



The goal of the West Coast Collaborative is to leverage significant federal funds to reduce emissions from the most polluting diesel sources in the most affected communities. The Collaborative seeks to significantly improve air quality and public health by targeting the highest polluting diesel engines and equipment with the most cost effective control strategies.

DERA 2016: American Samoa Achieves 100% Renewable Energy on Ta'u Island

Under the 2016 Diesel Emissions Reduction Act (DERA) Clean Diesel Program, the U.S. Environmental Protection Agency's (EPA) West Coast Collaborative (WCC) provided a \$70,715 grant to help American Samoa's Ta'u island operate on 100% renewable energy. This grant helps fund the replacement of a smaller diesel-powered emergency backup generator. The entire system includes solar photovoltaic panels and battery storage.

What is this project?

EPA's Pacific Southwest Region provided a grant to the American Samoa Power Authority (ASPA), the public utility, to store clean, reliable power to this rural U.S. territory island. The utility-scale renewable energy system includes 1.4 megawatts (MW) of solar photovoltaic panels and 6 MW hours of 60 Tesla Powerpack batteries installed by SolarCity, allowing the island's 600 residents to continually utilize this renewable energy even when the sun is not shining. EPA funding included a smaller backup diesel generator, only to be used in emergencies or when there is not sufficient sunlight.

Where is this project located?

American Samoa, which consists of five main islands, is a U.S. Pacific island territory located in the South Pacific Ocean. This territory has been highly dependent on petroleum imports since electricity is primarily generated by diesel generators. Due to their unique geographic isolation, oil prices have been and are expected to continue to be extremely high. The Manu'a islands, which include Ta'u island where this project is located, set a goal to be fully free of fossil fuel generated electricity; this project will allow this island chain to reach this very ambitious goal.

Has EPA funded any similar projects in American Samoa?

In 2015 EPA awarded ASPA a DERA grant of \$42,200 for a similar solar-storage system on the Island of Ofu, which is also part of the Manu'a islands. This system includes 250 kilowatts (kW) of solar and 750 kW hours of a battery energy storage system with a 150 kW backup diesel generator to provide 80% renewable energy. In 2017 EPA provided \$82,960 to ASPA to help the islands of Ofu and Olosega install an additional 500 kW hour battery system powered by 150 kW of solar system to allow the Manu'a islands to reach their self-sufficient 100% renewable energy goal.

What are the environmental & health benefits?

This solar-storage electricity generation system will reduce annual emissions of NO_x by 18.44 tons, fine particulate matter by 3.27 tons, hydrocarbons by 0.52 tons, carbon monoxide by 7.08 tons and carbon dioxide by 1,177 tons. This project reduces approximately 109,500 gallons of diesel fuel annually.

How was this project funded?

EPA provided \$70,715 in DERA grant funds to ASPA to enable the implementation of this project. The Department of Interior awarded ASPA \$927,500 to install the batteries in this microgrid system through their Empowering Insular Communities Program. ASPA provided the remaining funds for this project.

What is the West Coast Collaborative?

The WCC is an ambitious partnership between leaders from federal, state, local and tribal governments, the private sector and environmental groups committed to reduce diesel emissions along the West Coast. The WCC is part of EPA's National Clean Diesel Campaign: www.epa.gov/cleandiesel and www.westcoastcollaborative.org.

How can I find out more information?

Contact martynowicz.trina@epa.gov or visit SolarCity's blog blog.solarcity.com/island-in-the-sun/.