website.

Figure 45 Proposed Schedule for Application Status and Notification.

Submission Date	Review Period	~~Pre-Conference~~	~~Re-Submission (if needed)~~	Determination
Day 1	~~15~~ 14 days*	~~Day 21~~	~~10 days~~	5 days from re-submittal

*Business days

Finally, as part of the implementation plan application process, VIHFA will host a general orientation for interested participants to go over the process of applications within ~~120~~ ~~120~~ 45 days of the approval of the action plan.

Timelines for Publish Funding Availability,

VIHFA will primarily use the "Electrical" page at https https://cdbgdr.vihfa.gov/home/cdbg-electrical/ to inform and publish notices on the CDBG-DR ESPEI Action Plan along with its other media channels. Once the EPSEI Program becomes live, VIHFA will update its "Electrical" page on the CDBG-DR. VIHFA with announcements on the timelines for publication, funding availability and time frames for consideration of applications will be posted on the VIHFA website.

VIHFA encourages citizen participation and feedback from community stakeholders and offers various options for engagement which includes its:

- Physical/Mailing Addresses:

St. Thomas/St. John
3202 Demarara Plaza
Frenchtown Plaza, Suite 200

St. Croix
100 Lagoon Complex
Suite 4

	St Thomas, VI 00802-6447	St. Croix, VI 00840-3912
• Telecommunications:	Tel :(340) 777-4432 Fax : (340)775-7913	Tel: (340) 772-4432 Fax: (340) 772-4002
• : Online	Contact" page at https://cdbgdr.vihfa.gov/contact/;	

5.26 Construction and Resilience Standards

The USVI, having experienced landfall for two major hurricanes, is vividly aware that construction and resilience standards are paramount in the planning, design, installation, and maintenance of electrical infrastructure. As reflected in the CDBG MIT Action Plan and as discussed in greater detail under Chapter 3. Project and Activity Allocations, the USVI will construct all electrical grid improvements to the highest practical standards to withstand future disasters.

The USVI is particularly attuned to the risk of flood as outlined in Federal Register Volume 86, No. 117, as outlined in V.B. Infrastructure and Other Nonresidential Structures, Page 32698.

All subrecipient agreements executed under this CDBG DR allocation will be required to submit and follow detailed construction and resilience standards as developed by FEMA and CDBG MIT. Chapter 3. Project and Activity Allocations discusses construction and resilience standards in greater detail.

6.0 APPENDIX

A.1 Glossary of Terms

A.2 Citizens Participation Plan

A.3 TCT Minutes

A.4 Proof of Publication

A.5 Public Comments

A.6 WAPA Priorities

A.7 Lazard Report

A.8 Federal Register

A.9 Certifications

A.10 Reference Materials

A.11 Draft Community Innovations Application

A.12 Summary of Key Reports

A.13 Projections of Expenditures and Outcomes

Appendix A.1 Glossary of Terms

BESS: Battery Energy Storage System

CDBG: Community Development Block Grant

CDBG DR: Community Development Block Grant Disaster Recovery

CDBG MIT: Community Development Block Grant Mitigation

CGTC: Caribbean Green Technology Corridor

CPP: Citizen Participation Plan

EAP: Energy Assessment Plan

FEMA: Federal Emergency Management Administration

FEMA BRIC: FEMA Building Resilient Infrastructure and Communities

FR: Federal Register

HUD: US Department of Housing and Urban Development

LMI: Low-to-moderate income

MID: Most Impacted and Distressed

ODR: Office of Disaster Recovery

PSC: Public Service Commission

TCT: Technical Coordination Team

USVI: United States Virgin Islands

UVI: University of the Virgin Islands

VIEO: Virgin Islands Energy Office

VIHFA: Virgin Island Housing Finance Authority

WAPA: Water and Power Authority

A.2 Citizens Participation Plan

The U.S. Department of Housing and Urban Development requires that the Territory of the U.S. Virgin Islands develop a Consolidated Plan which is the result of the planning process that recipients of HUD funding must undertake as a condition of receiving funds. The programs covered include: The Community Development Block Grant (CDBG), Community Development Block Grant – Disaster Recovery (CDBG-DR), the Emergency Solutions Grant (ESG), the HOME Program, and other programs as may from time to time be made. The Consolidated Plan serves as a planning document which builds on citizen participation, as an application for federal funds under the above-mentioned HUD programs, as a strategy

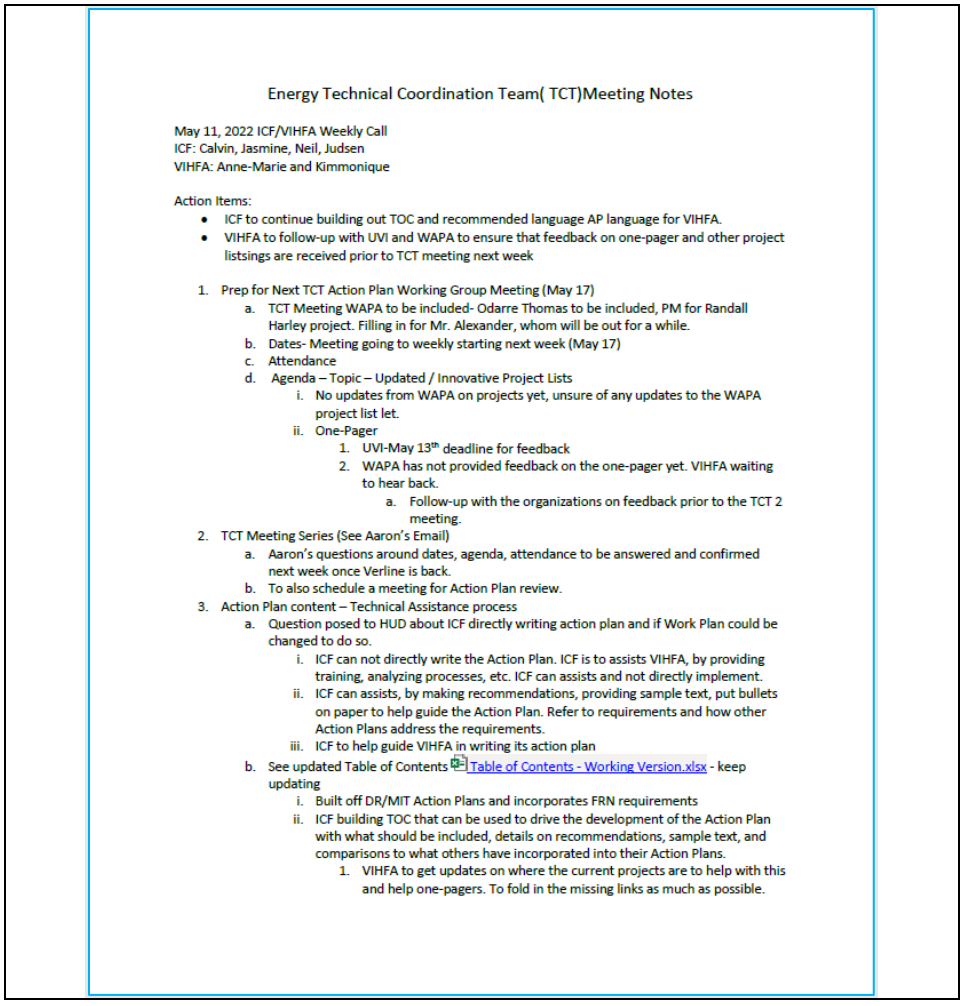
for the implementation of program activities, and finally, as a basis for assessing performance. The purpose of the Citizen Participation Plan is to describe how the Territory shall provide for and encourage citizen participation in the development of the 5- year Consolidated Plan, any amendments thereto, the Annual Action Plan, the annual performance evaluation report (CAPER), and any amendments to those plans. The Consolidated Planning process entails the assessment of needs, the establishment of priorities, and the development of strategies to address housing, community development, and homelessness. The Citizen Participation Plan shall be reviewed and revised, if necessary, every five (5) years as part of the consolidated planning process.

A revised draft of the Citizen Action Plan referencing this Action Plan, CDBG – Electrical Power System Enhancement and Improvement Action Plan to spend $67 million funding is available at CDBG-DR Recovery Programs - Virgin Islands Housing Finance Authority (vihfa.gov).

A.3 TCT Minutes

During the development of the Action Plan, VIFHA consulted with the federal Energy Technical Coordination Team (TCT). The TCT coordinated across local and federal agencies on the use of various forms of federal assistance provided for electrical power system improvements; reviewed the Action Plan and provided feedback and input and provided support through technical assistance and other planning resources. The TCT established an Action Plan Working Group for the VIHFA as additional support.

The following images are of the TCT minutes.



Energy Technical Coordination Team(TCT)Meeting Notes

May 11, 2022 ICF/VIHFA Weekly Call
ICF: Calvin, Jasmine, Neil, Judsen
VIHFA: Anne-Marie and Kimmonique

Action Items:

- ICF to continue building out TOC and recommended language AP language for VIHFA.
- VIHFA to follow-up with UVI and WAPA to ensure that feedback on one-pager and other project listsings are received prior to TCT meeting next week

1. Prep for Next TCT Action Plan Working Group Meeting (May 17)
    a. TCT Meeting WAPA to be included- Odarre Thomas to be included, PM for Randall Harley project. Filling in for Mr. Alexander, whom will be out for a while.
    b. Dates- Meeting going to weekly starting next week (May 17)
    c. Attendance
    d. Agenda – Topic – Updated / Innovative Project Lists
        i. No updates from WAPA on projects yet, unsure of any updates to the WAPA project list let.
        ii. One-Pager
            1. UVI-May 13th deadline for feedback
            2. WAPA has not provided feedback on the one-pager yet. VIHFA waiting to hear back.
                a. Follow-up with the organizations on feedback prior to the TCT 2 meeting.
2. TCT Meeting Series (See Aaron's Email)
    a. Aaron's questions around dates, agenda, attendance to be answered and confirmed next week once Verline is back.
    b. To also schedule a meeting for Action Plan review.
3. Action Plan content – Technical Assistance process
    a. Question posed to HUD about ICF directly writing action plan and if Work Plan could be changed to do so.
        i. ICF can not directly write the Action Plan. ICF is to assists VIHFA, by providing training, analyzing processes, etc. ICF can assists and not directly implement.
        ii. ICF can assists, by making recommendations, providing sample text, put bullets on paper to help guide the Action Plan. Refer to requirements and how other Action Plans address the requirements.
        iii. ICF to help guide VIHFA in writing its action plan
    b. See updated Table of Contents Table of Contents - Working Version.xlsx - keep updating
        i. Built off DR/MIT Action Plans and incorporates FRN requirements
        ii. ICF building TOC that can be used to drive the development of the Action Plan with what should be included, details on recommendations, sample text, and comparisons to what others have incorporated into their Action Plans.
            1. VIHFA to get updates on where the current projects are to help with this and help one-pagers. To fold in the missing links as much as possible.

2. Inquire with USVI Energy office for Capital Plan that hasn't been published.
    a. Neil to draft email to VI Energy office requesting that
3. ICF to start working on mock-up or subcontractor requirements. Standards listed in DR and MIT action plan, some areas may just add on and there may be gaps.
4. To speak to the O&M requirements as listed in the FRN- Neil to work on addressing how O&M concerns at large are addressed
5. VIHFA is looking for additional information on unmet needs to vet projects against it.
    a. Essential to fine-tune the particular projects and the prioritization rubric around that.
    b. ICF to build around this… make recommendations…putting in a form that can easily be put into Action Plan format

c. See draft section proposals I.1. Background - Intro.docx
    i. Sample language or recommended language to guide, at a high level. VIHFA can revise or use it to guide the writing of the Action Plan.
    ii. Does VIHFA have proposals regarding this? Would they like to see anything on ICF's sample language document?
    iii. Recommended next areas of focus: unmet needs analysis, project one-pagers.

Virgin Islands Fiscal and Policy Working Group
DATE: Monday, December 20, 2021
TIME: 15:00-16:00 AST
LOCATION: Microsoft Teams
FACILITATORS: Kyle Fleming (VIEO) and Frank McNally (HUD)

Agency	Participant
US Department of Energy	Aaron Ng, Johanna Zetterberg
US Treasury	Melissa Moye
Sustainable Capital Advisor	Jerome Cox
US Housing and Urban Development	Francis McNally, Laura Rivera-Carrion
Water & Power Authority	Steven Mayers, Vernon Alexander, Noel Hodge, Debra Gottlieb
FEMA Interagency Recovery Coordination	LaTanya Carlos, Andrew Ettienne, Karimah Chinnery, Donnise Nicholas
DOI	Dwayne Petersen
EDA Contract Support	Emily Stecher
LBNL	Peter Cappers
VI Housing Finance Authority	Daryl Griffith, Mario Leonard, Verline Marcellin-Constable, Kimmonique David, Ann Hanley

Meeting Notes

- When HUD was preparing the allocation notice for its electrical grid funding, which is the notice that sets up the TCT as a formal consulting body, they built in 3 aspects of that notice of considerations

    1. The context of the financial certification of the USVI to administer these funds
    2. The context of the implementation plan which looks at the capacity of the USVI to administer these funds
    3. In the context of the action plan – the plan for how the USVI plans to spend the funds.

- The financial and management health of any public utility that might serve as a subrecipient of the funds is a consideration in each of these three arenas
- From a HUD perspective and USVI's grantee perspective, the fiscal and management health of WAPA will be a key consideration going forward as the USVI makes proposes to expend the grid funding. These considerations also carry over to the other buckets of funding related to mitigation and unmet needs because the grid notice ties in those other resources of funding for this activity.

Territorial Challenges related to Fiscal Recovery Plan

1. Departure of the Authority's key management team whose input and direction were needed to complete the plan.
2. Legislation that impacted the operation of Authority
3. Act 83.75 Notice of Rate Payers Bill of Rights
4. Act 84.72 sought to change the constitution of the Authorities board and did to some extent impact board meetings for some period. This legislation is in the process of being challenged by the administration in the judicial system.
5. Act 84.71 mandated hiring of a turnaround company. It expanded the regulatory authority of the PSC. And it requires filings, which in conjunction with the Rate Payers Bill of Rights requires 60-day notice period of the Authority PSC filings. PSC recognizes that they will have to modify a minimum filing report, so this will have a major impact.
6. Interim appointments are currently being filled, but the process has taken time.

Needs related to Fiscal Recovery

1. Need to do updates to the Authority's Strategic Plan
2. The Capital Improvement Plan requires tweaking
3. WAPA needs to get more input and approval on the authority's updated Integrated Resource Plan and other plans

Timelines for the Authority's Fiscal Recovery Plan March 4th, 2022

1. Need to include CDBG DR Tranche 4 action plan and that will not be ready by March 4th. They will include in their fiscal recovery plan, priority projects for revitalization of those funds.
2. This will require input from their new Chief Executive Officer/Executive Director.
3. New CEO comes onboard January 10, 2022
4. WAPA will review Raftelis work by Feb 4.

- After developing the outline, they sought TA from LBNL, to work on an RFP. Due to limited time, they decided to contract a group, Raftelis, to provide TA to work on the Fiscal Recovery Plan.
- WAPA welcomes the input of the Energy TCT.

Discussion/Feedback

- Raftelis is based in Orlando, where the project lead works.
- The outline to be comprehensive and ambitious.
- A plan should solve to address the challenges that are outlined.
- One must plan for fixed and variable cost controls to meet the financial inadequacies.
- WAPA has worked with Raftelis and lean on their experience to come up with something to be more successful, but WAPA cannot project what they will do. Raftelis will increase their chances to have them recognize what they need. WAPA will follow the work internally. Raftelis is mindful of balancing costs with revenues.
- WAPA's intention was not to include the month-by-month cash flow, but WAPA will ask the consultant to consider it.
- WAPA's month-to-month projections go out to 13 weeks, but they can forecast out for a year.

Action Items and Next Steps

- The next meeting will be on January 26, if you have any additional agenda inputs, please send them to Aaron (DOE).

