The Virgin Islands Consortium

Letter To The Editor: A Successful Path Laid for Renewable Energy

Opinion / **Published On October 28, 2014 10:18 AM /**

Staff October 28, 2014

Dear Editor

As we observe Energy Action Month this October, there is much success to be celebrated. We have ushered in an era of energy efñciency with solar water heaters. LED light bulbs, and Energy Star appliances are becoming commonplace in homes across the territory. We have embarked on a comprehensive effort to diversify our sources of energy. The resulting effects of these policies, programs, and projects is a reduction of over 20% in our fossil fuel consumption for electricity production over the past five years. This represents almost 500,000 barrels of oil a year and places us well on our way to achieving a 60% reduction by 2025. Even the net metering program that has been a

source of constant scrutiny has become a rousing success.

Over 1,000 distributed renewable energy systems have been connected to the grid to date, with more applications and permits still making their way through the process. No other Caribbean nation can boast that it generates a larger percentage of its electricity from distributed renewable energy than the U.S. Virgin Islands. Nearly 10% of the peak demand for power on St. Croix is currently met by renewable energy systems that are net metered to WAPA's grid. In the St. Thomas-St. John district, that number is almost 12% of peak demand. This does not include the utility-scale solar projects being built at Estates Donoe and Spanish Town.

Progress has been steady, but real challenges remain. If we want to continue the growth of distributed energy in the Virgin Islands and to support the desire of some individuals to generate their own renewable energy, then we must address three concerns: We must fairly allocate costs for the upkeep of the electrical system. We must develop a fair cost for excess energy sold back to WAPA. We must implement smart grid solutions to solve the technological barriers. The good news is that these challenges are not without solutions and those solutions are already known to us.

A common misconception is that net metering customers have chosen to go "off-grid" and remove themselves from being a customer of WAPA. The truth is, a net metered customer has decided to enter into partnership with WAPA to reduce their utility bills. They have not left the grid. They connect to and rely on the poles, wires, transformers, substations, bucket trucks, and lineman. Solar customers, in particular, need the electricity grid to ensure they have sufficient power at night and on cloudy days. Net metering customers also use the grid to sell power back to WAPA when they generate more energy than they need.

The reliability and proper maintenance of the grid is of critical importance to all WAPA customers. However, net metering customers do not pay their proportional share of those charges. WAPA recovers these costs through the consumption charge on your bill based on the kilowatt-hours consumed.

Net metered customers who have reduced their consumption do not pay these costs fully. They effectively pass these costs on to non-net metered customers. This is negligible in small amounts, but as more people install renewable energy systems, it becomes increasingly important that everyone who uses the grid pays their fair share for the costs of keeping the grid operating. To solve this dilemma, we must agree to a standby rate or a net metering customer charge that adequately accounts for the maintenance and operation of the distribution grid. Other jurisdictions are doing this and there are models of how to spread these costs more fairly among all of WAPA’s customers.

Another concern to be addressed is the determination of a fair price for the compensation by WAPA to the customer for excess energy sold onto the grid. The current net metering arrangement provides the customer with a kilowatt-hour credit that is equivalent in value to the retail rate that WAPA sells power to its customers for. WAPA's consumer rate includes the cost of distribution, meter reading, customer services, accounting, and other administrative charges not incurred by the net metered customer. When WAPA purchases power at a cost that is greater than the current cost to produce power at its

power plants, it results in higher rates for all customers.

WAPA is required to file with the Public Services Commission a declaration of its "avoided costs". This is essentially the cost realized by WAPA in producing each kilowatt-hour of electricity at its power plants. WAPA can avoid paying a premium for excess power if it is not required to pay more than its actual "avoided costs" for that power. This approach is often referred to as net billing and has been adopted throughout the region on islands like Jamaica and Barbados. Likewise, this concept has already been enacted locally through the Feed-In Tariff Act and needs to be fully implemented moving forward.

Finally, we must address the technological barriers that hinder further renewable development. It is well established that wind and solar are intermittent sources of energy that fluctuate throughout the course of the day. Once again, in small quantities, this is not a concern; however, in large amounts it creates a challenge for the power plants as they try to maintain balance and stability on the grid. We know that these problems can be addressed through smart grid technology, energy storage, and adherence to strict interconnection standards. However, those solutions require thorough engineering analysis to guide the decision-making and then the capital to finance the implementation. Most importantly, they take time as we wait for technology to catch up to our ambitions.

We have come a long way in a short period of time concerning renewable energy. We can progress even further, but we can't dismiss the real challenges faced by WAPA moving forward. If we acknowledge the legitimate concerns of the utility, then we can engage in the dialogue, collaboration, and cooperation necessary to advance our energy infrastructure in a manner that serves the best interests of all.

Sincerely,

Karl Knight, Director - Virgin Islands Energy Office

Image Credit: SEAG

The views and opinions expressed in this article are solely those of the author, and do not necessarily reflect the views and opinions of the staff and management of the VI Consortium.