

U.S. Department of Energy Energy Efficiency and Conservation Block Grant Program (EECBG)

The U.S. Department of Energy's (U.S. DOE) Energy Efficiency and Conservation Block Grant (EECBG) Program, funded for the first time by the American Recovery and Reinvestment Act (Recovery Act) of 2009, represents a Presidential priority to deploy the cheapest, cleanest and most reliable energy technologies to local governments across the country. It is intended to assist U.S. cities, counties, states, territories, and Indian tribes to develop, promote, implement, and manage energy efficiency and conservation projects and programs designed to:

- Reduce fossil fuel emissions;
- Reduce the total energy use of the eligible entities;
- Improve energy efficiency in the transportation, building, and other appropriate sectors; and
- Create and retain jobs.

Over \$2.7 billion was allocated for direct EECBG formula grants to more than 2,300 State, local and tribal governments. Each U.S. territory received a grant of \$9.6 million.

Territory of American Samoa

Grant period: 12/28/2009 – 12/27/2012

Total award: \$9,593,500

Payments: \$604,700

The majority of American Samoa's EECBG funding is directed toward performing energy efficiency retrofits on government buildings. Because this is a two-step process with energy audits conducted first, progress has been slow and now 14 months into the award period, the retrofit work has not yet begun. For American Samoa, one of the major impediments to progress has been the length of time required to get procurements for contractors released and awards and other agreements signed.

Activity 1: Energy Efficiency and Conservation Audits (\$189,000)

This activity is funding thorough energy audits of approximately 50 government, non-profit and commercial buildings in order to identify the best candidates for retrofits under Activity 2.

Status: The audits are to be completed in three phases; Phase I and 2 audit reports have been received from the contractor.

Activity 2: Building Retrofits for Energy Efficiency and Conservation (\$7,307,369)

This activity implements the recommendations resulting from the building audits in Activity 1. The retrofit of the American Samoa Environmental Protection Agency (ASEPA) building will serve as a benchmark for the remaining retrofits and, when completed, it will be the first LEEDS certified facility in the South Pacific. Since there are several similar buildings in the same

vicinity, the methods and lessons learned from this first retrofit will be replicated in the neighboring buildings.

Status: The design work for the ASEPA building has been completed. The Request for Proposal (RFP) for the retrofit work resulted in no acceptable proposals and the RFP is being re-released. RFPs for lighting and other efficiency measures based on the Phase I and 2 audit reports have been written and sent to the procurement department.

Activity 3: Upgrade the Building Code: Energy Sections (\$200,000)

This activity will revise the energy section of the American Samoa Building Code.

Status: The Territory Energy Office (TEO) had planned to contract with the State of Hawaii to acquire the services of a specific state employee with expertise in tropical building codes. After almost a year of effort, the arrangement turned out to be unfeasible. The TEO plans to sign a Memorandum of Agreement (MOA) with Pacific Northwest National Labs to provide energy code development support.

Activity 4: Energy Distribution: Increase Energy Efficiency (\$850,000)

A sub-grant to American Samoa Power Authority (ASPA) will fund the installation of a new 13.2 KV feeder line at the Tafuna Power Plant. The existing feeder for the western part of the island is at 85% capacity, which translates into significant energy losses. By splitting the load, energy savings will be accomplished while increasing reliability.

Status: The agreement with ASPA has been signed and work had begun; however, ASPA discovered that the cable in stock for the feeder line was not manufactured in the US and, therefore, construction is on hold until new cable compliant with the ARRA requirement is received.

Activity 5: Financial Incentives for Energy Conservation (canceled by awardee)

Activity 6: Energy Education in American Samoa (\$298,500)

Funding is provided to American Samoa Community College (ASCC) to develop a grassroots effort to increase energy literacy among young Samoans. ASCC will promote energy-related careers and three students will be hired part-time to extend energy awareness into schools. The students will make presentations in the classroom targeting 5th, 10th and 11th graders. A supervisor will also be hired to lead and coordinate the efforts.

Status: The agreement with the ASCC has been signed and work has begun to hire the supervisor and the “energy ambassador” students.

Activity 7: Hybrid Vehicles (canceled by awardee)

Activity 8: Administration (\$748,631)

Funding is provided for project administration and management personnel, supplies and other requirements.

Commonwealth of the Northern Mariana Islands (CNMI)

Grant period: 2/12/2010 – 2/11/2013

Total award: \$9,593,500

Payments: \$0

Prior to 2009, the CNMI Energy Division had an annual budget of approximately \$180K and two employees. The total amount of ARRA funding awarded to the Energy Division by U.S. DOE for the SEP, WAP and EECBG programs exceeds \$30 million. The Energy Division staff has now been increased to 14 personnel with five assigned to the EECBG program. The EECBG program, in particular, has been very challenging due to the large number and complexity of activities selected for the funding.

