

The Virgin Islands Water and Power Authority continues its goal to introduce microgrids to the territory as it also continues to prioritize grid reliability and redundancy to reduce outages for its customers, the utility ...

3 LVAC AND LVDC MICROGRIDS 15 3.1 LVAC MG advantages and disadvantages 15 3.2 LVDC MG advantages and disadvantages 16 3.3 Energy efficiency and savings of LVDC technology compared to LVAC technology in microgrids according to literature 18 3.3.1 Power electronics and power conversion 19

The LVDC distribution has piqued academic interest due to expansion in power electronics technologies. The use of converters, however, has created many technical problems for their protection and control in the case of a failure under improper circumstances. In converter-fed systems, after-the-fault conduct LVDC distribution protection is much different and more ...

The St. Croix Microgrid Project is a smart grid project being developed in St. Croix, U.S. Virgin Islands. It is a microgrid renewable integration project. The project is expected to be completed in 2021. Go deeper with GlobalData. Reports. Vestas ...

U.S. VIRGIN ISLANDS - On Tuesday, April 23, the Virgin Islands Energy Office (VIEO) unveiled a micro-grid farm at the St. Croix Educational Complex (SCEC) that will enable the ...

Substantial progress has been made to create more resilient power grids throughout the U.S. Virgin Islands since hurricanes Irma and Maria left thousands of homes, businesses and critical facilities, such as hospitals, ...

An innovative microgrid would maintain power generation by disconnecting from the traditional framework and operate on its own using local energy generation in case of an ...

Solid-state dc transformer to integrate low-voltage dc (LVdc) microgrid, wind turbine (WT) generator, photovoltaic (PV), and energy storage (ES) into medium-voltage (MV) direct-current (MVdc) distribution grids is attractive. This article proposes current-source dc solid-state transformer (SST) for MVdc collection system in WT, PV, and ES farms or as an ...

WAPA plans four microgrid projects. WAPA's recovery plan also calls for building three microgrids on St. Thomas, St. John and Water Island as well as the one on St. Croix, according to a late February presentation by the utility to the US Virgin Islands' Legislature's Committee on Disaster Recovery and Infrastructure. The utility expects ...

U.S. VIRGIN ISLANDS - On Tuesday, April 23, the Virgin Islands Energy Office (VIEO) unveiled a micro-grid farm at the St. Croix Educational Complex (SCEC) that will enable the Educational Complex's

emergency hurricane shelter to ...

U.S. VIRGIN ISLANDS - The Virgin Islands Water and Power Authority ("WAPA" or "Authority") would like to provide the public with an update on its goal to introduce microgrids to the Territory as the Authority continues to ...

Globally, grid systems are facing substantial challenges due to the rapid growth in power demand. New technologies equipped by means of smart energy resources are one promising solution to cope with this challenge, leading to microgrid systems. The growing demand to develop the power sector by utilizing alternative energy resources plays an influential role in ...

A new energy management scheme for grid-integrated battery-based solar PV system is developed for a more practical DC bus voltage of 48 V. The main objective of the proposed work is to feed the grid by optimizing the available energy from PV and battery system. A unique advance adaptive control algorithm is used to generate the reference signal which is ...

The primary concerns in designing and control of LVDC microgrid involve: (a) choice of suitable converter, (b) extraction of maximum power from RES, (c) voltage regulation and (d) power sharing among various sources and loads [7, 8]. The output power of PV is intermittent in nature and is affected due to change in climatic conditions.

A 28-MW microgrid project in the US Virgin Islands was awarded \$4.4 million by the Federal Emergency Management Agency (FEMA) for the project's initial phase. The Virgin Islands Water and Power Authority ...

The concept of microgrid is evolving by leaps and bounds and assumes various forms depending on location and local requirements (Wouters 2015, 23). At the same time, the definition of microgrid is not based on a minimum or maximum size of a microgrid system but rather on function (Soshinskaya et al. 2014, 661). A generic definition treats microgrid as a ...

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