



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 cost effective control strategies.

American Samoa Island Achieving 100% Renewable Energy through Solar & Battery Storage Project

Under the 2016 Diesel Emissions Reduction Act (DERA) Clean Diesel Program, the U.S. Environmental Protection Agency's (EPA) West Coast Collaborative provided a \$70,715 grant to help American Samoa's Ta'u island operate on 100% renewable energy. This grant has helped fund the replacement of a diesel-powered stationary generator with a solar powered battery storage energy system.

What is this project?

EPA's Pacific Southwest Region provided a grant to the American Samoa Power Authority (ASPA), the public utility, to bring 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. Fossil fuel would only be used in emergencies in a backup diesel generator, which EPA specifically funded.

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 in American Samoa. This system includes 342 kilowatts (kW) of solar and 1,085 kW hours of a battery energy storage system. An additional 150 kW solar system and 500 kW hours of battery storage will be added 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 (PM_{2.5}) 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, through the West Coast Collaborative (WCC), 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 reducing 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 to learn more about the system, visit SolarCity's blog at blog.solarcity.com/island-in-the-sun/.