



VIRGIN ISLANDS WATER AND POWER AUTHORITY
Office of the Executive Director

TESTIMONY OF KARL KNIGHT
EXECUTIVE DIRECTOR OF THE
VIRGIN ISLANDS WATER AND POWER AUTHORITY
TO THE
36th LEGISLATURE OF THE U.S. VIRGIN ISLANDS
November 18, 2025

Good day, Honorable Milton E. Potter, President of the 36th Legislature of the United States Virgin Islands, other Honorable Senators, 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”). I am here at your invitation to provide testimony on:

- BR25-0914: An Act approving Major CZM Application No. CZMJL0018-25, pertaining to a solar farm at parcels #3B & 2 Estate Fortuna; and
- BR25-0915: An Act approving Major Coastal Zone Management Application No. CZMJL0017-25, pertaining to a solar farm at Rem. 17 Estate Bovoni, and Nos. 1 & 2 Frenchman's Bay Quarter on St. Thomas.

These projects are positioned to provide substantial operational, financial, and environmental benefits to our customers and the Authority stands in full support of both measures.

Operational Benefits

The interconnection of the Estate Fortuna and Estate Bovoni solar farms will have an immediate positive impact on the reliability of the St. Thomas-St. John electrical grid. Combined, they will provide an additional 35 megawatts of daytime capacity. This is more than half of the daytime power needs of the district. Unlike the solar farm at Estate Donoe,

the associated battery energy storage systems allow for the smoothing out of power fluctuations caused by passing clouds, haze, or Sahara Dust. This allows the solar farms to perform almost as reliably as baseload generators.

This additional daytime capacity allows for units to be taken offline during the day for routine and preventative maintenance. On most days, any repair that requires less than 8 hours' downtime could be completed on any one of the generators, in the Randolph Harley plant without compromising capacity and reliability. We have seen this approach work with great effect on St. Croix.

One portion of the Estate Fortuna solar farm will be connected to the transmission system that feeds the whole island, but the other portion of the solar will be connected to Feeder 6A which serves the western end of St. Thomas. This means that should the power plant experience a shortage of capacity during daytime hours, Feeder 6A would not be one of the feeders taken offline because its power needs would be supplied by the solar farm. This promises significant improvement in reliability for that portion of the island. A similar scenario is contemplated for Feeders 9C and 10B with the interconnection of the Bovoni solar farm to those distribution feeders. Residents on Feeders 2A, 3A, and 8B on St. Croix currently enjoy this benefit.

These projects represent a solution with the fastest deployment time for improving system reliability on St. Thomas and St. John. Due to the air-permitting process, the installation of a temporary generator may take up to two years. The FEMA-funded disaster recovery project for additional generation is likely at least 3 years from completion. By contrast, these projects could be constructed and interconnected to the power grid by the end of next summer.

Financial Benefits

These projects will provide a tangible financial benefit to the Authority and our customers. Over the next five years, the PV and battery systems at the Fortuna solar farm are expected to deliver savings of approximately \$8 million a year to the Authority. The Bovoni solar farm is expected to add an additional \$2.5 to \$3 million in annual savings. The combined impact would close the operating deficit of the Authority and allow WAPA to generate positive cash flow for the first time in years. These projects provide a straightforward pathway back to fiscal solvency for the Authority and allow for realistic discussions on sustainable rate reductions.

The savings are driven primarily by reduced fuel consumption and the avoided costs of operating our least efficient units during daytime hours. The cost savings may be even greater as the estimates use very conservative assumption. These numbers assume only 90% system efficiency with the possibility of vegetation or dust affecting the efficiency of the

panels. It assumes a 4% annual degradation in the capacity of the batteries and a 0.5% annual degradation in the efficiency of the photovoltaic panels. The savings model does not include the expected reduction in running hours by the generators in the Harley plant and the resulting decrease in maintenance expenses.

The structure of these projects also provides a hedge against rising fuel costs. While global events like the Russian invasion of Ukraine or the Covid pandemic can disrupt fuel commodity markets, these power purchase agreements provide stable pricing throughout their duration. It becomes a consistent and predictable component of the Authority's budget.

Environmental Benefits

Finally, the projects have a tremendously positive environmental impact. The power produced by these panels displaces power that would have otherwise been produced using fossil fuels at the Harley plant. That creates a significant reduction in airborne pollutants. They reduce our greenhouse gas emissions and help bring the territory to its 2025 goal of a 60% reduction in fossil fuel consumption for power generation. That goal was established back in 2010. Additionally, it reduces our dependence on imported fuels arriving by ship. This removes risks associated with oil transport, including oil spills and maritime accidents.

The Authority's support of these projects is not based on some hopeful prediction of what is to come. We are fully informed by the experience that we have had on St. Croix with this developer and the solar farms that it has constructed there. The Petronella solar farm has been online almost a full year now and has provided us with real world data on operational benefits and savings. The Hogensborg solar farm came online this past May and has also delivered as promised. The Fortuna and Bovoni projects have the potential to bring similar benefits to the St. Thomas-St. John district.

I wish to thank Christian Loranger, VI Electron, VIRAPC, and the rest of the development team for being such wonderful partners to the Authority. We look forward to our continued partnership in transforming WAPA into a utility that is well positioned for the future. Senators, I hope this testimony has been useful as you make an informed decision on the measures before you.

Thank you for this opportunity to testify and we look forward to any questions you may have.