



VIRGIN ISLANDS WATER AND POWER AUTHORITY

**TESTIMONY OF KARL KNIGHT
EXECUTIVE DIRECTOR OF THE
VIRGIN ISLANDS WATER AND POWER AUTHORITY
TO THE
36th LEGISLATURE OF THE U.S. VIRGIN ISLANDS**

April 9, 2026

Good day, Honorable Milton E. Potter, President of the 36th Legislature of the United States Virgin Islands, other Honorable Senators present, and the listening and viewing audience. I am Karl Knight, Executive Director and Chief Executive Officer of the Virgin Islands Water and Power Authority (hereinafter “WAPA” or “the Authority”). Joining me today are members of the Authority’s management team: Superintendent of the Randolph Harley Power Plant Facility Kevin Harrigan, Director of Special Projects Vernon Alexander, Director of Transmission and Distribution Collin Brown, and Chief Financial Officer Lorraine Kelly. Also joining us today is the Chairman of the Governing Board Maurice Muia.

We are here at your invitation to provide an update from the Virgin Islands Water & Power Authority, and to ensure our community has clear answers regarding the recent outages.

The last two months have been difficult—plain and simple. For our customers, for businesses, for families, and for our employees. To every resident who has lost sleep, food, business, or peace of mind because the power was not there when you needed it, I want to say clearly: I am sorry. We understand that frustration. We live here too. During this period, our employees have worked tirelessly, often through the night, to stabilize a system under real strain as they confronted a myriad of issues.

What we’ve experienced over these past weeks was not one issue, but a series of events, back-to-back, that exposed the fragility of an already stressed system.

Between the period of Monday, February 2 until Thursday, February 5, the Virgin Islands experienced intense thunderstorms resulting in prolonged power outages. While the rain was unusual for that time of year, the accompanying winds and lightning were even more disruptive. The islands experienced consistently high winds during that period, with wind gusts as high as 33 miles per hour. Power outages were caused by branches in the lines, blown fuses due to lightning strikes, broken insulators, and other storm-related damage.

The most intense showers occurred in the early morning hours on Tuesday, which delayed efforts to restore customers that lost power on Feeder 7A late Monday night on St. Thomas. Most customers on St. John and St. Croix were restored by Tuesday night. However restoration efforts on St. Thomas were further delayed by considerable vegetation in the lines on the northside of the island.

On February 5, WAPA experienced a blow out on the underground portion on Feeder 13 on the waterfront around 9:30 a.m. As a result, areas that had been previously restored lost power again for most of the day, due to the limited capacity of Feeder 12. When Feeder 13 trips, all the B, C, D and E feeders are served only by Feeder 12. Due to its limited capacity, approximately 30MVA, up to 5MVA of customer load is shed through rotations. Feeder 13 was restored at 6:36 p.m. A line crew was brought in from St. John on February 6 to support the St. Thomas line crews on the remaining trouble calls and address scattered outages.

On that same Friday, February 6 at 5:29 p.m., the transmission line between Red Hook and Cruz Bay tripped creating an islandwide outage on St. John. The Transmission and Distribution team tested the terrestrial section of the cable in Red Hook and found no damage. On Saturday morning at 6:00 a.m., the team inspected the St. John portions of the line. The submarine portion of the transmission line successfully passed testing. The terrestrial portion of the line to the substation on St. John also passed testing.

It was later determined that the line was not at fault. A burnt fust caused its protection system to misfire, shutting it down unnecessarily. Power was fully restored to St. John at 5:23 p.m. on Saturday, February 7.

I am deliberate in pointing out the testing of the transmission line from Red Hook to St. John because it provided verification that the line was in excellent condition. The cable is approximately 14 years into a 50-year expected useful life span.

