

EV SUMMIT

EXPLORING THE FUTURE OF TRANSPORTATION

VI Energy Office



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The Ford F-150 Lightning has become an integral vehicle in the Water and Power Authority's fleet

EV IN THE VI

Sparking a revolution

Hundreds of folks had their pressing questions about the territory's readiness to embrace electric vehicles answered during the 2024 Electric Vehicle Summit. Hosted by the Virgin Islands Energy Office, (VIEO) the summit was held on St. Thomas at the University of the Virgin Islands' (UVI) Innovation Center on July 16th, and on St. Croix at UVI's Great Hall on July 19th.

Since the Virgin Islands' government began augmenting its motor pool with fully electric vehicles two years ago, interest in the technology has grown exponentially in the territory. Sights like Water and Power (WAPA) messengers crisscrossing the islands in Teslas, and the recent addition of electric buses to the VITRAN fleet, have captured the public's imagination, even as it has spurred on numerous questions about the viability of the technology in our remote island jurisdiction. As the government

agency with the only fully electric fleet of vehicles, and the catalyst behind the policies that have led to their wider adoption across the central government, VIEO has become a natural repository of concerns raised by citizens interested in the technology, but leery of taking on the risks associated with early adoption. VIEO Director Kyle Fleming said during his welcoming remarks.

In order to answer questions about where these cars can be charged and purchased, what government support exists for their acquisition, and what's being done to ensure that properly trained technicians are available to service them, VIEO invited policymakers, electric vehicle owners, and subject matter experts to speak on four dynamic panels.

On St. Thomas, a lively and engaging consumer panel made up of Kristina Edwards, director of the Division of Territorial Parks and Protected Areas, John Engerman, chief advisor at The Strategy Group, and resident Bill Loewy, shared their experiences with adopting electric vehicles for their personal use. Engerman has owned several Tesla's, over the years, saying that part of the reason why he recently purchased his fourth vehicle from the company was because he likes keeping his ride fresh. Loewy has also bought multiple electric vehicles, but his purchases, he said, were generally motivated by finding a deal too good to pass up. As was the case when he purchased his own Tesla from a seller motivated to divest herself from any association

Darwin Newton, Siemens head of operations for electrical and E-mobility services, poses with a Level II charger







with a failed marriage. An avid fan of renewable energy, Loewy has installed solar panels and a battery backup system at his home, and is able to charge his vehicles virtually free of charge he said.

In answer to a question posed by panel moderator Dr. Shelly Francis, E-Mobility consultant with summit co-organizer EVNoire, Edwards expressed how pleased she is to own a vehicle that aligns with her personal philosophies around sustainability, and reducing her impact on a changing climate. On top of the feel good factor she gets from driving a car that has the ability to gain range as it harvests electricity to charge its batteries through regenerative braking technology, Edwards said that she has been pleased with how little maintenance her vehicle requires.

An electric vehicle's drive train can have as few as 20 moving parts, and the motors that power them even less. When you compare that to a car, which can have as many as 2,000 moving parts in its drive train alone, you can begin to see why electric vehicles typically require less maintenance than

“In parallel with reducing our overall dependence on expensive imported fossil fuels, we are also pushing for the expansion of renewable power generation across the territory. And electric vehicles represent a perfect output of renewable energy by mitigating fossil fuel dependence both for our energy, as well as our transportation needs,” Director Fleming said.

their internal combustion engine counterparts, Terry Travis, EVNoire managing partner, said. Travis, who moderated the workforce development and policymaker panels on St. Croix, went on to highlight that over the life of an electric vehicle, the most serious maintenance the car's operator can expect to do is change the tires, barring some major catastrophe. Electric vehicles do not require oil changes, and thanks to the fact that many models have installed regenerative braking systems, need less brake pad servicing. He also addressed one of the most common concerns that come up as people consider making the switch to a fully electric ride, range anxiety. He explained that battery technology has progressed to the point where the average range of an electric vehicle available for purchase after 2023 is almost 300 miles. The Melvin Evans Highway for comparison, is 9.3 miles long.