U.S. Virgin Islands Technical and Microgrids Working Group

DATE: Friday, December 10, 2021
TIME: 1PM-2PM AST
LOCATION: Microsoft Teams
CO-LEADS: Aaron Ng (DOE) and Ashley Bryan (WAPA)

Meeting Attendees

Agency	Participant(s)
WAPA	Odari Thomas
FEMA IRC	LaTanya Carlos, Kamal Russell
FEMA Mitigation	Gary Kuhn, Sandra Lashley, Patasha Tracey, Rob Tranter
FEMA UFR	John Dawson
DOE	Aaron Ng
VIHFA	Kimmonique David
NREL	Dan Olis
EDA	Emily Stecher, Chris Feduccia
HUD	Jessie Huddleston
RMI	Chris Burgees, Siana Teelucksingh
Witt O'Brien	Kristen Martin
Bloomberg	Adam Freed

Meeting Notes

STT Bovoni Microgrid Update

- The benefit-cost analyst was submitted by WAPA on 11/22/2021. It currently under review by FEMA.
- FEMA HM is currently preparing for a potential approval on STT Microgrid A&E phase

- The draft COA will be delivered to the territory and WAPA following the meeting, WAPA currently has not selected a project manager for the project.
- FEMA HM would like to schedule a technical meeting with VITEMA & WAPA to discuss the COA.
- FEMA HM will phase the project like the STX Western Microgrid project. Phase I A&E, Phase II Construction.
- (FEMA HM) Questions/Concerns in response to the application submitted
  - Where is the intended location of the battery system storage and how much space does it require?
  - The battery storage appears to discharge for 2 hours. FEMA HM needs clarity on the battery WAPA plans to use. How long is the charge?
  - Please elaborate on the intent of the sectionalizing and the load control. A better understanding of load control is needed.
  - It would be helpful if they can discuss challenges with the wind proposal at the landfill.
  - There are a couple of schedules that were provided that was for the engineering development and the construction development. They were a little conflicting. FEMA HM would like WAPA to address the concern for more clarity.
  - What is the status on the land? WAPA is currently engaged with Department of Property & Procurement. Currently WAPA is working with DPP to gain access to the property so the vendor can conduct some studies to identify where they will locate the structure.

- DOE requested an update from the last meeting when there was a possibility of a denial. Now FEMA HM is moving forward with approval; DOE wanted clarity on what transpired.
  - FEMA HM did produce a denial letter because the project didn't fit the definition of a microgrid, it was missing the power generation.
  - WAPA submitted a revised application which did include what was missing from the previous application which was the power generation component
  - FEMA HM is currently reviewing the BCA and any additional questions. They are moving forward with assessing the eligibility.

STJ Microgrid Update

- FEMA policy staff reviewed the potential for leasing sites. It did meet the eligibility of the project life; however, it is currently in the review stage.
- WAPA asked if FEMA needed a letter in writing requesting approval sent through the territory. FEMA PA said no.
- WAPA has sent draft MOUs to the various landowners. WAPA's legal team is trying to arrange those agreements, and they are working to arrange RFPs.
- This week WAPA had the factory test for the first engine for Cruz Bay. They will have the test for the Coral Bay engine next week.
- WAPA inquired if there was any money added in for the batteries for STJ for the $18M. FEMA will get back to them on that question. They will continue the discussion on Monday during the weekly update.
- RFP was advertised, and WAPA has received bid responses. The responses will be evaluated by a WAPA committee.

STX East Microgrid Update

- FEMA HM has no updates
- RFP has been advertised and the bids are due on December 14, 2021.
- WAPA have an RFP for interconnection studies for STX. They have been working to get the RFPs out with the help from Bloomberg & RMI.
- WAPA thanked NREL for reviewing their RFPs and they appreciate the technical assistance.
- NREL received data from WAPA over the weekend and NREL is reviewing.
- NREL sent out an email to WAPA for information on the fuel cost that should be used and the performance of the generator to make sure their model is based on the correct data. They have made progress on the modeling but need additional information and will contact WAPA.

Economic RSF Announcements

State Tourism Recreational Grant was awarded to the USVI. See Good Jobs Challenge Program information below:

The **US Department of Commerce - Economic Development Administration (EDA)** has an open application window for the **Good Jobs Challenge Grant Program**. The deadline for submitting applications is **January 26, 2022**. Through the American Rescue Plan programs at EDA, the Biden Administration is delivering on its commitment to address inequities and build back better for local communities across the nation to drive economic growth and spur job creation, particularly in rural America. We are asking that you share the information below with your network of partnerships to ensure awareness of this opportunity.

Good Jobs Challenge

- Aims to put $500 million into local economies to support the creation and expansion of industry-led workforce training systems and partnerships that get Americans back to work in good-paying jobs.
- EDA will fund 25 to 50 projects nationwide with a particular focus on equity to ensure that all Americans – particularly women, people of color, historically underserved populations and areas, and other groups facing labor market barriers – are at the center of our economic recovery.
- **Deadline to apply:** 1/26/22. **Early registration in the Grants.gov system is critical to avoiding delays in submission. **
- Good Jobs Challenge Webinar slides (see attached)
- Good Jobs Challenge Application Packet
- Program Website
- Recording of Good Jobs Challenge Office Hours (Includes Program Q&A Overview)
- Contact GoodJobsChallenge@eda.gov with further inquiries.

Presentation on Microgrid "Concept to Commissioning"

- RMI outlined the microgrid "concept to commissioning" process as it relates to the St. John and St. Croix microgrids.

- They proposed continuing discussions to keep the group informed of the analysis studies. After we are all comfortable, they will move into the site studies and provide a theme each month following the GANTT Chart.

Next Steps and Wrap Up

- Wishing all a Happy Holiday.
- WAPA and FEMA will engage on the FEMA-HM's technical questions for STT.
- The working group will discuss more specific topics related to RMI's presentation during future meetings.

U.S. Virgin Islands Technical and Microgrids Working Group

DATE: Friday, October 22, 2021
TIME: 12:30-13:30 AST
LOCATION: Microsoft Teams
CO-LEADS: Aaron Ng (DOE) and Ashley Bryan (WAPA)

Meeting Attendees

Agency	Participant(s)
WAPA	Elton Leitch, Odari Thomas, Orville James
FEMA IRC	Karimah Chinnery, LaTanya Carlos, Donnise Nicholas, Kamal Russell
FEMA Mitigation	Gary Kuhn, Michael Kuca, Ozzie Bradshaw, Sandra Lashley, David Low, Patasha Tracey, Rob Tranter
FEMA UFR	John Dawson
FEMA EHP	Kyle Jerris, Sharla Azizi
DOE	Aaron Ng
VIHFA	Kimmonique David, Dayna Clendinen
EPA	Zeno Bain
VIEO	Kyle Fleming
NREL	Dan Olis
EDA	Emily Stecher, Chris Feduccia
HUD	Jessie Huddleston
RMI	Chris Burgees, Siana Teelucksingh
Witt O'Brien	Kristen Martin
Bloomberg	Jake Elder, Adam Freed

Meeting Notes

STX Microgrid

- EY has completed their review of the RFP document for the studies. Currently WAPA is performing an internal review.
- **Dynamic Stability Study:** NREL had a call w/ WAPA to discuss the data collection. There was a follow up email that requested additional information from the WAPA team.

STJ Microgrid

- WAPA has completed their internal review of the documents. The RFP for the studies will be released.

- The question regarding the lease of the PV sites was with FEMA Chief Counsel for consideration.

STT East Microgrid

- FEMA HM stated that a denial was pending for the STT East Microgrid
- The main reason for the denial is the submitted application doesn't demonstrate how the components funded by FEMA connect to generation. The applications needs to demonstrate a generation component connected with the microgrid.
- VITEMA was provided the guidelines and definition for the microgrid.
- WAPA will wait for the feedback pending meeting with FEMA and VITEMA.
- WAPA worked with Witt O'Brien on the STT Bonvoni Microgrid application and RFI responses.
- Please see this link for FEMA's definition of a microgrid: Hazard Mitigation Assistance Grant Funding for Microgrid Projects | FEMA.gov
- FEMA HM asked WAPA when will they have the project managers assigned to the microgrid projects participate in the meeting to discuss the technical aspects. At the time, WAPA stated that currently they don't have project managers assigned to all the projects.

Next Steps and Wrap Up

- FEMA HM will follow-up with group pending the conversation with VITEMA

U.S. Virgin Islands Technical and Microgrids Working Group

DATE: Friday, September 24, 2021
TIME: 12:30-14:00 AST
LOCATION: Microsoft Teams
CO-LEADS: Aaron Ng (DOE) and Ashley Bryan (WAPA)

Meeting Attendees

Agency	Participant(s)
WAPA	Elton Leitch, Odari Thomas, Ashley Bryan, Orville James, Vernon Alexander, Chavante Marsh
FEMA IRC	Karimah Chinnery, Donnise Nicholas
FEMA PA	Patrick Mcpartlan
FEMA Mitigation	Gary Kuhn, Michael Kuca, Ozzie Bradshaw, Gina Veronese,
FEMA UFR	John Dawson
FEMA EHP	Kyle Jerris, Sharla Azizi
DOE	Aaron Ng
VIHFA	Kimmonique David, Mario Leonard, Verline Marcellin-Constable, Dayna Clendinen
UVI	Gregory Guannel
ODR	Bonnilyn Thomas
VIEO	Kyle Fleming
NREL	Dan Olis
EDA	Chris Feduccia
HUD	Jessie Huddleston
RMI	Chris Burgees, Siana Teelucksingh

VITEMA	Anisha Stanley, Merch James
Bloomberg	Jake Elder

Meeting Notes

STJ Microgrid Update

- Currently WAPA has not prepared a list of STJ studies as done with the Western STX Microgrid project. However, they will start working on one for the STJ project.

STT Bovoni

- RFI 005 responses are still outstanding from WAPA, they are currently working on completing the additional clarification questions received from FEMA HM; WAPA will submit responses to Witt O'Brien.
- WAPA has submitted the SOW for the interconnection studies. They are currently in the preliminary stage of the project, and WAPA doesn't have full details on the entire project.
- NREL engineers have been working with WAPA to validate instrumentation on the system. NREL is currently working on a test plan to submit to WAPA. The data collected will be given to WAPA to use in their dynamic stability studies. NREL will work with WAPA to schedule the actual data collection phase, they would like to get in on the books in October.

Western St. Croix

- NREL has ran a series of contingency events and will work with WAPA to collect additional data on the system economic dispatch modeling. There is a meeting scheduled for October 8 to get WAPA officials input on the dispatch modeling. The timeline to complete the dynamic stability study is dependent on availability of staff.

Next Steps and Wrap Up

- Next meeting will be scheduled for October 22, 2021

U.S. Virgin Islands Fiscal and Policy Working Group

DATE: Wednesday, September 22, 2021
TIME: 15:30-16:30 AST
LOCATION: Microsoft Teams
FACILITATORS: Kyle Fleming (VIEO) and Frank McNally (HUD)

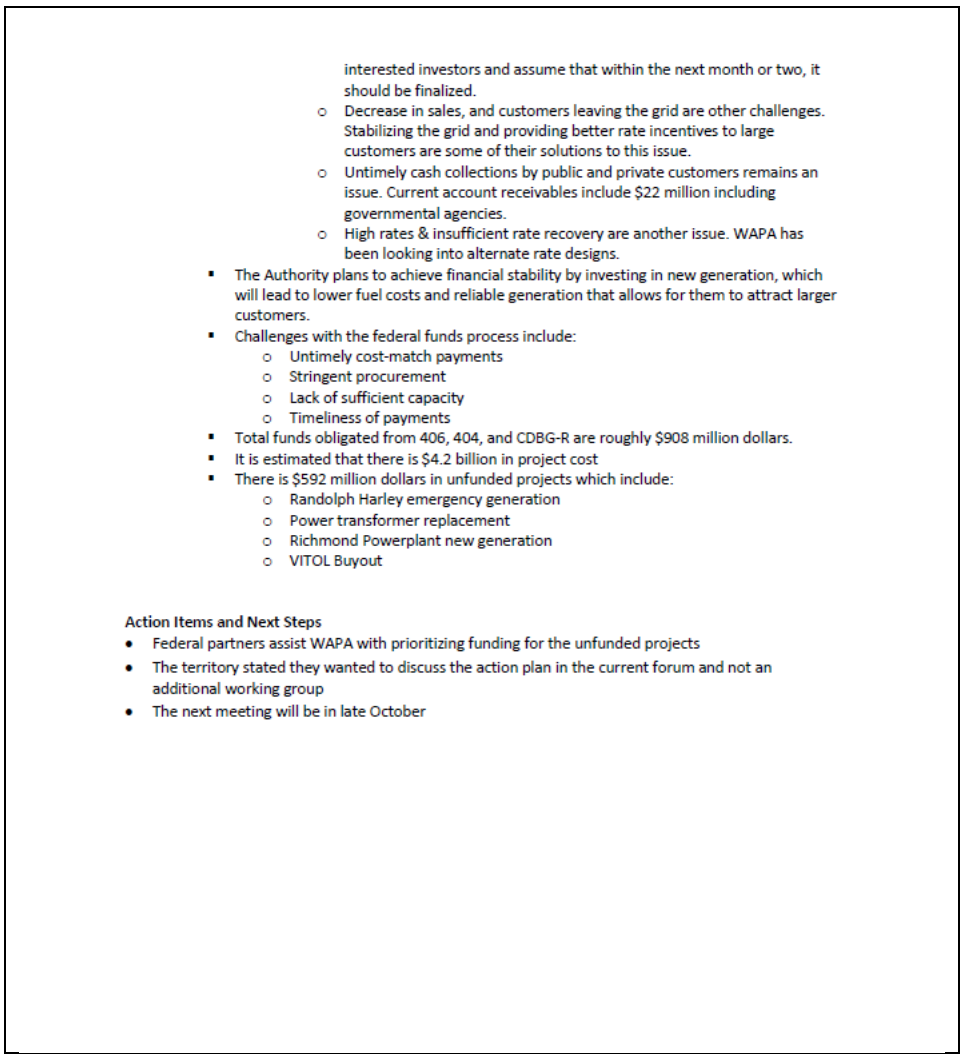
Agency	Participant
US Department of Energy	Aaron Ng, Johanna Zetterberg
US Treasury	Melissa Moye
Sustainable Capital Advisor	Jerome Cox
US Housing and Urban Development	Francis McNally
Water & Power Authority	Akeyla Christian, Vernon Alexander, Michael Dow Sr, Noel Hodge, Debra Gottlieb
FEMA Interagency Recovery Coordination	Derval Wiltshire-Petersen, LaTanya Carlos, Donnise Nicholas, Karimah Chinnery
FEMA HM	Michael Kuca, Gary Kuhn, John Kempf
DOI	Basil Ottley, Dwayne Petersen

USVI Office of Disaster Recovery	Bonnilyn Thomas
USVI Lt. Governor's Office	Chris George
USVI Energy Office	Kyle Fleming
VI Housing Finance Authority	Daryl Griffith, Mario Leonard, Verline Marcellin-Constable, Kimmonique David

Meeting Notes

WAPA Presentation

- WAPA provided a presentation related to the Authority's energy sector recovery efforts and their operational/fiscal status. Below are key points from the presentation, which was presented by Ms. Akeyla Christian, Director of Disaster Recovery and Compliance
    - The presentation outlined the authority's strategic transformation plan.
    - WAPA overview: The authority provides electrical power to approximately 54,000 customers throughout the territory to St. Thomas and St. Croix and transmitted via undersea cables to the smarter islands. They also distribute water to approximately 14,000 customers within the territory.
    - The presentation focused on the resilience transformation and stabilization of generation, transmission, distribution, and financial operations
    - The generation system consists of older less efficient generation. There are contracting concerns with the current fuel and infrastructure provider. Additionally, there is a lack of sufficient personnel capacity. Insufficient cash flow and inadequate rate recovery has led to deferred maintenance, a lack of sufficient back up generation, and the inability to replace aging generation in a timely manner
    - The authority's vision includes new generation, including renewable energy with battery storage and reduced carbon emissions. The transformation will lead to more efficient electricity generation, increased renewable penetration, reduced fuel costs, and more stable and reliable grid operations.
    - The current state of the transmission and distribution system includes infrastructure that is vulnerable to hurricanes and other major catastrophic damage, above ground distribution, pole-mounted transformers, damaged substations, greater need for renewable energy, and overgrown vegetation.
    - The transformation that WAPA envisions for the T&D system includes modification and upgrades to existing substations, repairs and upgrades to the AMI, development and implementation of territorial microgrids, underground distribution systems on St. Thomas, St. Croix, and St. John and replacement of wood poles to more resilient composite poles.
    - They highlighted some of their biggest financial challenges and proposed solutions to those challenges; the challenges are not listed in any particular order.
        - The costs of the propane facility infrastructure which includes a current contract of $44 million in infrastructure payments and $12 million in operation and maintenance cost. This contract puts the authority in an $18 million deficit, which WAPA doesn't have rates or a funding source to cover. They would like to utilize federal funds to acquire the facility.
        - The remainder of the payments of the recently acquired generation is another challenge. In 2017, the authority acquired 21 megawatts of generation on St. Thomas, and $21.5 million remains unpaid to the contractor. They are in the process of finalizing the terms with some



interested investors and assume that within the next month or two, it should be finalized.
    - Decrease in sales, and customers leaving the grid are other challenges. Stabilizing the grid and providing better rate incentives to large customers are some of their solutions to this issue.
    - Untimely cash collections by public and private customers remains an issue. Current account receivables include $22 million including governmental agencies.
    - High rates & insufficient rate recovery are another issue. WAPA has been looking into alternate rate designs.
- The Authority plans to achieve financial stability by investing in new generation, which will lead to lower fuel costs and reliable generation that allows for them to attract larger customers.
- Challenges with the federal funds process include:
    - Untimely cost-match payments
    - Stringent procurement
    - Lack of sufficient capacity
    - Timeliness of payments
- Total funds obligated from 406, 404, and CDBG-R are roughly $908 million dollars.
- It is estimated that there is $4.2 billion in project cost
- There is $592 million dollars in unfunded projects which include:
    - Randolph Harley emergency generation
    - Power transformer replacement
    - Richmond Powerplant new generation
    - VITOL Buyout

Action Items and Next Steps

- Federal partners assist WAPA with prioritizing funding for the unfunded projects
- The territory stated they wanted to discuss the action plan in the current forum and not an additional working group
- The next meeting will be in late October

A.4 Proof of Publication

Community Participation and Public Comment

The VIHFA values the input of its many affected citizens, decision makers, and stakeholders representing the vulnerable communities that suffered the impacts of Hurricanes Irma and Maria. As set forth in the FRN ([p 32679) Section V.A. 3.a.; based upon the allocation designated for the Territory, the VIHFA was required to convene at least three (3) public hearings. The FRN further requires that one of the public hearings must be held prior to the publication of public comment of its Plan on the website; and that all hearings are convened in different locations in order to ensure geographic balance and maximum accessibility.

