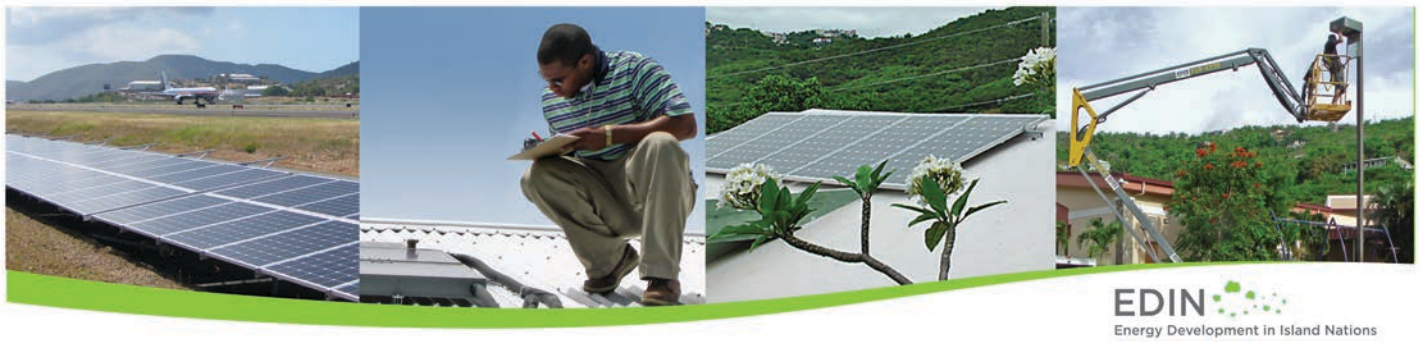


Energy Office Grant Helps the Virgin Islands Environmental Resource Station Install Solar Panels, Improve Efficiency, and Cut Monthly Energy Use Nearly 30%

Organization

Virgin Islands Energy Office
www.vienergy.org

Industry/Sector

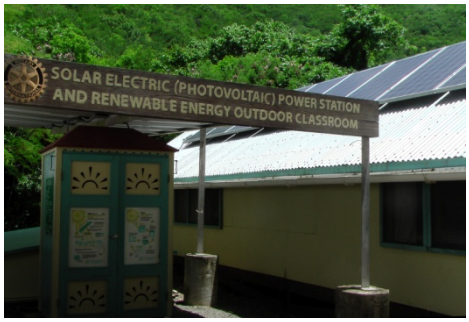
Government/Nonprofit

Deployment Location

St. John, U.S. Virgin Islands

This project is such a great learning tool, and I am excited about its progress and being able to show students visiting either VIERS or our website the impact of solar energy.

—Randy Brown
VIERS Administrator



The Virgin Islands Environmental Resource Station developed a solar classroom to educate young people in the U.S. Virgin Islands about renewable energy technologies and their energy and environmental impacts. *Photo from Don Buchanan, Virgin Islands Energy Office, NREL/PIX 20152*

Challenge

When Clean Islands International began operating The Virgin Islands Environmental Resource Station (VIERS) for the University of the Virgin Islands in 1997, the VIERS cabins consumed over 5,000 kilowatt-hours (kWh) of electricity per month. With support from the Virgin Islands Energy Office (VIEO), VIERS implemented a number of energy-saving improvements beginning in the early ’90s, including solar water heaters and low-watt fluorescent lighting.

Despite those improvements, energy consumption remained high; several cabins were air-conditioned, and the kitchen had a large walk-in cooler. In an effort to reduce its carbon footprint and lower its energy costs, VIERS partnered with St. John Rotary in 2003 to install a 1.8 kilowatt (kW) solar electric system acquired with the support of a VIEO rebate program. That system, which was connected to 5 of the 11 VIERS sleeping cabins, reduced operational costs 10%.

Faced with skyrocketing global oil prices in 2008, VIERS sought to further reduce its energy costs through additional energy efficiency measures and alternative energy sources.

Solution

In 2011, VIERS installed a 9.4 kW solar system funded by a $50,000 American Recovery and Reinvestment Act (ARRA) grant, which was administered by VIEO. To identify additional energy-saving opportunities, VIERS performed an energy audit of appliances, which resulted in the removal of two water coolers and the installation of a water meter to monitor water use and how it relates to electric pump use. VIERS also added an educational component to the project, developing a solar classroom near the original solar system.

Benefits

By building on previous energy conservation measures and making additional investments in renewable energy technology, VIERS has lowered its average monthly energy consumption nearly 30%, even with an increase in guests. The VIERS efforts are not limited to the technology installations, however. They also serve to impact the youth of the U.S. Virgin Islands (USVI) by educating young people about energy efficiency and renewable energy technologies and their energy and environmental impacts. VIERS' solar system is connected to the Web via a live feed that posts solar output data in real time, increasing the VIERS solar classroom's potential educational impact exponentially.

More Information

For information about opportunities to partner with the Virgin Islands Energy Office to reduce energy use and costs, contact Don Buchanan, don.buchanan@eo.vi.gov, or Miguel Quiñones, miguel.quinones@eo.vi.gov.

The Energy Office is partnering with the U.S. Departments of Energy and the Interior, the National Renewable Energy Laboratory, the Virgin Islands Water and Power Authority, and USVI businesses and nonprofits to advance the Energy Development in Island Nations (EDIN) goal of reducing the territory's fossil fuel-based energy consumption 60% by 2025.

To learn more about the EDIN-USVI energy revolution and how you can be part of the solution, please visit edinenergy.org/usvi.html.

NREL
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NREL/FS-7A20-54376 • March 2012

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