Activity 1: Residential CFL Exchange Program (\$222,767)

The CNMI Energy Division will conduct a compact fluorescent light (CFL) give-away event once a year on each of the three main CNMI islands. CFLs in a variety of commonly used wattages will be provided to CNMI residents with proof of a utility bill.

Status: An invitation to bid (ITB) for the CFL bulbs resulted in no acceptable bids. It will be re-released in early March. Once a supplier is selected and awarded, it will take 4 - 5 weeks for delivery of the lights.

Activity 2: Residential EnergyStar Appliance Incentive Program (\$113,316)

This activity is modeled after the CNMI State Energy Efficient Appliance Rebate Program (SEEARP). The rebates of up to \$1,400 apply for purchase of up to two air conditioning room units, and/or one refrigerator, and/or one washing machine. The EECBG program requires an existing appliance to be replaced.

Status: This program is being implemented in-house by Energy Division staff. It was launched in October 2010 and over 150 vouchers for appliances have been issued.

Activity 3: Residential Weatherization Incentive Program (\$556,328)

This activity is modeled after the CNMI Weatherization Assistance Program (WAP) but will assist residents that are not covered under the WAP or other incentive programs. The EECBG program includes only replacement of incandescent bulbs with CFL bulbs and replacement of inefficient refrigerators and air conditioners. Energy Division staff will conduct audits on homes to determine which weatherization measures to apply.

Status: This program is being implemented in-house by Energy Division staff. Over 7 homes have been weatherized.

Activity 4: Residential Cool Roof/ Cool Wall Incentive Program (\$770,000)

CNMI residents may apply to receive installation of Cool Roofs worth up to \$2,300 per house. Vendors will provide a Cool Roof estimate to the homeowner and the Energy Office and any costs exceeding the \$2,300 will be paid by the homeowner.

Status: The Energy Division is waiting for the results of the Government Building Cool Roof Program ITB before finalizing the ITB for this program.

Activity 5: Energy Division Office Building Retrofit (canceled by awardee)

Activity 6: Government Building Cool Roof Program (\$220,000)

This activity involves installation of Cool Roof reflective materials on 15 government-owned buildings on the main island of Saipan.

Status: The ITB for Cool Roof vendors was expected to be released by the end of February, 2011.

Activity 7: Residential Recycling Program (\$485,640)

This activity involves development and establishment of a residential recycling program for the main island of Saipan. Materials to be recycled will include paper, cardboard, aluminum cans, plastic bottles and containers. The development includes collection routes for commercial franchising, establishment of collection fee structures, and marketing of recycled materials. This effort involves obtaining appropriate approvals, permits, registrations, and other necessary administrative paperwork under CNMI law. Informational brochures as well as collection bins will be provided to residents.

Status: The ITB for the recycling collection bins is expected to be released by the end of February 2011.

Activity 8: Grinder for Debris Reuse Program (\$750,000)

A horizontal or tub grinder will be purchased and installed at the Marpi Landfill Facility on Saipan for grinding both construction and demolition (C&D) materials and wood waste. The intent of the grinder is to reroute debris from the Marpi landfill (prolonging the useful life of the landfill), and to generate materials that may be recycled and/or reused in landscaping projects throughout CNMI.

Status: An RFP for the grinder has been released twice but no acceptable bids were received. It will be re-released a third time in early March 2011.

Activity 9: Waste Characterization and WTE Feasibility Study (\$220,000)

This activity involves waste characterization at the Marpi landfill facility on Saipan to determine potential BTU capacity of incoming waste and conducting a waste-to-energy (WTE) feasibility study to include determination of facility size and type (e.g., incinerator), with associated cost estimate and identification of necessary permits, approvals, and other regulatory requirements.

Status: An RFP for the study was released and closed but only two widely varying proposals were received. CNMI is unclear how they will proceed with this activity.

Activity 10: WTE Facility Installation (canceled by awardee due to long timeframe required for project completion)

Activity 11: Solar Panel Systems for Government Buildings (\$719,938)

Solar photovoltaic (PV) systems will be installed on the roofs of approximately 12 government owned buildings on the main CNMI islands of Saipan, Rota and Tinian. Eligible government-owned buildings will be selected based on the structural ability to support a solar PV system, history of fuel use and/or energy bills, and location/visibility within the community to promote renewable energy education.