Publication of the action plan and opportunity for public comment.

HUD continues to emphasize the importance of a robust citizen participation process, which shall include at least two public hearings on the proposed action plan. VIHFA has published an amendment of its citizen participation plan to incorporate the electrical power system improvements through CDBG– DR funds with the specific citizen participation requirements. The first of the public hearings occurred prior to

a grantee's publication of its action plan on its website for public comment on September 15, 2022 and September 20, 2022. These public hearings were conducted as virtual hearing pursuant to section V.A.3.b. they were convened to allow geographic balance and ensure maximum accessibility. The second public hearing was held on November 09, 2022 to announce the publishing of the drafted action plan. As provided in section V.A.2.d. of the FRN, before VIHFA submits the action plan for this grant to HUD or any substantial amendment to the action plan of this notice, the VIHFA will publish the proposed action plan or amendment. The manner of publication must include prominent posting on the VIHFA's official website and must afford citizens, affected local governments, and other interested parties a reasonable opportunity to examine the plan or amendment's contents. The topic of electrical power system improvements, as part of the grantee's broader disaster recovery efforts, must be navigable by citizens from VIHFA's (or relevant agency's) homepage.

VIHFA also has made the recordings of the public hearings available online for live viewing and has created an archival video of the public meetings on its website. Plan publication efforts and public hearings must comply with civil rights requirements, including meeting the effective communications requirements under Section 504 of the Rehabilitation Act (see, 24 CFR 8.6) and the Americans with Disabilities Act (see 28 CFR 35.160); and must provide meaningful access for persons with Limited English Proficiency (LEP) (see HUD's LEP Guidance, 72 FR 2732 (2007)).

This index is designed to identify the notices of the three Public Hearings. Public notices will be found at the CDBG-DR website at [Electrical- Virgin Islands Housing Finance Authority (vihfa.gov)](). These include:

a. Pre-Action Plan - September 15, 2022 and September 20, 2022
b. Post Action Plan – November 09.2022

Figure 46 Pre Action Plan Public Hearing Notice

CDBG-DR Disaster Recovery

JOBS | NEWS | EVENTS | CONTACT | English

FOR CITIZENS | ELECTRICAL | MITIGATION | PROGRAMS | PROCUREMENT | SUBRECIPIENTS | CONTRACTS | RESOURCES

VIHFA Announces Launch of Electrical Grid Public Hearings

September 13, 2022

ST. CROIX, USVI – Two upcoming public hearings offer V.I. residents the chance to learn more about the development of the V.I. Housing Finance Authority's Electrical Grid action plan, along with opportunities for funding and input.

The action plan delineates how $67 million in CDBG-DR funds awarded through the U.S. Department of Housing and Urban Development for enhanced and improved electrical systems can and will be used – though public input during a subsequent 45-day comment period will also guide the creation of the final document.

While significant progress has been made in restoring and enhancing local power systems since Hurricanes Irma and Maria in 2017, the CDBG-DR Electrical System Improvement funds address other remaining or proposed restoration and improvement costs not already covered through other sources of funding. Public hearing opportunities are as follows – remember to register first in order to receive your individual meeting link:

Thursday, September 15, 2022 at 5:30 p.m.

Registration Link: **https://tinyurl.com/ElectricalSept15**

Meeting ID: 871 4057 4362

Passcode: **538455**

Tuesday, September 20, 2022 at 3:00 p.m.

Registration Link: **https://tinyurl.com/ElectricalSept20**

Meeting ID: 873 0507 6505 Passcode: **915980**

Figure 47 Public Hearing Notice

Meeting ID: 873 0507 6505 Passcode: **915980**

Vihfa Cdbg Public Hearing Daily News 002

Figure 48 CDBG-DR News Notices

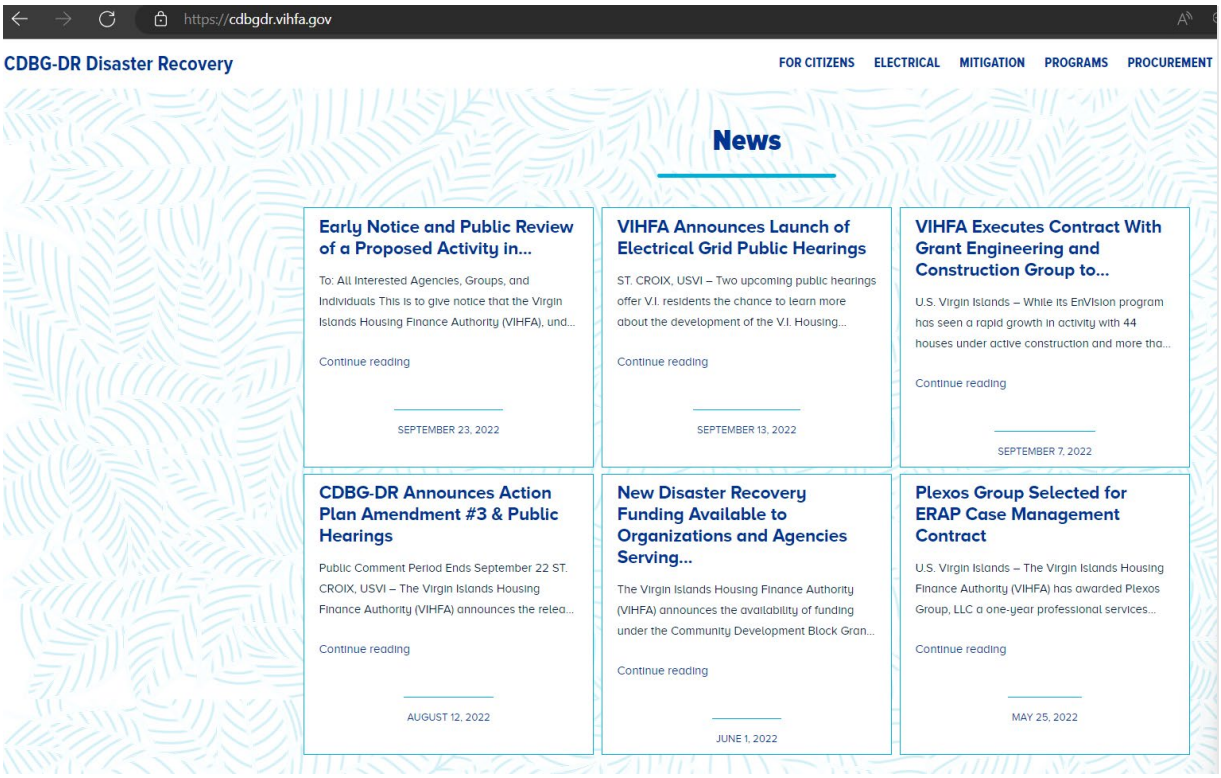


Figure 49 CDBG-DR Notice on 11/09/22 Public Hearing

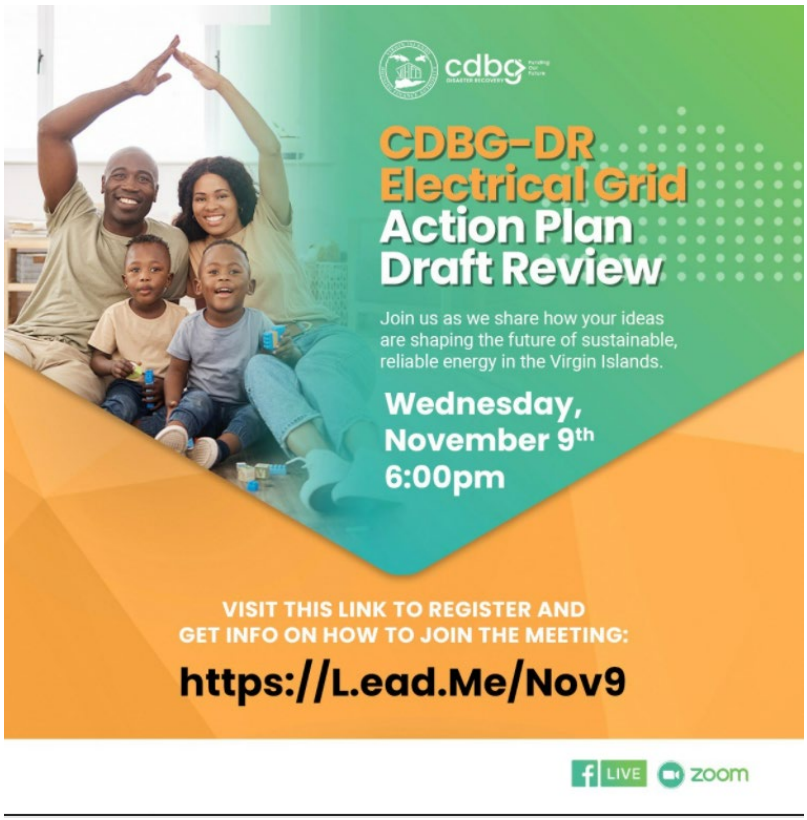


Figure 50 Notice on Public Comment Period Open

https://cdbgdr.vihfa.gov/home/cdbg-electrical/

JOBS | NEWS | EVENTS | CONTACT | English

CDBG-DR
Disaster Recovery

FOR CITIZENS | ELECTRICAL | MITIGATION | PROGRAMS | PROCUREMENT | SUBRECIPIENTS | CONTRACTS | RESOURCES

Public Comment Period Open November 11, 2022 – December 26, 2022

The Territory's CDBG – Electrical Action Plan to spend $67.6 million for the electrical power grid is published and the Authority is soliciting comments and feedback.

Federal Register Notice FR-6261-N-01 was issued June 22, 2021

- CDBG ELECTRICAL GRID ACTION PLAN DRAFT W APPENDICES
- CDBG ELECTRICAL GRID ACTION PLAN DRAFT W APPENDICES SPN
- CDBG ELECTRICAL GRID ACTION PLAN PUBLIC HEARING | DECEMBER 6, 2022
- CDBG ELECTRICAL GRID ACTION PLAN PUBLIC HEARING | NOVEMBER 9, 2022
- PRE-ACTION PLAN RELEASE PUBLIC HEARING | SEPTEMBER 20, 2022
- PRE-ACTION PLAN RELEASE PUBLIC HEARING | SEPTEMBER 15
- ELECTRICAL GRID ACTION PLAN PUBLIC HEARING PPT PRESENTATION
- ELECTRICAL GRID PUBLIC HEARINGS PRESS RELEASE
- FR-6261-N-01

A.5 Public Comments

Initial publication will be on Friday, November 11, 2022. Public notices will be found at the CDBG-DR website at Electrical- Virgin Islands Housing Finance Authority (vihfa.gov).

Public Hearings Chats and Transcripts

Public Meeting Chat and Responses September 15, 2022

Time: 5:30 pm AST

Duration 1:02:02

Event: Zoom

17:34:31 From Ann Hanley to Everyone: 👐

18:03:53 From Pam Gaffin to Everyone: Do you have a census map of LMI areas for St John?

VIHFA response from Ann Hanley: Yes, the maps can be provided.

VIHFA response from Keva Muller: The Census maps will be added to the presentation when it is published.

18:04:30 From Chris Christian to Everyone: Concerning the community innovations program. Please reconfirm. What types of organizations may participate? 501c, For Profit?

VIHFA response from Verline Marcellin-Constable: Applicants can include community-based organizations that can demonstrate that they meet the eligibility requirements of the grant. These can include nonprofit and for profit and government agencies.

18:06:02 From Pam Gaffin to Everyone: Thank you.

18:06:10 From Dayle Barry to Everyone: Is it possible to use funds to install renewable energy in high density public housing areas and use cost savings to provide a common fund that may be used for transitioning tenants to home ownership.

VIHFA response from Verline Marcellin-Constable: So once again, in looking at whatever is being proposed, we're going to go back to just answering those questions. It seems like a good project and I don't want to go on record to say, well, you know, definitely we can fund it because we can have a discussion. And if it meets the eligibility, definitely.

VIHFA response from Keva Muller: Okay. I'm my suggestion to you. That's to me. Just blanket me. That, that sounds like a good idea. But if you can expound a little bit on that and send it as a formal comment, I think we'd really appreciate that for the plan. because that would also, I see that having some kind of integration with public and affordable housing programs and housing authority and that type of stuff. So, if you can Expound under that little proposal or note that you have there and send it to formal comments. we'd love that. That's the type of things that we'd like to see. Thank you, Dave.

18:07:18 From Jo zoom to Everyone: How long is it anticipated to take before WAPA is allowed to start spending money on the Richmond Plant?

VIHFA response from Keva Muller: So, I will go back and I will explain this particular process. I am not sure because I and I don't speak for WAPA. If they already have any type of federal funds for the Richmond plans because they know they have plenty of, you know, maybe some other funds. But for this particular program that they presented a plan for, and they would have to wait until one, we're in the very, very, very, very beginning stages of this process. because we don't even have an action plan draft. We are coming to the public to get some ideas, some feedback, before we draft the plan, to take those things into consideration and then we draft it and we come back out to the public.

It's like telling us what you want us to include. We're going to include it and then we're going to run it back by you. And then before we're done with that, we're going to package it up really nicely with a move, send it up to HUD. They take say, sixty to ninety days to review the plan in its entirety, very thoroughly, and then come back to us with any changes they may have one or two changes who knows. They may accept it on the first try. And then once that's that one that is done, then we move on to grant signing. So that can take some months. So I don't want to give you an exact timeline. But, this your particular question anticipated to what, you know, how long is anticipated to take WAPA before WAPA is allowed to start spending money. It's not going to be enough. It's not going to be before the end of this year. And I don't want to associate it being before, like, six months into 2023. So, it's a process, but I guarantee you, and I will reassure you that we will keep you in the know every step of the way with updates and press releases. Hope that helps.

18:09:28 From Dayle Barry to Everyone: Thank you.

18:11:51 From Dayle Barry to Everyone: Could you describe in a little more detail the work that is to be completed at the Richmond Plant?

VIHFA response from Keva Muller: I'll go back to that slide. And, I don't think it outlines the work that needs to be done, but it does say what they plan to do. So, I think it's this slide. The current configuration at the Richmond state generating facility is that they have three permanent operable units with a total capacity of 60 megawatts, and then they have 18 leased agricultural generators. So, what they plan to do with these funds is to replace the leased technical generators and the older existing units, which I would assume to be the three permanent operable units, was more efficient cost effective and environmentally friendly generation. That is as broad as they can tell us right now or as we know, they may be considering solar wind battery storage. I don't know. This is me just speculating, but that's what they propose. And with what they plan to do with the money, it will definitely improve the reliability and resiliency of the overall system, and that leads back to the LMI benefit. Let's go back to that slide. I'm going to go back to the LMI, either or statement. It's going to cause some rate savings, or some reliability. So, that's the plan.