Charging up

EV AND

WAPA



Spectators take a closer look at a Ford F-150 Lightning

As the summit was underway on St. Thomas, a power outage struck, momentarily plunging the proceedings into darkness before a backup generator wired into the Innovation Centers circuits automatically switched on. The incident served to perfectly tee up one of the most pressing questions that VIEO has received over the years, are electric vehicles a sound investment given the reality of the frequent power outages that affect the territory, and the high cost of WAPA electricity. Boyd Sprehn, legal counsel to the Public Service Commission, was a member of St. Thomas' policy panel, and said that major initiatives that are currently under way will address not only the grid's instability, but also reduce the bottom line price of power.

WAPA has contracted with a renewable energy company that plans to install 143 MW of solar generating capacity in the territory across six solar farms that will have footprints in St. Thomas, St. Croix, and St. John. Sprehn said that WAPA is currently paying more than \$170 million for fuel to run its gas turbines, a figure that could drop to somewhere in the neighbourhood of \$60 million a year once the renewable projects come online. Those projects, when coupled with other efforts like the installation of 36 MW of new, more efficient gas powered reciprocating engines that are slated to be commissioned by the end of the year at the Randolph Harly Power Plant on St. Thomas, and the onboarding of utility scale battery energy storage systems, should have a positive impact on rates.

The policymaker panel on St. Thomas brought together local leaders who are working to foster sustainability

EV INFRASTRUCTURE

But even at present, Sprehn, who drives an electric vehicle, said that the pros of the technology outweigh their cons, even when you are charging up on WAPA power. He plugs his car in about once or twice a week, and has found that he's gone from paying about \$55 a fill-up, to \$5 for a week's worth of charge. He also noted that charging the vehicle doesn't seem to place any added burden on the utility grid, as he typically charges it overnight when WAPA is overproducing power to maintain the required spinning reserve necessary for maintaining electrical service.

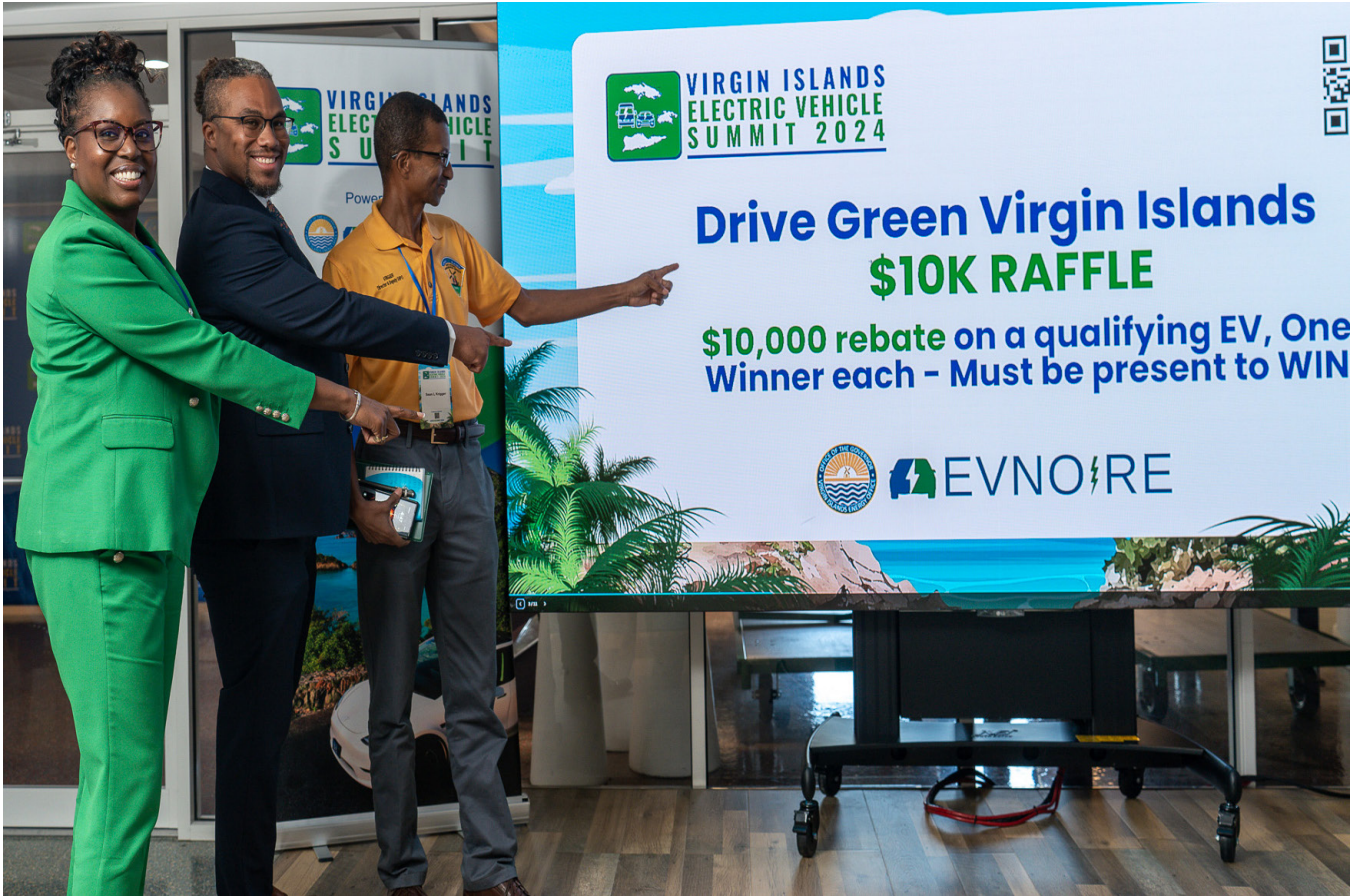
Electric vehicles are still an emerging technology in the territory, and most of the chargers that have been installed on island have been done so to serve the various government agencies that have incorporated them into their fleets. Publicly available chargers, like the one installed at the Market on Centerline Road, are few and far between. VIEO has been working to change that reality, and this year plans to install 34 Level II Siemens electric charging stations at public facing locations



