

The Virgin Islands Consortium

WAPA Director Details Plan To Utilize Federal Funding For Underground Distribution Feeders, Other Hardening Initiatives

Economy / **Published On June 10, 2018 11:57 AM /**

Staff **June 10, 2018**



Galerie technique à Montesquieu des Albères Prise de vue des 4 câbles

The majority of federal funding approved by the Federal Emergency Management Agency for the hardening of WAPA's electrical systems will go towards the undergrounding of transmission and distribution feeders and providing service drops directly to customer's meter bases, WAPA said in a Saturday release.

Executive Director Lawrence J. Kupfer said this week that approximately 300 miles of underground systems will be installed throughout the territory. "After these projects are completed, approximately 50% of WAPA customers will have underground power from the distribution feeders directly to their meters. The planned underground projects will provide complete undergrounding in Christiansted and Frederiksted on St. Croix, Charlotte Amalie and Red Hook on St. Thomas, and Cruz Bay, St. John. Additionally, when the new underground facilities are constructed, they will include spare conduits to be used by communication providers to underground their networks," Mr. Kupfer said.

The authority began working with FEMA at the end of 2017 to request grant funding to permanently harden the electrical systems. To date, FEMA has approved, and WAPA is eligible to receive, approximately \$625 million in mitigation funds. There is a local match required for FEMA funding at a level of 10%. WAPA anticipates tapping disaster recovery funds from the Housing and Urban Development (HUD) Community Development Block Grants to cover the local match. Using HUD grant money for this purpose avoids WAPA having to rely on its already strained financial resources to satisfy the local funding requirements for the underground projects to move forward, according to the utility.

In the areas where underground circuits will not be installed, FEMA has approved the installation of composite poles. In all, approximately 6,500 poles will be installed on 400 miles of WAPA's above-ground circuits. "These poles are rated for 200 mile per hour winds and are warranted for 40 years by the manufacturer. The cost of the composite pole project is a little over \$100 million," Mr. Kupfer said.

Both FEMA and WAPA are working to make St. John much more resilient in the event of a future storm event. After the hurricanes, St. John remained without electrical service for more than 50 days, awaiting reconstruction and restoration of the transmission and distribution system on St. Thomas, which provides electrical service to St. John. Kupfer said that in addition to the underground circuits and composite pole projects, FEMA has approved the installation of two back-up four-megawatt generators, and a utility scale four megawatt solar farm near Coral Bay, WAPA said. These projects would allow St. John to operate independently of St. Thomas, should it be required to do so.

"Once these projects are completed, should an island-wide service interruption occur on St. Thomas, St. John residents would no longer sit in darkness as a result of the lost generation capacity. These new capabilities will allow for more timely restoration of electrical service on St. John," Mr. Kupfer said.

The mitigation projects that have been designed and funded by FEMA are aimed at making WAPA's grid more resilient which will facilitate a more timely recovery from hurricane events. The projects will also contribute to an overall reduction in operating expenses. "They will provide one-megawatt of low cost solar power, and will help reduce line losses, tree trimming expenses, and emergency repair work on above-ground transmission and distribution circuits," said the executive director.

Mr. Kupfer said WAPA is working closely with Governor Kenneth Mapp to maximize the use of HUD disaster recovery funding for other projects. HUD has provided \$1.8 billion to the territory. The funding can be used for both projects and on the local match mitigation initiatives funded by FEMA. "We are planning to use our share of the allocation from these funds to transform our generation to include utility scale wind and solar, utility scale

battery storage, and to continue to upgrade old and inefficient generating plants. The HUD disaster recovery funding is true grant money, not loans, and do not need to be repaid. I refer to this as 'free money'," Kupfer added.

In 2016, WAPA completed an Integrated Resource Plan to guide its future resource planning process. The plan called for replacement of the current generating fleet with renewable compatible, higher efficiency, smaller generators. The first three of these generators, with a total capacity of 21 megawatts, have been manufactured by Wartsila North America and will be shipped to St. Thomas in August, for installation and commissioning by the end of this year. While these new generators were financed with debt, WAPA seeks to fund additional new generators with HUD Grants. Once all generation has been upgraded, WAPA would experience a reduction in fuel consumption on the order of approximately 50%.

According to the release, Mr. Kupfer also explained that WAPA, through the use of HUD grant money, will build its own utility scale wind and solar facilities and utility scale battery storage systems. "A renewable facility built with grant money will have no financing costs to be recovered and since the fuels, wind and sunlight, are free, the cost for power will be low. It is estimated that the cost of power of a WAPA-owned wind and solar facility could be 2 to 3 cents per kilowatt hour. This compares to power purchased under a wind or solar power purchase agreement that could be more than 15 cents per kilowatt hour. Additionally, because the facility would be owned by WAPA, it would qualify for FEMA funding should it be damaged in a significant hurricane event," he said.

WAPA said it intends to use a first wave of HUD funding, \$45 million, to fund additional utility scale renewable and battery storage projects on St. Thomas and St. Croix. At the present time, Kupfer said, the Authority and the governor are continuing to work on additional allocations of HUD grant funding for WAPA.

"All of the parties involved fully understand the potential significant rate reductions that our customers will experience as we utilize more and more of the free federal money to revamp the manner in which electricity is produced and distributed across the territory," Mr. Kupfer said.