If anybody in any official capacity is on the line from WAPA, I would like to explain or have a better idea? I welcome you to answer that question. But right now, I got let me speak from VIHFA. Thank you so much for understanding. Hope that helps. If I can just pass it to you, miss Muller. Oh, sure. Absolutely. Did WAPA? Okay.

*VIHFA response from Verline Marcellin-Consta*ble: So, basically, the intention is to replace the existing Aggreko units. by installing permanent generators. And, they're also trying to tie in the battery energy storage system as peace. to that. So, basically, they now have ownership of these units. So, you would see cost savings there as well as being a more efficient unit, you know.

Furthermore, you have a cost-savings in your operation and your operation and maintenance because you now have a new efficient unit. So that's the idea in a nutshell. And what about if you're on, you're free to more details.

VIHFA response from Keva Muller: Alright. That sounds good to me. Anybody has any other questions. You guys have some good questions, and I'm happy to see that. Going to wait it up for a few more questions and I'm going put it back on this slide. While you are thinking of some more questions to ask. I'm going to go ahead and reiterate that our written comments can be submitted to media@vihfa.gov email. And, I ask that you use for the subject for your email be CDBG-DR Electrical Power Improvements, Action Plan, or Electrical Grid action plan, or just electrical, whatever floats your boat, and all of the information that's from tonight's hearing will be uploaded to cbbgdr.vihfa.gov under the electrical tab. So, what is up now is the federal register notice. And if you are interested in those type of documents, you can read that. And then we have a press release up about the public hearings. So, by the end of the day tomorrow, I'll have the live recording up and then a PDF document of the slide deck. so you can review all of the information in great detail and on your own time to give you a little bit more freedom of flexibility to submit your comments if you do have them. So, it's six clock, Team. I'm going to give it about one or two more minutes if you have other questions.

18:12:09 From Lasiba Knight to Everyone: Thanks a ton for the detailed response

18:14:13 From Dayle Barry to Everyone: Thank you

18:16:50 From Pam Gaffin to Everyone: Could the funds be used to install solar panels at schools then allow the schools to keep the amounts saved on WAPA bills for the benefit of that school? I read a newspaper article today about many schools in the States doing this.

VIHFA response from Keva Muller: And I'll also say again, Pam. All of these things can be sent written as formal comments for us to consider. So, I don't want to get into these yes or no questions because this is still in its infancy stages. We don't even have a plan drafted yet. We are really just coming out to you guys to see what you would like to see done. So that we can consider it in the action plan. And if they sound great enough, we make it make it something that HUD may like as well. They could approve it and it can be done. So, no yes or no questions. But yes, thank you for the suggestion, and we have recorded in the chat, so we'll consider it as well.

18:18:04 From Pam Gaffin to Everyone: I meant that to be a suggestion for you to consider.

VIHFA response from Anne-Marie Williams: Related to Chris Christian's [question] the project activities are open to non-profit and for-profit organizations, and educational institution as well as small local business.

VIHFA response from Keva Muller: So definitely, Pam, just if you if you didn't want to reach out to any of the infrastructure staff with there to just have a discussion with you. But we like that. This is what we wanted. We wanted to hear these ideas and, they are great ideas. But, definitely, again, say yes and thank you. Yes.

18:18:10 From Chris Christian to Everyone: There is a strong need for underground electrical conduits as well as low voltage conduits coming from Level 3/Lumen and AT&T towards the Frederiksted ball bark. This rural area route is a high-risk area during a storm.

VIHFA response from Keva Muller: Thank you so much, Chris. I must say, I've got a lot of these public hearings and like this set of feedback and commentary. I'm proud of you guys. So even if you have your question or comments in the chat, you don't have to email it because we automatically archive it from the chat and include it. The names are attached, and I think that's good enough

for us. But if there's anything that you want to expound on, you can definitely send it via email. So I'm going to give two more minutes for questions, and then we're going to close out. And while you guys are maybe thinking about your last questions. I'll also mention again that if you have other disaster recovery interests other than the energy like anything related to energy and electrical systems. We have a public comment period going on until September twenty second. That will be next week. So, we're getting down to the wire on the action plan amendment number three. When you go up on our website, the cdbgdr.vihfa.gov. You'll see all of those documents, live recordings to the public hearings that we held a few weeks ago, and we are moving around some money. So, there's an opportunity to give some feedback and input there as well.

And while you're on our DR website, check the news section to see what we've been up to. There's a lot of information there. If you guys are on social media, make sure you like and follow our page via housing finance authority. There's a lot of exciting things going on here that we're doing that we would like you guys to know and be a part of.

18:19:06 From Pam Gaffin to Everyone: Thank you

18:21:14 From Pam Gaffin to Everyone: You have conducted a very good meeting. I look forward to being able to find the information on your website - that has not happened at many meetings I have attended. Thank you.

VIHFA response from Keva Muller: Thank you so much, Pam. I try my very best to make sure all of the information is accessible to you guys online and weather permitting. And I don't have a lot of preparation to do. I will have those things up by end of day tomorrow. So, it's once again, cbbgdr.vihfa.gov and everything relative to the electrical grid. let me say, the official term, Electrical Power Systems Improvements Action Plan will be up under the Electrical tab. Not forgetting the question about the St. John LMI, the LMI map? I'll find a way to insert it into this presentation slide deck under the LMI, next to the LMI slide. so that you guys can have an idea of what that looks like for all Islands, not just St. John. So that's some work to do.

Oh, how did I forget Pam? So you can contact us you can contact me at media@vihfa.gov There's one. My email and I will put it in the chat is kmuller@vihfa.gov. My telephone number is (340) 772-4432 extension 3258 That's smaller. and you can also call that main number if you need to speak to our staff infrastructure. You can call that main number and speak with miss Arlene Consumable, miss Anne Marie Williams. or miscommunicated. I hope that helps.

18:22:33 From Pam Gaffin to Everyone: How can we contact you?

VIHFA response from Keva Muller: Oh, how did I forget Pam? So, you can contact us. You can contact me at media@vihfa.gov. There's one. My email and I will put it in the chat is kmuller@vihfa.gov. My telephone number is (340) 772-4432 x3258. That's kmuller. And you can also call that main number if you need to speak to our staff infrastructure.

You can call that main number and speak with Ms. Verline Constable, Ms. Anne Marie Williams. or Ms. Kimmonique David. I hope that helps.

18:22:56 From Keva Muller to Everyone: kmuller@vihfa.gov

18:23:10 From Keva Muller to Everyone: 340-772-4432 ext. 3258

18:23:40 From Pam Gaffin to Everyone: Thank you

18:25:33 From Pam Gaffin to Everyone: One school installed the solar panels on a roof to provide shade and rain protection, our temporary trailers could use that.

VIHFA response from Keva Muller: And I don't think we have any other questions. We'll give you a few more seconds to submit if you have any. But while you're thinking about any last-minute questions. I'm going to ask Ms. Hanley if you have any remarks, closing remarks you'd like to bring. Feel free to do so. You'll have to turn on your camera if you don't want to. But thank you for being on the call. And also, Ms. Constable, if you have any closing remarks, feel free to do so at this time.

VIHFA response from Ann Hanley: Good evening. I just wanted to say thank you to the participant. I do agree, Keva, this is a very active and responsive group. And some of the ideas that were brought forward are excellent ideas. So, we do definitely look to engaging the public with this particular action plan. So thank you again for your participation and good work to the team who put this presentation together.

VIHFA response from Keva Muller: Thank you. It's possible any last closing remarks before I wrap it up for you guys.

VIHFA response from Verline Marcellin-Constable: I share with internally sentiment. Thank you. It was a very interesting discussion and like I said earlier, we accomplished what we wanted. And it seems that we have individuals out there that are thinking in and are being creative, and we welcome your comments. Thank you for attending. Alright.

VIHFA response from Keva Muller: Thank you so much, guys. Pam, Chris, Dale. You guys had some really great comments and feedback. And I will personally add your emails to our listing to keep you updated about what's going on with the electrical plant electrical grid action plant. You guys seem very interested and invested.

So, thank you. Thank you. Thank you. This is what we wanted. And lastly, we have a very safe and hopefully, speech right, a big. this rainy weekend, and I am going to I saw your last comment there, PAM. Thank you.

Yes. So, thank you once again for joining our call. I am Keva Muller, Communications Manager.

You heard from Ms. Ann Hanley, she's our Director of Programs. Verline Constable, she's our Senior Manager of Infrastructure, and also her staff, Kimmonique David Anne Marie Williams.

If you want to join next week's conversation, we'll be doing this at 3:00 PM (AST). Same here on Zoom again. So, if there's some other folks that may be interested in this go ahead and forward that invitation onto them. All of the information is on our website, cdbgdr.vihfa.gov under the Electrical tab.

So once again, thank you. Thank you. Thank you. And you guys have a great evening.

18:26:07 From Chris Christian to Everyone: thanks

18:26:21 From Pam Gaffin to Everyone: thank you very much.

18:26:54 From Verline Constable to Everyone: Great Information team!

18:27:23 From Verline Constable to Everyone: Great Job Keva!

Public Meeting Chat and Responses September 20, 2022

Time: 3:00pm AST

Duration 1:01:02

Event: Zoom

15:34:23 From Jason Budsan to Everyone: Good afternoon. When ready, can you describe the progress made on solar or renewable projects underway currently? I believe folks applying for new grants should know where the greatest needs are and where the gaps should be filled. Thanks!

VIHFA response from Keva Muller: Someone from infrastructure, infrastructure, can you help with this question I? I think if I can synthesize it, 'is there any studies or assessments currently going on that address what, I guess is the level of solar or renewable projects that are going on the islands so we can gauge the need. Let me catch for these funds?"

VIHFA response from Verline Marcellin-Constable: Good Afternoon, this is Verline Constable. The best method is to just take the question sentence by sentence. It says one ready, "can you describe the process made on solar or renewable projects underway, currently?" So, I think this is where the TCT and the different focus groups come in. Where we can identify projects that are ongoing, so there's no duplication of efforts. So, we are going to do a lot of the plan in consultation with the various focus teams. So, at that point we will be able to identify the needs.

VIHFA response from Keva Muller: So, a question to Ms. Constable. Could we expect to see something like that in the action plan from the TCT? Would that be included in the overall plan?

VIHFA response from Verline Marcellin-Constable: A good place for it would be with the innovative projects. If individuals can come up with an idea that is related to some renewable energy project, that would be great. It just goes back to the project being eligible. So, if they can demonstrate that it meets the requirement of what's in the action plan. We can definitely do, if the fund is available and the project is eligible. If there's a project in mind that involves renewable energy, that's something that can definitely be considered.

VIHFA response from Keva Muller: So, Jason, I would say just go ahead and submit any project or idea that you have for consideration. If there is some overlap address that.

VIHFA response from Verline Marcellin-Constable: If I may, can you go back to the slide that speaks to the criteria for these projects. What might help when considering a possible scope is the project eligibility requirements. It is a good place to start. And, if there's something there that you think that we did not consider, please put it in your comments as well, because we can revisit this and revise it accordingly. But this is a good place to start. And, if you come up with or you have the idea that you think might be eligible, you can go through the list. And if you can answer these questions, I think you're in good shape.

So, if we want to address the renewable energy, happy for that. I think for everybody this is a good place to start is by trying to tap into the funds allocated for the possible innovative community projects.

15:41:48 From Alan Boisvert to Everyone: Good afternoon, With the $53 Million to WAPA to upgrade the power plant who will be responsible for oversight of the project?

VIHFA response from Keva Muller: WAPA will be responsible for the oversight. VIHFA will manage the project as the financing requirements under HUD, which includes that the project must be complete and have long-term O/M.

15:43:44 From Donnie Dorsett to Everyone: Does For-Profit qualify as community organizations?

15:45:19 From: Asiah Clendinen Gumbs:: Good afternoon, I'm getting some feedback from Duncan and I'm not able to hear the questions or the responses. Thank you, I have two questions.

Good afternoon. Thank you for the presentation. On one of the slides, it talks about 70% of the money would benefit the mid to low income population. 70% of the money. What happens to the other 30%? So, can you have a project that does not benefit the low and moderate income persons with the other 30%? Thank you and my next question. Who qualifies as a community organizer?

VIHFA response from Verline Marcelin-Constable: Yes.

15:46:13 From: Asiah Clendinen Gumbs:: Thank you and my next question. Who qualifies as a community organizer?

VIHFA response from Verline Marcelin-Constable: Do you have a particular organization in mind?

15:46:18 From Asiah Clendinen Gumbs:: Havensight Mall.

VIHFA response from Verline Marcelin-Constable: OK, So, what you can do for us since it's just a forum where we are just providing information, you can Anne-Marie, Kimmonique or myself just to discuss. If you can just provide us what your plans are, what how your organization is currently set up and then we can provide more information.

We just have to be careful with how certain organization are defined under regulation. So we just want to get a better idea as to how your set up is and we can better answer that question.

15:46:48 From Asiah Clendinen Gumbs to Everyone: Thank you.

15:46:57 From Asian Clendinen: Thank you, so do I just call the main number and ask for one of you?.

VIHFA response from Verline Marcelin-Constable: Yes, and Ms. Mueller has our information and we're happy to sit down and have a meeting with you just to discuss your ideas and just answer any possible questions you may have. Because, then at that point we would have more details.

15:47:16 From Asiah Clendinen Gumbs:: Thank you. All right, my final question. This is the public hearing, so you're gathering information in order to take back and write in your plan. Do you have an anticipated date of when this would be approved and rolled out to begin taking applications for this competitive process?

VIHFA response from Verline Marcelin-Constable We can say this, that the plan has to be submitted to HUD by December 30th of this year. And if you factor in the time that it goes through the approval, then we come back with a grant agreement and then implementation with implementation. At that stage we can get into providing information on you, possibly submitting an application what's needed in your application, and just the process flow. And how the entire project will be implemented.

So, if you, if you factor that in, you may get an idea of how quickly. So, it's dependent and the hard review. How quickly we can get to implementation. But we're fighting and we're moving as quickly as we can because we're excited about these projects and we're just excited just to see what different ideas the community can come up with. So, we're pushing to just get it up and running as quickly as we can.

VIHFA response from Verline Marcelin-Constable: You're welcome.

15:48:40 From Asiah Clendinen Gumbs: Thank you so much for your response and thank you for the presentation.

VIHFA response from Keva Muller: This is my second action plan, public hearing or initial action plan draft because I did [the CDBG-] Mitigation. And, I could say, based on mitigation, I'd say give it about six to nine months to get an approval. And that's just being very honest with how the process is with HUD and how they may have some revisions to the plan that we have to go back and work out. Of course, they do provide some technical assistance by way of contractors. But. I don't think that they will it would. It would be nice. They always they take a deep dive into the action plan; and they always have some suggestions that we may have to go back and address. So, it takes some time. It's not going to be by the end of the year. We have to submit the plan by the end of the year. But, it takes some time for them to review it in its entirety and get back to us and for us to come to a full-approval. So, I'll say that it will take six to nine months, to hear some good news from us.

So, moving on Alan. Good Afternoon. "With the $53 million to WAPA to upgrade the power plants, who will be responsible for oversight of the project?"

And if I may and I'll allow the infrastructure to discuss it. When we issue funds or we grant funds to our sub recipients. We have a compliance and monitoring team that is responsible as well as the program managers for each program area activity area who provide a level of oversight on the project to make sure that they're meeting all of the eligibility guidelines and the processes that were mapped out in their sub recipient agreement and then our internal compliance and monitoring team conducts routine monitoring and reviews of the program areas. And then of course HUD does their monitoring on us as well. So, it's kind of two tiered. If anybody like to add to that? Did I get that right, Ms. Constable?

VIHFA response from Verline Marcelin-Constable: If I may, just on that you have the program, that's going to be responsible for the overall management, and then you have as the sub recipient that's going to have its personnel responsible for their oversight. So, you have it under sub recipients and then you have it under program. And, as Ms. Muller indicated, we have a compliance team that keeps everything on track.

VIHFA response from Keva Muller: Donnie Dorsett asks, 'does for profit qualify as community organizations?'