On Saturday, March 14, at 9:57 p.m., the transmission line from Red Hook to St. John was deliberately cut with a mechanical device. St. John was once again plunged into an island-wide outage. Realizing how long it would take to repair the damage to the line, a decision was made to return to service the previously abandoned transmission line to St. John. That night, the field team completed the tie-in of the Red Hook portion of the line. Early Sunday morning, the field team completed the connection of the St. John end of the cable. After testing, service was fully restored to St. John at 11:46 a.m. on Sunday, March 15.

About three hours later, power transmission to St. John was disrupted again triggered by a fire in the junction box where the lines are connected in Red Hook. Evidence suggests this was a direct result of the damage caused by the event the night before that was not immediately apparent. At this point, the field team began working on both cables to determine which would yield the quickest repair. The existing cable was ultimately returned to service but had a damaged phase. The field crew was innovative enough to utilize one phase from the previously abandoned cable and two phases from the existing cable to restore full service to St. John. The field team completed repairs and restored power shortly after midnight on Tuesday, March 17.

Finally, Thursday, March 19 began a two-and-a-half-week prolonged period of rotational outages caused by the inability of the Randolph Harley Power Plant (RHPP) to produce sufficient power to meet the customer demand in the St. Thomas – St. John district. This event occurred on March 19 at approximately 11:45 a.m., where Unit 15 experienced an electrical fault and tripped offline. This destabilized the plant and caused the other generation units operating at the time to also trip, resulting in a district-wide outage.

The apparent damage was quickly assessed, and parts were sourced to repair or replace the damaged components. When Unit 15 went offline, we simply did not have enough generation available at certain times of the day. At peak demand, we were short by up to 5 megawatts. Rotations were not the goal, but instead, they were the safeguard to prevent a full system outage.

WAPA currently operates 10 generation units in the St. Thomas–St. John district. Three of these—Units 27, 23, and 15—are legacy, heavy-duty turbines that produce large shares of power critical to maintaining reliable service. The remaining capacity is supported by smaller, more efficient Wärtsilä units, which together provide approximately 57 megawatts of generation. At the time of Unit 15 tripping offline, Unit 23, Unit 27, and Wärtsilä Engine 5 were all offline for maintenance repairs.

There were three successful restarts of Unit 15 during this outage event, but the Unit performed erratically and, in each case, failed to stay online for longer than 24 hours. Every time the unit tripped offline, it resulted in a district-wide outage. On Monday, March 30 a decision was made to pivot and focus efforts on the repair of Unit 27.

Repairs on Unit 27 were successfully completed on Monday, April 6 at approximately 1:00 p.m. That additional generation allowed us to end rotational outages. We are continuing to monitor the unit closely and operate cautiously to ensure stability.

With Units 23 and 27 unavailable, Unit 15 had been running continuously since September 2025 to carry the system load. Because it was the only large unit available, WAPA was unable to remove it from service for routine maintenance without risking wider outages. It is also the only gas turbine in the Harley Plant that can utilize liquified petroleum gas (LPG) as a fuel.

To recap:

- **Early February storms** brought lightning, high winds, and vegetation damage, causing multiple feeder outages and delays in restoration.
- **Mechanical Failure on Feeder 13** reduced our ability to carry load, forcing temporary rotations.
- **A transmission disruption to St. John**—later traced to equipment malfunction, not line failure—required full system testing before restoration.
- **A deliberate act of vandalism in March** cut the transmission line to St. John, triggering another island-wide outage.
- **And most significantly, on March 19 Unit 15 failed**, triggering a district-wide outage and a prolonged period of rotational service interruptions.

Let me be direct about the core issue. Our system is operating with aging infrastructure, limited redundancy, and very little margin for error.

Unit 15 was commissioned in 1980. It has served this community longer than any employee at WAPA. The unit is probably older than most of our employees. It is significantly past its expected useful life, and its retirement has been intended for several years now. FEMA has agreed to replace the unit as part of the Prudent Replacement plan for the RHPP.