Status: The ITB for the PV systems was being finalized in January and is expected to be released by the end of February 2011.

Activity 12: Solar Powered Composite Samplers (canceled by awardee)

Activity 13: Administration (\$879,511)

Funding for project administration and management personnel, supplies and other administrative requirements.

Activity 14: Commonwealth Utility Commission (CUC) Power Plant Retrofits (\$4,656,000)

CUC power plant #1 will be retrofitted with radiator replacements, engine rebuilds and replacement of engine mechanical governors with high speed electronic governors. With these planned upgrades, CUC will be able to operate fewer engines to supply the same loads which will result in huge energy savings.

Status: This is a new activity being added with the award modification now in process. A NEPA determination of categorical exclusion has been received for this activity. An ITB is being drafted for purchase of new radiators.

Territory of Guam

Grant period: 3/19/2010 – 3/18/2013

Total award: \$9,593,500

Payments: \$39,827

This grant to the Guam Energy Office (GEO) was awarded in March 2010 with 90% of the funding conditioned, due to the fact that no projects for expenditure of the funding had been finalized. An award modification adding approved projects was completed in July 2010.

Activity 1: Administration, Project Management and Internal Implementation (\$493,798)

Funding for project administration and management personnel, supplies and other administrative and implementation requirements.

Activity 2: Community Education & Outreach (\$500,000)

The University of Guam will work with island schools and other educational and outreach organizations to increase energy awareness and promote future conservation of resources. The goal is to increase energy literacy in Guam communities through education and energy awareness activities. Workshops, training and education outreach to schools at all levels will be focused on energy conservation practices in the home and community as a means to reduce the high cost of energy bills as well as the high impact on the environment due to reliance on imported petroleum fuel.

Status: The memorandum of understanding (MOU) to pass the funding to the University of Guam had received most of the required signatures within the Guam government when Governor Eddie Calvo took office in early January. Because of the change in personnel in the new administration, the MOU must be resigned by new signatories. The new target date for finalizing the MOU is now Feb. 28th.

Activity 3: Financial Incentives for Building Improvements (\$1,368,150)

Funding is being made available to five non-profit organizations for the purpose of improving their buildings with energy efficiency technologies to reduce energy consumption and provide significant dollar savings that could be redirected for other necessities.

Status: The MOU to pass the funding to one of the five non-profits was completed before the change in administration so that project should be in process. The other four MOUs had to be rerouted for new signatures and one has been completed. The new target date for finalizing the three remaining MOUs is Feb. 28th.

Activity 4: LED & other Energy Efficient Lighting (\$2,566,000)

Guam will replace old metal halide and high pressure sodium light bulbs along highway and major suburban roadways with energy saving LED (Light Emitting Diode modules) lights.

Status: The original intent was to sign an Energy Savings Performance Contract (ESPC) with an Energy Service Company (ESCO) to perform the streetlight retrofits. However, it was

discovered that the Guam Power Authority (GPA) had planned to perform the same retrofit with its own ARRA funding. Since GPA already had a contract in place for the work to be performed, the GEO decided to pass the funding to GPA to pay for the retrofit with EECBG funds. This arrangement will accelerate progress on the project since passing the funding to GPA through an MOU will be much more expedient than releasing a new RFP to select an ESCO.

Activity 5: Guam Residential Energy Performance Score (\$700,000)

A contractor experienced in the management of Energy Performance Score programs will be hired to evaluate the energy performance and associated carbon emissions of single-family and small multi-family dwellings.

Status: An RFP was released at the end of December 2010 and a contractor selection will hopefully be made shortly.

Activity 6: Retrofitting Public Facilities (\$2,500,000)

Comprehensive energy use and savings analyses will be performed by one or more energy services companies (ESCO) at designated public facilities such as schools, housing, community centers, and other government facilities to identify and implement energy efficiency building retrofits.

Status: The primary focus of this effort was Guam schools with one school in particular identified as needing significant work. However, it was discovered that the Guam Department of Education had already conducted energy audits of their schools with the intent of performing needed retrofits with their ARRA funding. The GEO is now having discussions with the Guam Airport Authority to pass funding to them for the purpose of retrofitting air conditioning and/or exterior lighting at the airport.

Activity 7: Resource Conservation Manager Program (\$1,000,000)

The Resource Conservation Manager (RCM) program will include hiring 6-10 RCMs to assist in bringing about reductions in government expenditures for energy, water, fuel oil, solid waste disposal, and other utilities. The Resource Conservation Managers will be responsible for improved energy use practices, detailed auditing of utility billings and services, and the installation and use of resource management equipment at a designated agency or group of agencies.