VIHFA response from Verline Marcelin-Constable: Mr. Dorsett, I'm going to respond like I responded earlier. If you can just submit the actual organization that's set- up, we'll get a better description of it. We can say yes or no, but just in general, we're looking at nonprofits, schools, small businesses. So, if you can provide your comments with just your scope and just how that organization is set up, then we'll be happy to respond.

VIHFA response from Keva Muller: And I also add to that that since this is the Pre-Plan meeting, I think we're really open to as many suggestions as possible and when we write the plan we'll come up with the best course of action for each program. So, I'd say just submit, the proposal or the comment feedback and then we will address it in the plan. Don't limit yourself.

Do you have any other questions, comments, or concerns?

I'd also like to mention. Well, I'll let you guys think about your other questions. We are at the end--but you still have two days of our Action Plan Amendment #3--and this is for the Community development block grant disaster recovery. The initial action plan for tranches 1, 2

and 3. We've repurposed some funds, one to provide more funding to our housing programs because taking into consideration the rising cost of construction. And then, under economic revitalization, we've added two new funding programs. So, that's our {CDBG-DR] action plan on the DR website CDBG-DR.vihfa.gov on that main page you see the action plan, Amendment # 3 and, all of the documents. We held some public hearings about a month ago. You can see the live recordings, For that you can read the plans and the summary for the Amendment #3 and the public comment period actually ends on today's Tuesday. On Thursday the 22nd.

So that's another thing that you can provide your input on if you are not 100% committed to electrical grid; there are some other things that we have going on as well. That [public comment period] ends on the 22nd on Thursday. And while you're at it, on our website, there's a lot of information on there so you can see what the disaster recovery program is doing but check out our news section. If you know anyone that's interested in doing business with the recovery.

Check out our procurement section as well and just be updated on what we have going on here at CDBG DR.

. 15:53:14 From Keva Muller to Everyone: kmuller@vihfa.gov

15:53:28 From Keva Muller to Everyone: 340-772-4432 ext. 3258

VIHFA response from Keva Muller: Any more questions? I don't see any questions. OK, and in the chat. I'll just put you can reach me at media@viahfa.gov, but I'll also put my e-mail and my number. If you have any questions or concerns, I can point you in the right direction.

And you heard from Kimmonique David and Anne-Marie Williams and Verline Constable for this electrical grid. So, if you check the website out and you see something that you have questions about or pertaining to another program, just give me a call or shoot me an email and I'll point you to the right staff member.

VIHFA response from Anne-Marie Williams: Before you go, I just want to emphasize that people who are looking to develop programs or application or see that there's an opportunity for them to apply. This is a very good reference page. We can accept, like Miss Constable says, small businesses, educational institutions, nonprofit and other community stakeholders will be able to apply. However, for the applicants under this program, this slide is very important. This is where you can determine and develop your project activities to address or meet all of these criteria. So it's all. It's not one or, it's all the criteria currently.

VIHFA response from Verline Marcelin-Constable: I will my contact information in the chat so that may be reached.

15:57:58 From Keva Muller to Asiah Clendinen Gumbs: (Direct Message): vconstable@vihfa.gov

15:58:13 From Keva Muller to Asiah Clendinen Gumbs: (Direct Message): Ms. Constable's email.

VIHFA response from Keva Muller: OK, I'm going back to what Anne-Marie said. I just want to emphasize this and these are the questions that you need to ask yourself when you're thinking about your project proposal.

- If you will, will this activity benefit low and moderate income persons?
- Will this activity address the duration and frequency of outages in the project area?
- Will overall will the overall schedule be completed in a great grand cycle and this is taken into consideration your environmental permitting, your design and your construction? Mind you, we have six years from the signing of the grant agreement.

- To what degree will green or sustainable? Methods be incorporated into your project?
- How are resiliency and mitigation measures incorporated?
- What degree of specialized equipment or innovative technology is incorporated?
- What is your institutional capacity in your agency or business or company? Can you carry out the project, including staff, your budget return on investments and all of those things?
- If you have the capacity to take on this funding and carry out your project and then is it cost reasonable?

Those are all the things that we are going to question you about. So, this is kind of like a 'cheat-sheet' before the formal application comes out, so think about these things when you consider submitting an activity proposal.

OK. So, I will go. Before I close, I'll give Ms. Constable an opportunity to give some last remarks, and then I'll close you out. And then you guys. And have a great afternoon. It's almost 4:00 o'clock.

VIHFA response from Verline Marcellin-Constable: Thank you for taking the time to meet with us today. We welcome your comments. We're excited about the proposed projects and feel free to contact my staff and myself, if you have any additional questions and Ms. Muller is here facilitating this public hearing for us. I'd like to thank you. I'd like to thank everybody that was responsible for putting it together as well as who attended.

We appreciate you and we look forward to your suggestions and proposed projects.

VIHFA response from Keva Muller: All right, I don't see any more questions, comments, concerns. Like I said, please, if you need some more time to review what we have here, this slide deck is on our website at CDBG-DR.vihfa.gov and under the electrical tab. And, please submit your comments to media@vihfa.gov. I will get them and forward them to our action plan writing team to be incorporated. And, thank you so much for being here this afternoon. We are out in an hour.

My information is in the chat. You can e-mail me or call me if you have any questions, comments or concerns outside of this or even for VIHFA for CDBG-DR in general. So, thank you so much for being here this afternoon. And, you guys have a great rest of your day. Thank you.

Public Meeting Chat and Responses November 09, 2022

Time: 5:30pm AST

Duration: 1:01:01

Event: Zoom

18:50:33 From Chris Christian to Everyone: It has been said at several Utility meetings. undergrounding of the power lines from the ballpark going towards the AT&T and Lumen internet landing stations would take place. Is this still in play?

VIHFA response from Keva Muller: I believe that this is FEMA sponsored (project) which is a little bit outside of our area today.

VIHFA response from Anne-Marie Williams: WAPA has that project in its Strategic Plan which is on its published on its website and we do not have insight into the completion. WAPA has provided details in its senate hearing which is available to the public. This is one of the FEMA funded projects.

18:52:32 From Malachi Thomas to Everyone: Are there any governance plans being put in place given the state of affairs concerning the current debacle with the Vitol contract?

VIHFA response from Keva Muller: This is a question for WAPA. VIHFA is a funding agency and is not part of the operational oversight of the WAPA.

VIHFA response from Verline Constable: If WAPA comes to the Agency with a proposed project each funding source has specific eligibility requirements so the only time we can take a look at the project is if it is submitted to us and presents a scope that is an eligible activity. Then we can move on from there. We currently have nothing from WAPA related to VITOL. So, all our projects are based on project eligibility and availability of funds.

18:53:50 From Malachi Thomas to Everyone: Understood. Wouldn't WAPA be a sub-recipient for these funds?

VIHFA response from Anne-Marie Williams: Yes, WAPA would be a subrecipient for these funds. There are funds earmarked for the WAPA for the Estate Richmond under this action plan.

VIHFA response from Keva Muller: So, WAPA has a subrecipient agreement existing for the current project that we have with them. But these funds are that we're talking about today, WAPA would not have a sub recipient agreement because this is just the draft action plan that we are bringing to the public.

So once the action plan is submitted to HUD and approved. And, then we have the funds available. Then as a subrecipient agreement could be. established or created whatever word you want to use. But until then, for these particular funds that we are talking about today, it's just earmarked for a while. WAPA still has to apply and in the application of those funds, as with other funds for CDBG-DR, there is a capacity assessment involved. So, *it could be that there is. There are some concerns about what they have going on, but we wouldn't know. and that would only come up in, uh, uh, in the capacity assessment so. That is a non-issue. At this point we're just trying to get through the draft action plan.*

18:53:59 From Malachi Thomas to Everyone: Most probably?

18:54:51 From Chris Christian to Everyone: Concerning private entitles being able to submit proposals for electrical projects that affect the community in reference to CDBG set aside monies. What is the process for submitting a proposal?

VIHFA response from Keva Muller: So, Chris Christian also. stated concerning private entities being able to submit proposals for electrical projects that affect the Community in reference to CDBG, and aside monies, what is the process for submitting a proposal? I think this is for the $10 million Community Innovations Program Anne-Marie, you can talk a little bit about that, but to my understanding that is to be determined. Because right now we're just trying to get through the action plan. So once the action plan is approved and HUD gives us the green light, then we can establish policies and procedures for these programs. And I'm 100% sure that. Policies and procedures will cover how these outside entities can submit proposals and apply and or apply for a piece of that you know, $10 million. So, I'm just going to say we're a little early on that maybe I'm Anne-Marie can provide some context, but we haven't gotten there yet, so we're just trying to make sure we submit a really good plan to HUD so that they approve it readily.

VIHFA response from Anne-Marie Williams: Thank you Keva, and thank you Christian, that is a very good question. We are working through the action plan, and we will have the process for submitting proposals. It will be members of the community. It will be an open competition. So, it will be

publicized. Again, we are anticipating approval of our plan by March 2023 and shortly thereafter we will be making the announcements of how to apply and what the requirements are.

18:57:03 From Malachi Thomas to Everyone: Understood. VIHFA will cross the governance bridge with WAPA when it arrives. :)

VIHFA response from Keva Muller: One last [comment] 'VIHFA will cross governance bridge with WAPA when it arrives?' I bet OK. Any other questions or comments, please type them out in the text. Yes, Any other questions or comments?

It is 6:59, I'm going give it two more minutes. I don't want to take up anymore of anyone's time. You're getting well into the evening. So, let's give it maybe two more minutes for any questions, and while I wait, just go back and mention that. You could submit other questions or comments to "media@vihfa.gov and label your comments with the subject line: "CDBG-DR Electrical Power Improvements, Action plan" or "Electrical action plan", whichever works best for you.

You can also go on the website CDBG DR.vihfa.gov, there's tons of information on there on electrical disaster recovery mitigation. Feel free to just browse our website and see if there is any information there that applies to you or that you may want to be aware of. Also follow us on social media. We are Virgin Islands housing finance authority on Facebook and VIHFA Virgin Islands no VI Housing Finance Authority on Instagram. And there's lots of information out there about what the authority is doing and what we're doing with CDBG-DR and I think I'll go ahead and wrap it up my OK, so thank you for your time and efforts.

Thank you for engaging with us this evening. I really appreciate it. I appreciate all of you that are on the call. You know, 7:00 o'clock is way into the evening for some so. Much Many thanks for being here this evening.

So, I'll say, on behalf of our interim Executive Director Dayna Clendinen, thank you once again for joining the call. We hope to see you on our next call after the action plan is published. The draft is published on our website on Friday. You can get a better look at the programs more in detail. It's going to be a long document where you have some time to review it before the next hearing, and so that you can make your comments so I will leave the floor open so Ms. Constable if you have any last remarks and then go ahead and close out this meeting.

18:59:43 From Malachi Thomas to Everyone: Thank you for your time and efforts! Looking forward to engaging throughout the rest of this process. Take care!

19:02:53 From Chris Christian to Everyone: thanks

VIHFA response from Verline Constable Thank you for being part of the process. We started with the pre action plan and here in a matter of days we'll have the first draft for your review. We want you to take time to just look at the document. Provide any comments to us? Reach out to the staff if you have any questions. We appreciate your feedback. We appreciate you taking the time to join us this evening. Thank you.

VIHFA response from Keva Muller: Alright, so no more questions like this, so we'll set. Thank you and look forward to since you guys are on this call, you're going to be added to our e-mail listing for future events regarding the electrical grid action plan, so you'll be receiving some type of notification. I'll also repeat media@vihfa.gov to submit your comments or questions. And I will see you next time.:

Electronic Mail Public Comments

From: Chris Christian <cchristian@lancomm.us>
Sent: Thursday, September 15, 2022 10:05 PM
To: Media <media@vihfa.gov>
Cc: Lavinia Baxter <lbaxter@lancomm.us>
Subject: CDBG-Electrical Grid Action Plan Public Hearing Confirmation Public comment

Public comment:

There is a strong need for underground electrical conduits as well as low voltage conduits coming from Level 3/Lumen and AT&T towards the Frederiksted ball bark. This rural area/ highway 63 is a high risk area during a storm.

Almost 100 percent of the Virgin Islands internet comes from these 2 focal points who bring service via undersea marine cables from Miami and New York.

During the last hurricane these companies have had to run their generators for several weeks while power was being restored. Should either of these 2 facility loose power. Internet to all 3 major islands and part of the Caribbean would be greatly impacted. Most internet service providers use these facilities to provide internet to the government , as well as community at large. Priority needs to be given to undergrounding of the utilities.

Which include low voltage fiber optics cable. Which Internet service providers use to bring service to the Virgin Islands.

Therefore, in addition and in the meantime composit poles need to go up along this route to ensure the integrity and resiliency of our Utility grid. High as well as low voltage. All of the old rotted and leaning poles along this route should be immediately replaced to help ensure continuity after the next storm.

Chris Christian
General Manager
LAN Communications
Main 877.411.3674 Cell 301.442.3247 Fax 240.553.1607
cchristian@lancomm.us http://www.lancomm.us

"Time Is a Most Precious commodity Make the most of It !!!"

VIHFA Response

From: Anne-Marie Williams
To: cchristian@lancomm.us
Cc: Damali Rogers; Keva Muller; Infrastructure Team
Bcc: Odari Thomas
Subject: CDBG Application
Date: Wednesday, November 30, 2022 10:33:00 AM

Greetings,

Thank you for your interest in the CDBG Electrical Program. Currently, the VIHFA is solicitating comments and feedback on the proposed CDBG Electrical Action Plan.

The VIHFA values the input of its many affected citizens, decision makers, and stakeholders representing the vulnerable communities that suffered the impacts of Hurricanes Irma and Maria. Your input to the Proposed Action Plan is welcomed during the Open Public Comment Period, which started on November 11, 2022 and will end on December 26, 2022.

The VIHFA anticipates bringing the CDBG Electrical Program online during the second quarter of 2023.

Please use this link: https://cdbgdr.vihfa.gov/home/cdbg-electrical/ for more information on the Plan and additional announcements.

Sincerely,

Infrastructure Team

https://cdbgdr.vihfa.gov/.

From: Infrastructure Team
To: Curt Besselman; Media; Infrastructure Team
Bcc: Odari Thomas
Subject: RE: CDBG-DR Electrical Power System Improvements Action Plan
Date: Friday, December 9, 2022 4:24:00 PM

Greetings,

Thank you for your inquiry. At this time, VIHFA has no involvement in the Bovoni Wind Project.

Best regards,
Infrastructure Team

From: Curt Besselman <curt@smartwatervalve.com>
Sent: Wednesday, December 7, 2022 12:18 PM
To: Media <media@vihfa.gov>; Infrastructure Team <infrastructureteam@vihfa.gov>
Subject: CDBG-DR Electrical Power System Improvements Action Plan

Good morning,

Am in the renewable business and follow wind and solar projects rather closely, and have been cheering on efforts in the USVI to recover from the 2017 hurricanes and the economic damage covid did to the islands.....

Do any of these HUD grants support the Bovoni Wind project that is still as I understand it awaiting land to be released from the USVI government? I have seen too that FEMA has awarded funds to support the wind farm. If possible, would appreciate a response as to the projects overall status and whether HUD funds announced in today's release are supporting it.