For months, we haven't been able to do the maintenance the unit needs, and it's hard to justify large investments on a unit that is slated for retirement. As of 2021, the unit is deemed obsolete, meaning the manufacturer no longer produces that model turbine and spare parts are now mostly sourced from the aftermarket.

That is not a sustainable position for any utility. These incidents were all problematic. Each incident was unique in nature. While they are illustrative of the challenges faced by WAPA, they are all solvable.

I understand that what people remember is the outage, not the explanation. But it is important to say this clearly. This was not neglect. This was a system under pressure responding to multiple compounding failures.

All things considered, our teams restored service repeatedly, safely, and as quickly as conditions allowed.

We are not standing still. The Authority has a clear path forward that will provide tangible improvements to our delivery of reliable service in the St. Thomas – St. John district. There are firm long-term plans, intermediate-term plans, and short-term plans.

Short-term Plans (0 - 6 months)

St. Thomas:

Construction of a Bypass to the Feeder 13 Transmission Line. The construction of the bypass to the Feeder 13 Transmission Line is approximately 95% complete. This project is funded by FEMA through its Public Assistance Program.

St. John:

- **Installation of Emergency Standby Generation for the island of St. John.** The Authority is pursuing an expedited path for the installation of emergency standby generation for the island of St. John. Several vendors have presented suitable proposals. This project is funded by FEMA through its Public Assistance Program.
- **The Repair of the Great Bay 34.5 kV Transmission Line to St. John.** This submarine line was damaged several years ago. The Authority has identified the location of the damage to the

line and has identified a contractor capable of conducting the repairs. A vendor has been engaged in manufacturing the necessary inline splices. This project is currently unfunded.

- **Temporary Repair of the 13.8 kV Ridge Road Distribution Circuit at Cabrita Point.** This submarine cable provides an alternate means of energizing Feeder 7E on St. John. The circuit was damaged during Hurricane Irma. FEMA has agreed to fund its permanent repair as part of the horizontal bundle of underground projects for the end of St. Thomas. Construction is not expected to commence for another 12 months. The Authority is pursuing a temporary repair that will make the line available for emergency use. A contractor has been identified to conduct the repairs. This project is currently unfunded.

Territory-wide:

Installation of Distribution Automation Devices. DA devices will allow WAPA to isolate and restore electrical service to customers in sections both locally and utilizing SCADA. These DA devices can detect and isolate faulted areas of the power system, allowing for quicker service restoration, ultimately leading to fewer and shorter outages for customers. This project is funded by HUD through the Community Development Block Grant for Electrical Grid Stabilization (CDBG E-Grid) administered by the Virgin Islands Housing Finance Authority.

Installation of New Distribution Transformers. WAPA has a large volume of mild steel encased non-CSP transformers. This project aims at replacing pole mounted transformers, older than 20 years, with stainless steel tanks. The new transformers will be of type Completely Self Protected (CSP) fitted with internal protection and lightning surge protection. This project is funded by HUD through the Community Development Block Grant for Electrical Grid Stabilization (CDBG E-Grid) administered by the Virgin Islands Housing Finance Authority.

Intermediate-term Plans (6 - 24 months)

St. Thomas:

- **Installation of Temporary Generation in the Randolph Harley Power Plant.** This project is funded by FEMA through its Public Assistance Program and is being administered by the Office of Disaster Recovery through its Super Project Management Office.
- **The Development of the Fortuna Solar Farm.** VIElectron has begun construction of a 25 megawatt solar farm in Estate Fortuna. This project is funded through an existing power purchase agreement with VI Electron.
- **The Development of the Bovoni Solar Farm.** VIElectron is pursuing the development of a 10 megawatt solar farm in Estate Bovoni. This project is funded through an existing power purchase agreement with VI Electron.
- **Installation of an Additional Battery Energy Storage System at the Randolph Harley Power Plant.** The plant currently has 18 megawatt-hours of storage capacity. The goal is to

add another 18 megawatt-hours. This project is funded by FEMA through its Public Assistance Program and is being administered by the Office of Disaster Recovery through its Super Project Management Office.