throughout the territory. Micheal Jaffurs, VIEO deputy director, explained during the St. Croix workforce development panel that the locations that will be selected are being judged based on how long people typically congregate in those areas, and that popular beaches, grocery stores, and hotels are all being considered.

Darwin Newton, Siemens head of operations for electrical and E-mobility services, partnered with VIEO to facilitate the procurement of the chargers, and during his panel with Jaffurs, delved into the necessity of fostering private/public partnerships to help avoid pitfalls being seen in other jurisdictions that have moved more swiftly to usher in electric vehicles. Of key importance, Newton said, is making sure that once the

“We are at a pivotal moment in the journey towards sustainable transportation,” said Terry Travis, Managing Director and Co-Founder of EVNoire.



Dr. Shelly Francis, VIEO Director Kyle Fleming, and St. Thomas raffle winner Sean Krigger urge motorists to “drive green”

chargers are installed, there is an able workforce ready to maintain them. About 40% of the chargers that are on the market today, Newton said, are out of service at any given time. Given that each of the island’s making up the territory are relatively small, Newton said drivers won’t have the same range anxiety they may have in the states, but they will need ready access to charging stations for widescale adoption to become a reality. VIEO has a number of workforce development initiatives in the pipeline Director Fleming said, highlighting the fact that nearly \$1 million in federal grant funding has been secured to help establish an electric vehicle service center in the territory. VIEO is currently seeking an entity to partner with to develop the project, an opportunity that Fleming said is open to established dealerships as well as those seeking to enter the automotive sector for the first time. The service center is only a piece of the puzzle however, Fleming said, adding that VIEO also has plans underway to help establish electric vehicle technician training opportunities in the territory. Training that would be a natural evolution for practicing mechanics looking to add to their skillset.

Buying an electric vehicle in the territory can be a challenge, members of the consumer panel on both islands acknowledged. In most cases residents end up importing used or new electric vehicles from the mainland, although there exists one electric vehicle dealership on St. Thomas. But no matter where the vehicle is purchased from, the buyer can take advantage of VIEO’s Equitable Electric Mobility (EEM) program, an incentive that offers a up to \$5,000 rebate on qualifying vehicle purchases.

Incentives like EEM, and its federal counterpart the New Clean Vehicle Tax Credit, are part of a push by policymakers to steer the nation away from high polluting internal combustion engines Fleming explained. Internal combustion engine vehicles account for nearly 99% of all traffic on US roadways, and produce more than a quarter of the 14.0 trillion pounds of greenhouse emissions the country generates every year. Reducing barriers like the cost of these vehicles, building out accessible charging infrastructure, and making sure that an able workforce of technicians exist to serve them; are all part of VIEO’s strategy to cut down the territory’s reliance on expensive, polluting, imported fossil fuels Fleming said.