Thank you. Curt Besselman
806-681-8537 | curt@SmartWaterValve.com
"Buy Water, Not Air"
www.SmartWaterValve.com
https://vimeo.com/398665664
Members: HAA, TAA, NAA

Electronic Mail Comments - Stakeholder Agencies:

WAPA Comments and VIHFA Responses

WAPA Comments to: CDBG DR Electric Power System Enhancements and Improvements Action Plan	VIHFA response
• Page 6 – What is the justification/source of the cost allocation breakdown of Figure 1?	The $53 million figure was provided by VIWAPA in the document "Projected Mitigation Project - Prioritized 05-24-2022_Finalized". VIWAPA is the source and origin of the $53M figure. As identified in the public hearing presentation, the allocation to the "Community Innovation Program" was derived from the objective of the FRN by which HUD stated that the Department seeks to maximize the impact of these CDBG–DR funds by encouraging the formation of public-private partnerships, partnerships with local, community and neighborhood organizations, and through enhanced coordination with other Federal programs. Both HUD and VIHFA recognize that the public utility might not only enitity that address the needs of the LMI population. Furthermore, DOE is working with Puerto Rico to roll out a similar program in order to help them achieve the same objective with their CDBG funding. The Community Innovation Program is based on approval of applicants that meet the national objective to LMI benificiaries including the capability to complete all project activities. Therefore, it prioritizes LMI beneficies at a greater extent than what is provided by the general distribution from the public utility.
• Page 14 – 2nd paragraph states there is a generating capacity of 100 megawatts on the island of St. Croix. This value should be approximately 80 megawatts, which includes Units 17, 19, and 20 and the leased Aggreko units. In addition, the same paragraph states there is 138 megawatts on St. Thomas. This value should be approximately 110 megawatts which includes Units 14, 15, 23, and 27 and the three Wartsila units.	VIHFA updated the generating capacity for both islands to reflect the revised data.
• Page 15 – Figure 3 either remove (per comment of Dan Olis) or revise to remove "STx 17 w. STG11" and "STx 20 w. STG 11." These referenced steam turbines are no longer in service.	VIHFA deleted the references from the final draft.
• Page 15 – 1st paragraph, add something to the effect of "In addition, due to financial constraints, the existing generators on both St. Croix and St. Thomas suffer from a lack of appropriate maintenance and resulting reliability."	Action plan consistently incorporated correlation of the lack of maintenance and its direct contribution the lower reliability of the power generation and distribution. Language has been revised to further emphasize this relationship and the need for additional capital as noted in the unmet needs.
• Page 23 – Figure 12, how was the value determined and what is the purpose/intent of the $10M or 15% allocated to "Community Electrical Innovations Application Program?"	The $53 million figure was provided by VIWAPA in the document "Projected Mitigation Project - Prioritized 05-24-2022_Finalized". VIWAPA is the source and origin of the $53M figure. As identified in the public hearing presentation, the allocation to the "Community Innovation Program" was derived from the objective of the FRN by which HUD stated that the Department seeks to maximize the impact of these CDBG–DR funds by encouraging the formation of public-private partnerships, partnerships with local, community and neighborhood organizations, and through enhanced coordination with other Federal programs. Both HUD and VIHFA recognize that the public utility might not only enitity that address the needs of the LMI population. Furthermore, DOE is working with Puerto Rico to roll out a similar program in order to help them achieve the same objective with their CDBG funding. The Community Innovation Program is based on approval of applicants that meet the national objective to LMI benificiaries including the capability to complete all project activities. Therefore, it prioritizes LMI beneficies at a greater extent than what is provided by the general distribution from the public utility.
• Page 27 – Revise last two paragraphs to state the allocated finds will be used for a combination of efficient, reliable conventional generation and battery storage. Remove "tri-fuel capability" language as this is unnecessary (diesel and LPG are the only available fuels) and restricts the range of potential useful options. In addition, remove language stating the "proposed generators will reside in the newly constructed generator gallery building ….." Any new generators will include appropriate structures/buildings given the technology used and taking into account the location of the equipment.	Per FRN, the project activities must include mitigation and resiliency measures to prevent assets funded through the grant from being susceptible to damage from future disasters. Action plan language has been updated to better clarify FRN requirements. Tri-fuel language has been removed.
• Page 28 – 1st paragraph, revise Aggreko language to something to the effect of "Commercial operation of the new generation will support the retirement of the leased Aggreko generation."	Language has been incorporated into the draft.
• Page 28 – In the "Background" section revise verbiage to reflect the island of St. Croix has approximately 80MW of generation which includes Units 17, 19, and 20 and the leased Aggreko units. In addition, revise Figure 16 to reflect this fact.	Change in the generation will be incorporated.
• Page 31 – Add additional language in the "Unstable Electrical Frequency with Aggreko Power Generating Units" which reflects the fact that due to the lack of inertia with the existing Aggreko units, they all trip simultaneously with the loss of a gas turbine resulting in an island-wide outage.	VIHFA has incorporationed the language into to draft as "The leased Aggreko units do not have the capability to follow increased customer demand, which results in unmatched load and generation. The unstable electrical frequency with Aggreko power generating units reflects the fact that due to the lack of inertia with the existing Aggreko units, they all trip simultaneously with the loss of a gas turbine resulting in island-wide outages. This results in poorer system frequency regulation, making the system less stable and resilient."
• Page 32 – Remove specific language around the storage capacity/energy. While a significant amount of storage capacity will likely be included in these finds, stating 10MW/20MWh is too specific and potentially limiting. (also on page 34 and elsewhere in the document). In short, remove all language providing specific capacity values related to the new generation as this is still uncertain.	Accepted. Drafted language is now uses "up to" or "a potential of" to remove specificity.
• Page 33 – Remove or revise the "Environmental and Gas Emission" section. The environmental issue with the Aggreko's is related to VOC's (volatile organic compound) emissions.	Tables to be updated to show GE untis WAPA to provide current data on emissions.
• Page 35 – Remove language that "new generating units will be resided in professionally designed buildings…." The new generation will be resided in the appropriate structures/buildings given the technology selected and the physical location.	Language on the structure of the building must reflect the regulatory guidance of the FRN, which stipulates the structures are to withstand or mitigate environmental factors.
• Page 39 – How does the "Community Electrical Innovations Application Program" benefit the overall wellness of LMI customers? What prevents these finds from assisting a small group of individuals while further burdening the overall LMI customer class?	The $53 million figure was provided by VIWAPA in the document "Projected Mitigation Project - Prioritized 05-24-2022_Finalized". VIWAPA is the source and origin of the $53M figure. As identified in the public hearing presentation, the allocation to the "Community Innovation Program" was derived from the objective of the FRN by which HUD stated that the Department seeks to maximize the impact of these CDBG–DR funds by encouraging the formation of public-private partnerships, partnerships with local, community and neighborhood organizations, and through enhanced coordination with other Federal programs. Both HUD and VIHFA recognize that the public utility might not only enitity that address the needs of the LMI population. Furthermore, DOE is working with Puerto Rico to roll out a similar program in order to help them achieve the same objective with their CDBG funding. The Community Innovation Program is based on approval of applicants that meet the national objective to LMI benificiaries including the capability to complete all project activities. Therefore, it prioritizes LMI beneficies at a greater extent than what is provided by the general distribution from the public utility.

A.6 WAPA Priorities

See WAPA Strategic Plan, “WAPA’s Plan for a Brighter Future” on viwapa.vi as updated. See link. Home (viwapa.vi)

A.7 Lazard Report

See section 3.7.

A.8 Federal Register

The published June 22, 2021, Federal Register Vol. 86, No. 117 (*FR-6262-N-01)* governs the use of the $2 billion CDBG–DR allocation for enhanced or improved electrical power systems, with HUD establishing a waiver and alternative requirement that creates electrical power system improvements as a CDBG–DR eligible activity while also designating how these funds were to be allocated. This FRN is accessible at FRN-2021-06-22 https://www.govinfo.gov/content/pkg/FR-2021-06-22/pdf/2021-12934.pdf

A.9 Certifications

VIHFA will include Certifications in the Implementation Plan.

A.10 Reference Materials

Author/Owner, Date of Publication, Resource

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A.11 Draft Community Innovations Application

VIHFA will develop a competitive application process to select eligible projects that meet the criteria described in this Action Plan. The competitive application process will be open to all eligible applicants and one application may be submitted per entity.

A.12 Summary of Key Reports

Summary of Key Reports

One of the requirements of the Federal Register Notice governing the use of CDBG-DR electrical systems improvements funds is that grantees coordinate with local and regional planning efforts to ensure alignment of CDBG–DR electrical power system improvements with existing planning and development activities, as well as to incorporate the results of strategy and development plans regarding integrated utility resources into the USVI's unmet needs assessment.

The reports, plans, and studies summarized below contain content that was utilized by VIHFA in the preparation of this Action Plan. Most of the reports are publicly available, and where that is not the case, a summary of key findings is provided. Many of the reports identified here refer to and build upon each other. This Action Plan, too, fits within that larger framework of mutually supportive planning documents and reports.

Potential Options for Electric Power Resiliency in the U.S. Virgin Islands

Date: February 14, 2018

Author: Congressional Research Service

Key Findings and Recommendations:

- This report looks into several alternative electric power system structures for meeting the needs of the USVI in terms of electric services. The report recognizes the initial disaster recovery efforts that were made following Hurricanes Irma and Maria focused on restoring power. It examines the challenges that pre-dated the hurricanes in 2017 in terms of finances for WAPA and maintaining aging infrastructure. The report acknowledges the historical dependency on imported fuel oil and high costs for consumers.
- In recognition of a goal established in 2010 to reduce fossil fuel-based energy use by 60% by 2025, the report highlights WAPA's efforts to improve energy efficiency and diversify its energy resources, such as through propane, solar and wind power.

- The report acknowledges a 2017 estimate of $850 million in recovery funding needed to "rebuild a more resilient electrical system" and identifies that the cost of rebuilding and modernizing the entire USVI electric grid likely far exceeds existing budgeted resources and fiscal capacity in the territory.
- The report provides a summary of energy planning efforts prior to the 2017 hurricane season, including highlighting recommendations of evaluation studies and conclusions of energy assessment reports. While not all earlier areas of consideration have been subject of current focus, such as evaluating the feasibility of using petroleum coke or connecting to the Puerto Rico grid underwater, some earlier recommendations remain ongoing themes, such as reducing dependence on petroleum and addressing maintenance and replacing outdated stock.
- Other areas of recommendations and conclusions include:
    - Electric system resiliency can be enhanced through improvements to preparedness and readiness, such as conducting hurricane preparedness trainings, managing vegetation, participating in mutual assistance groups, improving communications with employees including during evacuations and re-entries, maintaining minimum fuel tank volumes or securing fuel contracts for emergency vehicles.
    - An electric microgrid is a localized group of energy sources that is both connected to the central power grid and that can operate independently as a power source. In increase in microgrids could minimize a major service interruption by functioning as a small generating facility to produce electricity on its own.
    - Particular hardening measures appropriate to hurricanes that increase resilience may take the form of the following measures, elevating substations and control rooms, relocating power lines and facilities, enclosing equipment in protective structures, burying or undergrounding power lines, and upgrading facilities with new materials, recognizing that newer infrastructure can weather a storm better than older infrastructure simply due to repeated exposure for older systems. Lastly, smart grid technologies, including sensors that can localize system problems and reroute power as needed, are recommended system upgrades and enhancements.

Available at: https://sgp.fas.org/crs/row/R45105.pdf

USVI Hurricane Recovery and Resilience Task Force Report

Date: 2018

Author: Hurricane Recovery and Resilience Task Force

Key Findings and Recommendations:

- The charge of the Task Force was to develop a comprehensive report on the 2017 hurricanes' impact and to make recommendations for effective recovery and resilience, answering three questions for each of 14 different sectors: 1. What happened during the hurricanes and why? 2. How will climate change affect the sector in the future? 3. What will the Territory do to respond? The report is informed by available data, offers recommendations that can be implemented, takes into account funding realities, and is the result of stakeholder and community engagement work. In recognition of the extent to which the power system was damaged and the length of time customers were without power being restored, Energy has a chapter all of its own in the Report.
- Specific issues regarding vulnerabilities in the energy sector include reliance on an overly centralized grid with many single points of failure where if one link fails, many customers lose

power; a large amount of aboveground infrastructure tied to older assets, particularly wooden utility poles; and backup generators not designed for extended run times.

- Strategies for recovery include:
    - first, hardening and fortifying existing infrastructure including buying power lines where feasible, utilizing composite poles otherwise, and fortifying power plants and substations from storm surge and hurricane impact
    - then, reconfiguring systems and devising new ways of delivery service, such as adding 50 megawatts of energy generation from renewable sources by 2025, making St. John independent from the St. Thomas grid, and linking hospitals and telecommunications hubs to microgrids to ensure continuity of service if other parts of the grid fail
    - next, engaging in planning, and making changes to regulatory and governance structures, particularly regarding the energy purchase process and transparency with customers and other stakeholders
    - and finally, engaging in planning and preparedness activities for future storms, including installing backup power generation at critical facilities to perform for longer periods of time and to ensure generators are maintained and adequately fueled prior to an event.
- Articulation of challenges
- 17 initiatives
- Recognize WAPA efforts to date

Available at: 257521_USVI_Hurricane+Recovery+Taskforce+Report_DIGITAL.pdf (bloomberglp.com)

2017 Hurricane Season: Federal Support for Electricity Grid Restoration in the U.S. Virgin Islands and Puerto Rico

Date: April 2019

Author: United States Government Accountability Office

Key Findings and Recommendations:

Available at: www.gao.gov/assets/gao-19-296.pdf

Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future

Date: Published in 2020

Author: RAND Corporation for Homeland Security Operational Analysis Center

Key Findings and Recommendations:

- In the infrastructure capacity area of energy, the direction of recovery includes ensuring reliability and resilience within the electrical power grid, improving readiness in the area of emergency management, upgrading existing infrastructure, providing a transformation of the grid, and engaging in planning and implementing reforms.
- Barriers to recovery include the extent of damage to electric infrastructure, legacy challenges such as the extent to which existing infrastructure is beyond its intended service life, impacts of deferred maintenance, and a low level of implemented mitigation measures. Inefficient infrastructure, reliability, the volatility of fuel prices, and financial challenges faced by WAPA have all contributed to high energy costs. Other barriers include management capacity, sustaining a

skilled workforce to perform operations and maintenance, and a low level of investment by the utility in stakeholder and community engagement.

- Efforts to date, including from before Hurricanes Irma and Maria in 2017 include strategic planning to increase resilience, expand renewable energy, improve system design, and make additional capital investments. Several high-priority projects have been identified or are underway, including emergency restoration work, hardening efforts, generation unit upgrades, and utility hardening. Some projects have not been funded yet.
- Near-term recommendations include enhancing WAPA's fiscal sustainability by restructuring debt and improving the collection of fees, enhancing WAPA's capacity to implement disaster-recovery efforts and manage capital projects, and improving coordination among USVI agencies.
- Longer-term recommendations include enhancing the reliability and long-term performance of energy systems by improving WAPA's asset-management systems and operations and maintenance protocols, hardening electric grid infrastructure and providing other system upgrades to reduce costs and increase reliability.

Available at: Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future | RAND

The Virgin Islands Territorial Emergency Operations Plan

Date: April 2022

Author: Virgin Islands Territorial Emergency Management Agency

Key Findings and Recommendations:

- The Territorial Emergency Operations Plan (TEOP) identifies and outlines the roles of governmental, non-profit and private partners and provides the framework for emergency plans and the provision of disaster assistance. The TEOP is used to mobilize resources to guide and support the USVI's efforts through preparedness, response, recovery, and mitigation. It is designed to all hazards identified in the Threat and Hazards Identification and Risk Assessment (THIRA) and the Territory's Hazard Mitigation Plan (HMP), and it addresses the various types of emergencies likely to occur.
- Emergency Support Function 12 (ESF 12) addresses Energy (Power and Fuel) and identifies the Virgin Island Energy Office and Water and Power Authority as coordinating agencies. The ESF 12 Annex in the Plan provides details on the roles and responsibilities of VIEO and WAPA, as well as other supporting offices, and private energy partners.
- For this Action Plan, the TEOP contains a brief summary of electricity in the USVI:
    - "1. WAPA is responsible for generating and delivering electricity to the Territory across two electrical grids: one on St. Croix and one on St. Thomas. Each system is supplied by a primary generation station powered by combustion and steam turbines powered with fuel oil or propane.
    - "2. The U.S. Virgin Islands energy sector provides electricity to the Territory population of 106,400. This is approximately 45,000 residential and 9,000 commercial customers across five islands: St. Croix, St Thomas, St. John, Water Island, and Hassel Island. Most of the infrastructure is owned and run by USVI Water and Power Authority (WAPA). Once electricity leaves the main generating station it travels across its respective island transmission and distribution (T&D) system
    - "3. The St. Thomas system has a generating capacity of about 138 megawatts to supply the 51,000 people on the island as well as the 4,100 on St. John. The St. Croix system has a capacity of about 100 megawatts and serves this island's population of 45,000.

- "4. The Estate Richmond Terminal capacity is 10,400 cubic meters, held in a total of eight tanks which provides 19.2 days of effective supply. The Randolph Harley Terminal capacity is 14,000 cubic meters, held in a total of ten tanks which provides 18.23 days of effective supply."