Status: Negotiations for an MOU with Washington State University are underway.

Activity 8: Sustainable Development Forward (\$465,552)

The GEO will contract with energy consulting companies, engineers, and/or other energy professionals to assist in the development of: 1) Energy Saving Guidance for Households; and 2) database to evaluate savings estimates for residential and commercial facilities.

Status: The definition of this activity is shifting. The new proposal is to contract with the National Renewable Energy Laboratory (NREL) to assist Guam in developing an overall energy plan for the island.

U.S Virgin Islands

Grant Period: 9/28/2009- 9/27/2012

Total Award: \$9,593,500

Payments: \$1,176,554

Activity 1: Virgin Islands Water and Power Authority Street Lighting System Upgrade (\$2,500,000)

The first is a street lighting system upgrade being carried out by the Virgin Islands Water and Power Authority with a budget of \$2,500,000. This project aims to replace nearly 1,000 conventional high pressure sodium street lights with LED street lights. The LED lights last twice as long and use less than half as much energy as the high pressure sodium lights. In addition to the light replacement, VIWAPA will also install a lighting management system that will allow them to monitor and track the operation of every light in their entire network. This system will greatly reduce the time needed to respond to problems and will increase the overall system efficiency.

Status: To date approximately 140 bulbs have already been replaced.

Activity 2: Landfill Gas to Energy Project (\$3,014,046)

The next project is a landfill gas to energy conversion project being carried out by the Virgin Islands Waste Management Authority with a budget of \$3,014,046. This project is exciting because it simultaneously prevents the release of methane, a greenhouse gas much more potent than carbon dioxide, into the atmosphere and generates electricity to power Commonwealth facilities. Currently methane gas collection wells and manifolds are being constructed under an EPA grant at the Bovoni Landfill on St. Thomas. EECBG funds will be used to purchase equipment to collect, treat, and burn this gas in order to create electricity. Power generated will be used at the adjacent Mangrove Lagoon Waste Water Treatment Plant, and any excess power will be fed into the grid.

Status: At this time a company has been selected to design and install the gas collection and electricity generation systems, they should be under contract shortly and design drawings will be produced within the next few months.

Activity 3: Airport PV Energy Installation (\$2,949,000)

The third project is the installation of a solar array being carried out by the Virgin Islands Port Authority with a budget of \$2,949,000. A 335 kW array will be installed adjacent to the main runway at Cyril E. King airport on St. Thomas. The power produced will be used at the airport to reduce their grid demand, and the high visibility of the array will emphasize the USVI commitment to renewable energy.

Status: At this time a company is under contract to design, procure, and install the panels. Design drawings are nearing completion and installation is expected by late spring.

Activity 4: LED Traffic Signal Light Retrofit Program (\$964,955)

The fourth project is a traffic signal light retrofit program being carried out by the Virgin Islands Department of Public Works with a budget of \$964,955. The VIDPW will replace incandescent light bulbs at 56 traffic signalized locations to LED signal lights and upgrade existing high pressure sodium lights to LED lights in those intersections. This represents all signalized intersections on St. Thomas and St. Croix. The benefits of LED lights over high pressure sodium lights were mentioned previously. The efficiency gain is even more dramatic when considering LED traffic signals, which use less than 20% of the energy of conventional incandescent signal lights. In addition to this, the VIDPW will also install solar powered lights in 10 bus shelters on St. Thomas and St. Croix. These lights will replace currently installed ineffective grid powered lights, increase passenger safety, and allow bus operators to see waiting commuters at night.

Status: The VIDPW is currently in the procurement phase with regards to the LED lights. Currently 9 bus shelters have been identified for installation of lights, which should begin shortly.

Activity 5: Government Energy Demand Reduction Program/ Comprehensive Energy Action Plan (\$165,499)

The last project is the drafting of a plan for the Government of the Virgin Islands' energy demand reduction initiatives being carried out by the VI SEO with a budget of \$165,499. Through this effort the USVI will measure energy consumption in an effort to find areas for potential reductions, implement energy efficient procurement standards and building codes, and promote the use of energy service companies to finance energy efficient and renewable energy projects. In addition, the USVI will continue their ongoing comprehensive energy planning efforts through the development of an action plan to implement the Virgin Islands Energy Strategy, a document that encompasses many different aspects of the energy demands of the Islands.

Status: The SEO met with other EDIN members to discuss ways to meet their goals, set up an Energy Alliance, and started signing contracts with ESCOs.