- **Installation of a Battery Energy Storage System at the East End Substation.** The 15 Megawatt/30 Megawatt-Hour Battery Energy Storage System will provide the ability to service Feeders 9C and 7C. This project is funded by HUD through the Community Development Block Grant for Electrical Grid Stabilization (CDBG E-Grid) administered by the Virgin Islands Housing Finance Authority.

St. John:

The Development of the St. John Solar Farm. VI Electron is pursuing the development of a 10 megawatt solar farm on the island of St. John. This project is funded through an existing power purchase agreement with VI Electron.

Long-term Plans (2-3 years)

St. Thomas:

- **The Permanent Replacement of Units 14 and 15 with at least 32 megawatts of New Generation.** This project is funded by FEMA through its Public Assistance Program and is being administered by the Office of Disaster Recovery through its Super Project Management Office.
- **The Rebuild of Transmission Feeders 11 and 12.** Following the damage of Feeder 11 during Hurricane Maria, there has been extreme stress on the two active transmission lines. This has also eliminated the level of redundancy that was provided when all three lines were active. This project is funded by HUD through the Community Development Block Grant for Electrical Grid Stabilization (CDBG E-Grid) administered by the Virgin Islands Housing Finance Authority.
- **The Development of the St. Thomas Bovoni Eastern BESS & Microgrid Project.** This project will provide an alternative energy source to a portion of southeastern St. Thomas. This project is to be funded through the FEMA Hazard Mitigation Grant Program with the solar and wind energy resources funded through existing power purchase agreements with independent power providers.

St. John:

- **The Development of the St. John Microgrid.** This project would allow St. John to “island” independent of the Harley power plant by combining utility-scale solar, conventional generators, and battery energy storage system to meet customer demand. It is primarily funded

by FEMA through its Public Assistance Program, with the solar energy being funded through an existing power purchase agreement with an independent power provider.

There is a reality we cannot ignore, and I want to take a moment to remind the community. For many years, the Authority has been losing money on every barrel of oil it purchases. This is an inconvenient truth, because we all agree that our electricity rates are high.

It creates a real conundrum because we cannot solve our problems by simply raising rates. WAPA has been operating for years in a position where costs of goods, services, labor, and fuel are increasing, as seen in the community. The gap has been managed for over a decade by deferring maintenance, prioritizing critical vendor payments, cutting operating budgets, etc. Those budget cuts have often resulted in inadequate staffing, a shortage of tools and equipment, a shortage of fleet vehicles, and inadequate training. Realistically, there is no overnight fix.

That is the true challenge. How do we responsibly reduce operating expenses without placing a burden on our customers or eroding the quality of our service? It is a difficult challenge, but one that we are skillfully trying to navigate. To assist the Authority, this body must recognize that reality. We can resolve these fiscal woes, but it will require focus and persistence to the finish.

In conclusion, senators, the buck stops with us. We accept that responsibility fully. Our job is to provide reliable, affordable service, and regain the trust of our community. To get to the finish line, we cannot do it alone. We need partnership:

- A stable regulatory environment
- Action on suggested legislative measure previously presented
- Timely progress for critical infrastructure funding
- Continued backing for projects like the Ridge Road and Great Bay repairs for St. John
- Community support for developing solar farms

We can meet every goal outlined if we all work together!

I thank the many members of the community and our governmental partners that have been very supportive during these last few weeks. I thank the employees of the Authority for being unwavering during very stressful times. The mechanics in our plants can fix anything! Both the electric and water systems have had many late nights and early mornings out in the field and in the power plants. They've consistently answered the call and I truly appreciate them.

They deserve recognition and our customers deserve results. We are, wholeheartedly, committed to delivering both.

I thank you for the opportunity to testify here today and I look forward to your questions.

Best Regards,

Karl J. Knight

CEO / Executive Director

Virgin Islands Water & Power Authority