Available at: www.vitema.vi.gov/docs/default-source/key-documents/virgin-islands-territorial-emergency-operations-plan-(teop-2022-version).pdf?sfvrsn=ad4b59a3_2

Energy Assurance Plan: The Territory of the Virgin Islands

Date: May 14, 2021

Author: Aptim for Virgin Islands Energy Office

Key Findings and Recommendations:

- The EAP "provides a clear, concise and comprehensive framework to respond to potential or actual energy emergencies caused by a variety of energy emergency situations." The 2021 EAP supersedes the 1991 EAP and incorporates the guidelines outlines in ESF 12 within the TEOP.
- The EAP is structured in the following sections: Introduction, Response to an Energy Emergency, Energy Profile of the USVI, USVI Energy Data Tracking Plan, and USVI Plan for Resilience. The EAP outlines roles and responsibilities before an event, during a period of disruption, and in recovery.
- It further details natural threats and hazards that have the potential to cause disruptions to the supply and delivery of energy in the USVI. The EAP acknowledges hurricanes and major storms are the largest threat to energy infrastructure and cause the majority of energy disruptions across the islands, and that the USVI is at risk of other energy disruptions, whether caused by earthquake or tsunami, equipment failures, terrorist events and cyber-attacks, petroleum price fluctuations and geopolitical upheaval.
- Since Maria and Irma, many changes have been identified to promote energy resilience, including grid hardening measures, electrical generation transformation, the development of an Integrated Resource Plan (IRP) and Strategic Transformation Plan for WAPA, and other energy efficiency and sustainability strategies, all of which are referenced in this document. As a matter of recommendations, to compliment grid hardening, this Plan identifies that USVI develop a long-term transition plan to move the Territory to a more resilient energy system that is consists of more renewable energy systems, is less dependent on fossil fuels, and is built around microgrids, district energy systems, and other distributed energy resources.

Available at: USVI+Energy+Assurance+Plan.pdf (squarespace.com)

Supplemental: Aptim Environmental & Infrastructure, LLC. | USVI Department of Property & Procurement

2019 VIWAPA Integrated Resource Plan

Date: November 15, 2019

Author: Black & Veatch for Virgin Islands Water and Power Authority

Key Findings:

- An integrated resource plan (IRP) assesses various power supply options under different scenarios with a focus on optimal plan from an economic perspective. The plan is informed by robust analysis building off many assumptions that may impact the overall economic assessment, such as the availability of U.S. governmental funding, load forecasts, or the cost and performance assumptions around the integration of renewable energy into the Virgin Islands' two energy distribution systems. The IRP for WAPA looks at the 2020-2044 planning period.
- The IRP's overall objective is "to identify the mix of incremental resources that will achieve a safe, adequate, and reliable supply of power at the lowest reasonable cost and in an environmentally acceptable manner."
- Different expansion plans were evaluated against each other looking at economics, reliability, and renewable energy. The recommended expansion plan for St. Thomas (Plan P0) includes the retirement of 5 units (STT 14, STT 15, STT 25, STT 26, STT 27) and addition of 6 units, which include too solar and battery energy storage systems. The recommended plan for St. Croix (Plan P1) assumes available grant funding and includes the retirement of 3 units (STX 19, Aggreko, STX 11) and addition of 6 units, including battery storage at Richmond.
- Aligned with WAPA's IRP, the Revised PR 1 efforts will focus on reducing load shedding by expanding renewable energy, upgrading infrastructure, and optimizing demand-side management. Enhancing equipment reliability through proactive maintenance, modernization, and real-time monitoring is crucial, while managing risks in forested areas requires vegetation control, infrastructure hardening, and efficient emergency response. Strengthening distribution stability involves smart grid technology, battery storage, and customer efficiency programs, ensuring a more resilient power network. Optimizing crew operations through predictive maintenance, remote monitoring, and fleet improvements will help reduce costs and enhance service efficiency.
- Additional recommendations on next steps include: the refinement of cost and performance characteristics of certain renewable energy projects, additional studies to support the IRP including a rate study and transmission studies needed to system stability and load flows within adopted standards, and the development of detailed timelines for new project development.

Available at: http://www.viwapa.vi/docs/default-source/default-document-library/draft----2019-wapa-integrated-resource-plan.pdf

Virgin Islands Water and Power Authority Strategic Transformation Plan

Date: June 2020

Author: Virgin Islands Water and Power Authority

Key Findings and Recommendations:

- WAPA's transformation plan builds from 3 core target themes:
  - Financial and System Stabilization
  - System Resiliency
  - Generation Sector Transformation.
- In terms of Financial and System Stabilization and recognizing the overall system has been stabilized since the 2017 hurricanes, WAPA intends to extend the use of liquefied propane gas in new generating units, with the benefit of having with an efficient and reliable fuel source less expensive than fuel oil and a goal of having the fuel component of WAPA's bill declining faster than the base component required to pay for conversion from fuel oil to propane. Other

components of this theme include integrating solar battery energy storage at various strategic locations, refinancing outstanding debt, and changing other purchasing practices.

- On System Resiliency, one area of focus for WAPA in strengthening its transmission and distribution system is through the undergrounding of facilities, and where not feasible, through the installation of over 8,400 composite poles to better withstand major hurricanes and last longer than conventional poles. This theme also includes the hardening of substations. While the work could take five to ten years to accomplish, the work will be concentrated first on serving the most critical loads like medical centers.
- To advance Generation Sector Transformation, WAPA intends to replace obsolete and inefficient generating units with propane instead of fuel oil, including use of dual fuel technologies. The conversation to propane is estimated to carbon dioxide emissions by 35% and sulfur dioxide emissions by 90%. This will be accompanied by the gradual installation of distributed, renewable energy.

Public summary available at: www.viwapa.vi/docs/default-source/redacted-strategic-plan/wapa-strategic-transformation-plan-2020----single-page-booklet.pdf?sfvrsn=229475a7_2

Virgin Islands Water and Power Authority Strategic Plan

Date: May 2022

Author: U.S. Virgin Islands Water and Power Authority

Key Findings and Takeaways:

Redacted summary available at: www.viwapa.vi/docs/default-source/redacted-strategic-plan/viwapa-strategic-plan_may-2022_redacted-final.pdf?sfvrsn=ee6c63e3_2

Energy Transformation Initiative: Islands Playbook

Date: January 2015

Author: U.S. Department of Energy - Energy Transformation Initiative

Key Findings and Recommendations:

- The Islands Playbook is an action-oriented tool designed to be utilized as a framework for initiating, planning, and implementing the transition to an energy system that is primarily reliant on local resources and no longer dependent on specific and few imported fuels. It is tailored towards island communities but can be broadly adapted to any community looking to organize its own energy transition efforts.
- The Playbook includes lessons learned from efforts undertaken by the U.S. Virgin Islands amongst other primarily island communities.
- The Playbook includes templates, blank worksheets, and other resources designed to organize an ongoing, constructive dialogue about a given community's energy future.

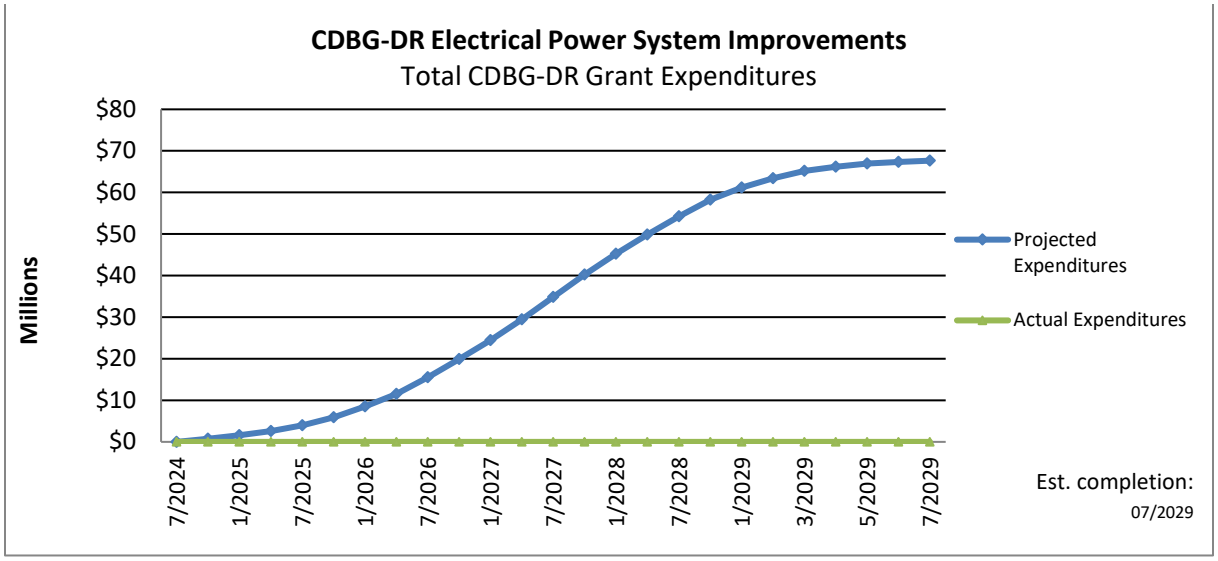
Available at: www.energy.gov/sites/prod/files/2015/02/f19/62742.pdf

A.13 Projections of Expenditures and Accomplishments

Financial Projections

As the designated grantee for Community Development Block Grant Disaster Recovery Electrical Power System Enhancements and Improvements (CDBG-DR Electric Grid) funds for the U.S. Virgin Islands (USVI or Territory), the Virgin Islands Housing Finance Authority (VIHFA) tracks the projections and expenditures of activities identified in this Action Plan.

Grant Expenditures

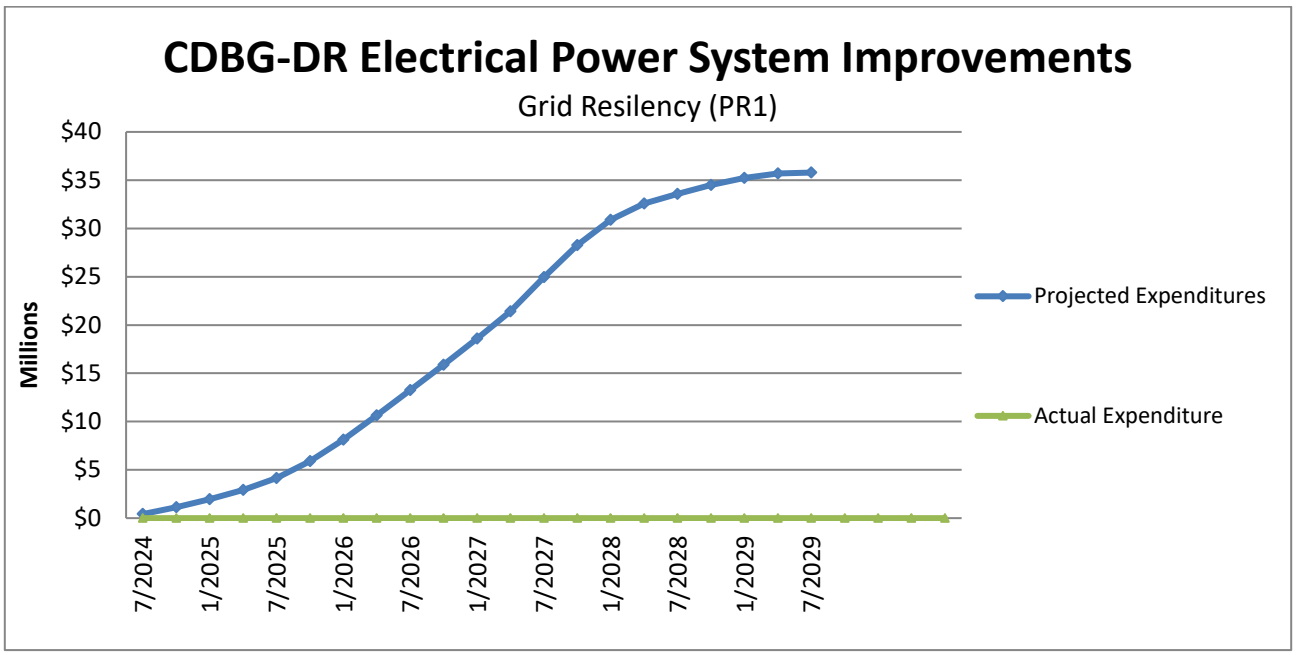


Total Expenditures	Projected Expenditures	Quarterly Projection
7/2024	$0	$0
10/2024	$411,600	$411,600
1/2025	$1,003,100	$591,500
4/2025	$2,019,330	$1,016,230
7/2025	$5,685,626	$3,666,296
10/2025	$7,502,700	$1,817,074
1/2026	$9,822,052	$2,319,352
4/2026	$12,256,936	$2,434,884
7/2026	$15,306,228	$3,049,292
10/2026	$18,967,415	$3,661,187
1/2027	$22,962,388	$3,994,973
4/2027	$27,222,893	$4,260,505
7/2027	$30,948,930	$3,726,037
10/2027	$35,377,007	$4,428,077
1/2028	$39,443,632	$4,066,625
4/2028	$44,913,805	$5,470,173
7/2028	$50,189,272	$5,275,467
10/2028	$55,303,287	$5,114,015
1/2029	$57,740,611	$2,437,324
2/2029	$59,953,191	$2,212,580
3/2029	$62,104,119	$2,150,928
4/2029	$63,850,103	$1,745,984
5/2029	$66,968,381	$3,118,278
6/2029	$67,562,672	$594,291
7/2029	$67,653,000	$90,328

Infrastructure Program Expenditures

The two direct programs funded by the grant, ~~the Generation Facility at Estate Richmond Program~~ (PR1) and the Community Electrical Innovations Application program (PR2), have their expenditures projected in the charts and tables below by using a basic S-Curve analysis that projects expenditures on a quarterly basis across a 6-year timeframe for both projects. ~~The $63 million combined energy program award is broken down into the funding allocated for each infrastructure activity, including $53 million for Richmond to address the generation component and $10 million for the Community Innovation Application program to address the distributed energy/microgrid component~~. This S-curve projection methodology is consist with similar Infrastructure project expenditures, and is reasonable based on the details available at this current point in time. The stated budgets and expenditure projections incorporate predevelopment, planning, construction, and installation costs of each component. VIHFA will update the projections, including reporting on actuals, in future Action Plan amendments, based on updated project schedules from WAPA and from Innovation project applicants.

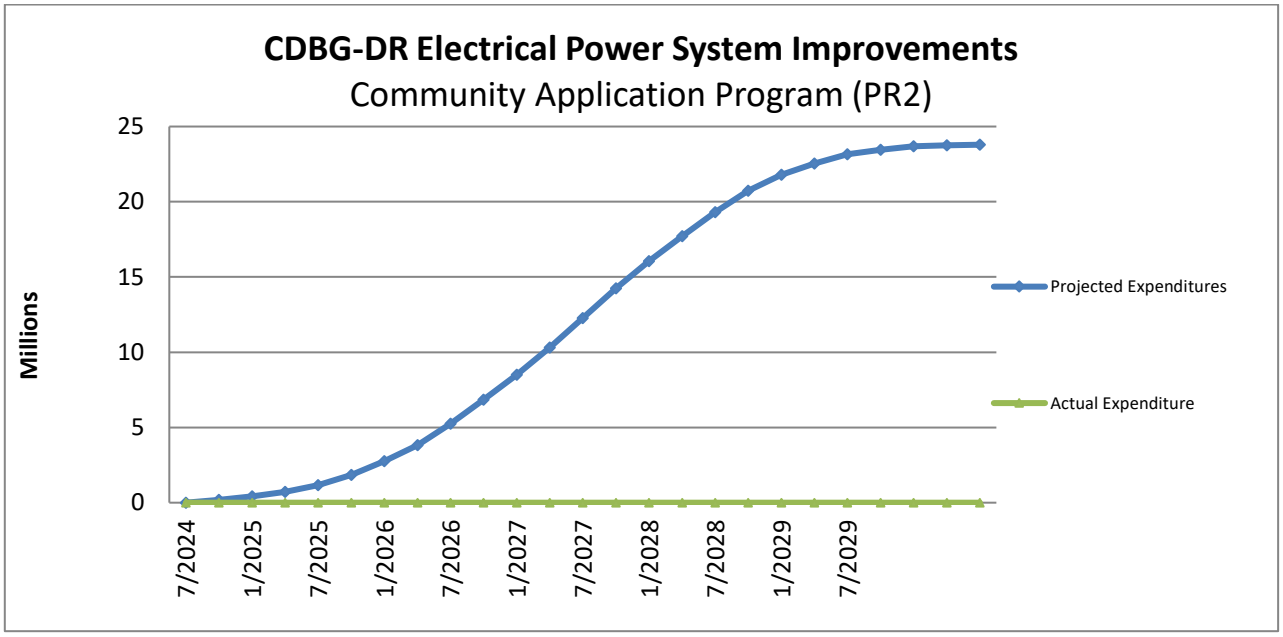
Figure 51 Projected Expenditures PR1



Grid Resiliency (PR1)	Projected Expenditures	Quarterly Projection
7/2024	$0	$0
10/2024	$0	$0
1/2025	$0	$0
4/2025	$420,000	$420,000
7/2025	$1,140,000	$720,000
10/2025	$1,960,000	$820,000
1/2026	$2,910,000	$950,000
4/2026	$4,130,000	$1,220,000
7/2026	$5,903,637	$1,773,637
10/2026	$8,123,637	$2,220,000
1/2027	$10,643,637	$2,520,000
4/2027	$13,263,637	$2,620,000
7/2027	$15,883,637	$2,620,000

10/2027	$18,603,637	$2,720,000
1/2028	$21,423,637	$2,820,000
4/2028	$24,943,637	$3,520,000
7/2028	$28,263,637	$3,320,000
10/2028	$30,883,637	$2,620,000
1/2029	$32,583,637	$1,700,000
2/2029	$33,583,837	$1,000,200
3/2029	$34,513,837	$930,000
4/2029	$35,233,837	$720,000
5/2029	$35,685,837	$452,000
6/2029	$35,788,437	$102,600
7/2029	$35,788,437	$0

Figure 52 Projected Expenditures PR2



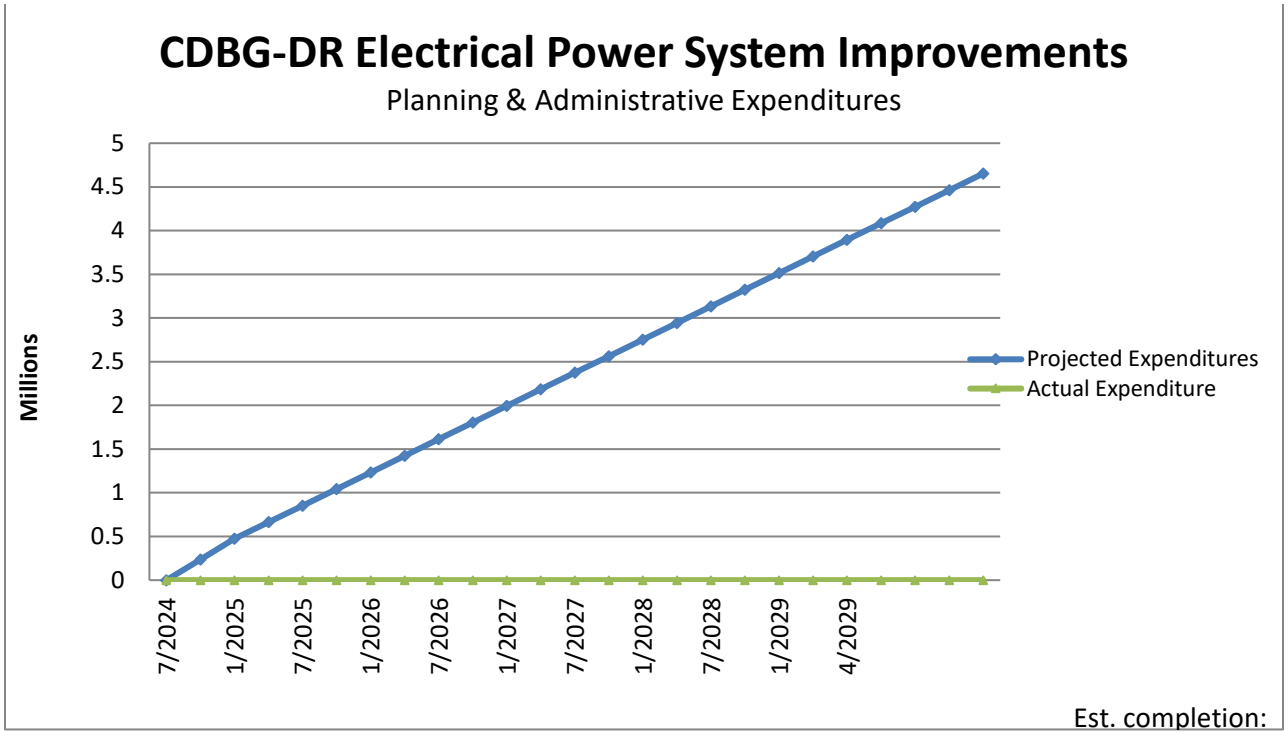
Community Innovation- PR2	Projected Expenditures	Quarterly Projections
7/2024	$0	$0
10/2024	$46,200	$46,200
1/2025	$112,700	$66,500
4/2025	$206,750	$94,050
7/2025	$309,426	$102,676
10/2025	$801,839	$492,413
1/2026	$1,553,441	$751,602
4/2026	$2,533,585	$980,144
7/2026	$3,687,460	$1,153,875
10/2026	$4,804,827	$1,117,367
1/2027	$6,763,940	$1,959,113
4/2027	$8,944,545	$2,180,605
7/2027	$11,540,642	$2,596,097
10/2027	$14,423,739	$2,883,097
1/2028	$16,736,344	$2,312,605

4/2028	$18,245,711	$1,509,367
7/2028	$19,145,766	$900,055
10/2028	$19,999,641	$853,875
1/2029	$20,594,785	$595,144
2/2029	$21,236,945	$642,160
3/2029	$21,716,613	$479,668
4/2029	$46,200	$46,200
5/2029	$112,700	$66,500
6/2029	$206,750	$94,050
7/2029	$309,426	$102,676

Planning and Administrative Expenditures

The Planning and Administrative expenditures table below demonstrates the expenditures for planning activities, as well as those expenditures related to administration, management oversight, reporting, and monitoring of programs funded by the CDBG-DR Electric Grid funds. VIHFA is utilizing a straight-line projection methodology, with the exception of the first two quarters, where projects are higher to reflect anticipated disbursements for pre-award costs. VIHFA will update the projections, including reporting on actuals, in future Action Plan amendments.

Figure 53 Projected Planning and Administrative Expenditures



Planning & Admin	Projected Expenditures	Quarterly Projection

Jul-24	$460,800	$460,800
Oct-24	$950,800	$490,000
Jan-25	$1,492,850	$542,050
Apr-25	$2,191,050	$698,200
Jul-25	$2,833,850	$642,800
Oct-25	$3,323,850	$490,000
Jan-26	$3,813,850	$490,000
Apr-26	$4,303,850	$490,000
Jul-26	$4,793,850	$490,000
Oct-26	$5,283,850	$490,000
Jan-27	$5,773,850	$490,000
Apr-27	$6,263,850	$490,000
Jul-27	$6,753,850	$490,000
Oct-27	$7,243,850	$490,000
Jan-28	$7,733,850	$490,000
Apr-28	$8,223,850	$490,000
Jul-28	$8,713,850	$490,000
Oct-28	$9,203,850	$490,000
Jan-29	$9,693,850	$490,000
Feb-29	$10,147,950	$454,100
Mar-29	$460,800	$460,800
Apr-29	$950,800	$490,000
May-29	$1,492,850	$542,050
Jun-29	$2,191,050	$698,200
Jul-29	$2,833,850	$642,800

Performance Projections

Infrastructure Program Accomplishments

For purposes of projecting accomplishments, ~~the Generation Facility at Estate Richmond Program~~ (PR1) and the Community Electrical Innovations Application program (PR2) are categorized as Infrastructure projects. The selected accomplishment is number of projects completed, which is reflected here as number of public facilities improved. VIHFA is currently assuming ~~a total of 16 projects, including one for Richmond and assuming a ra current assumption of 15 projects under the Application program~~, variable awards recognizing the number of actual awards may differ. VIHFA will update these projected accomplishments based on newer information once available. Additionally, VIHFA will explore using other metrics to measure accomplishments, such as looking at the number of beneficiaries impacted or similar measures, once additional project applicant information is available. This projection distribution assumes the completion of projects across a six-year time period, recognizing the completion of less complicated and smaller-scale projects earlier on, and complex and larger cost projects completed later in the timeframe. Again, VIHFA will update this information in future Action Plan amendments for more precise projection measures as well as to reflect actual accomplishments.

Figure 36 – Projected Infrastructure Accomplishments - Combined PR1 and PR2

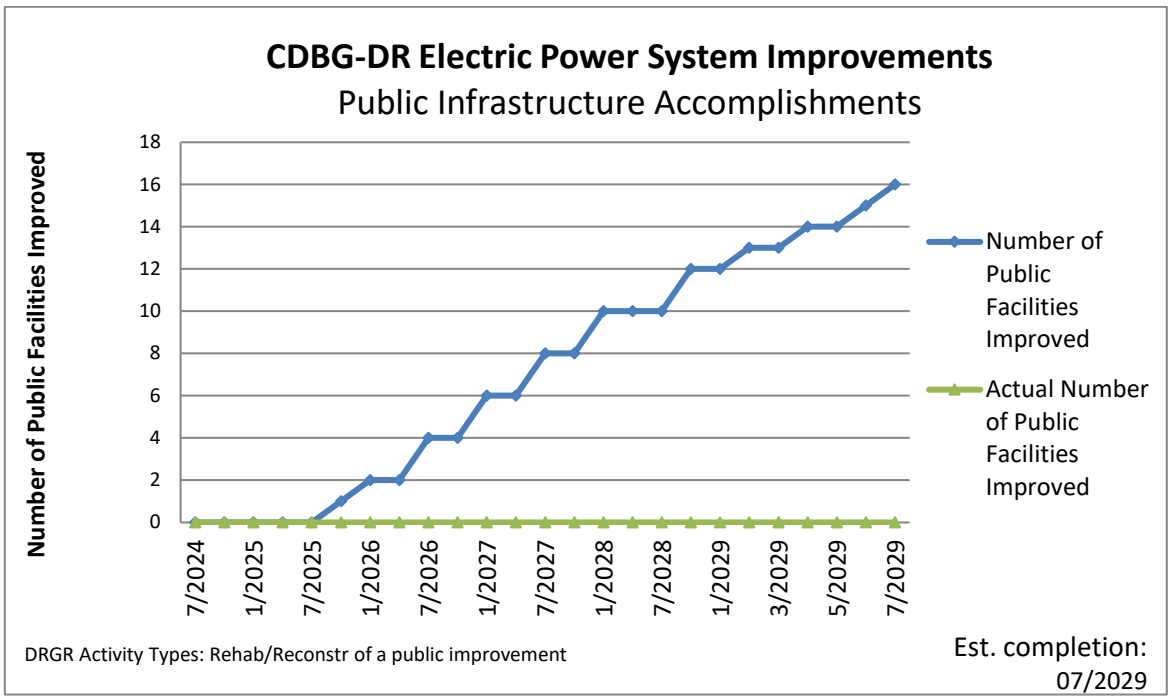


Figure 37 – Projected Infrastructure Accomplishments - PR1

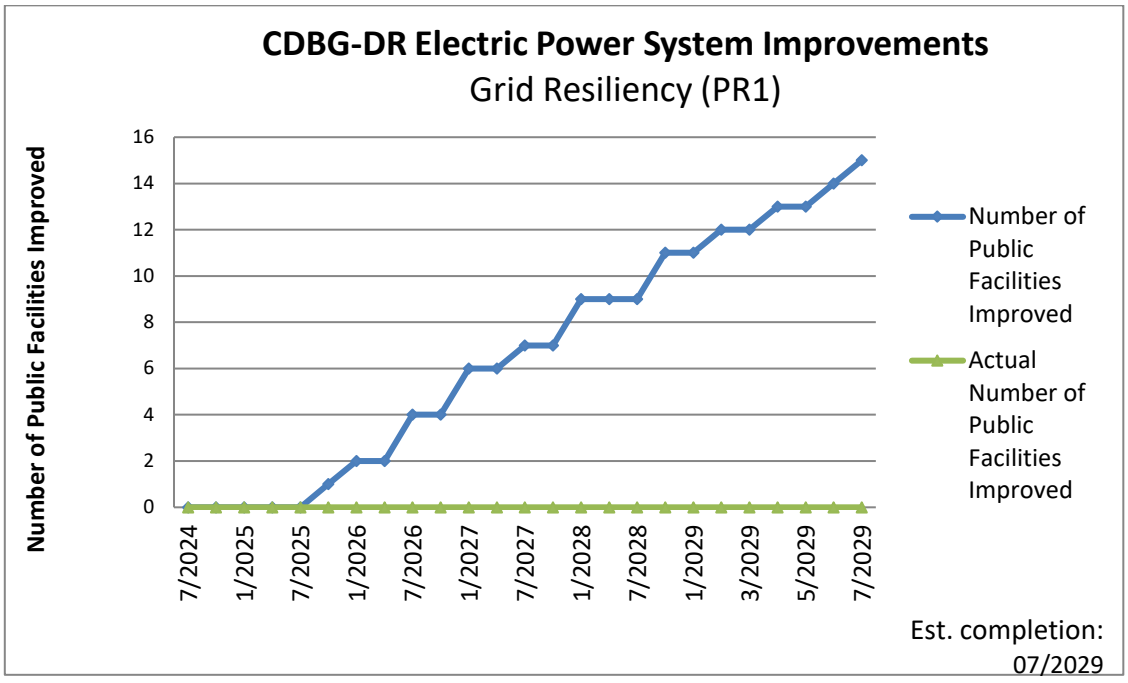
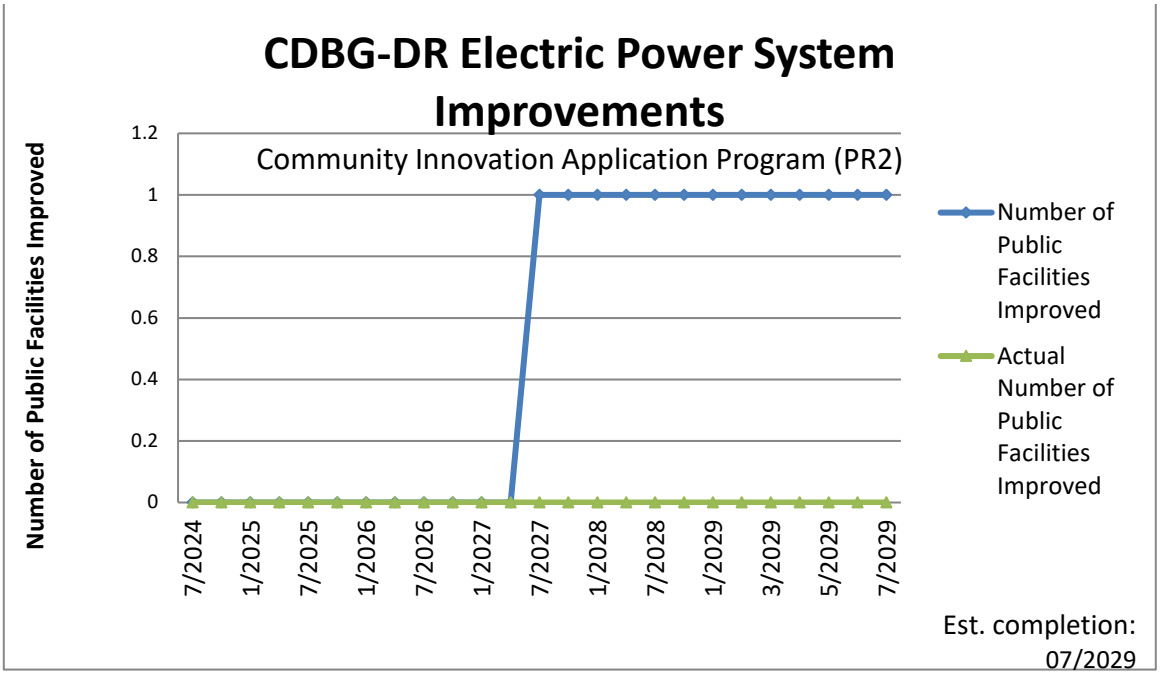


Figure 38 – Projected Infrastructure Accomplishments - PR2


CDBG-DR Electric Power System Improvements
Community Innovation Application Program (PR2)
Number of Public Facilities Improved
1.2
1
0.8
0.6
0.4
0.2
0
7/2024
1/2025
7/2025
1/2026
7/2026
1/2027
7/2027
1/2028
7/2028
1/2029
3/2029
5/2029
7/2029
Number of Public Facilities Improved
Actual Number of Public Facilities Improved
Est. completion: 07/2029