

U.S. Department of Energy State Energy Program (SEP)

The State Energy Program (SEP) is a 30-year-old program administered by the U.S. Department of Energy (DOE) that provides resources directly to the States and Territories for energy efficiency and renewable energy. Funded at \$3.1 billion under the 2009 American Recovery and Reinvestment Act, SEP provides financial and technical assistance through formula and competitive grants. As outlined under the Recovery Act, SEP aims to:

- Increase energy efficiency to reduce energy costs and consumption for consumers, businesses and government;
- Reduce reliance on imported energy;
- Improve the reliability of electricity and fuel supply and the delivery of energy services;
- Reduce the impacts of energy production and use on the environment.

Under SEP, states use their grants, along with 20% matching funds (there is no match required for the Territories) and leveraged resources, to develop strategies, set goals and manage a variety of programs geared to address energy priorities by promoting the adoption of energy efficiency and renewable energy technologies. The program emphasizes the state's role as decision-maker and administrator for the individual activities, recognizing that state energy offices are a vital resource for delivering energy benefits, addressing national energy goals, and coordinating energy-related emergency preparedness across the nation.

Territory of American Samoa

Grant period: April 24, 2009 to April 30, 2012

Total award: \$18,550,000

Obligated: \$18,350,000 (99%)

Payments: \$8,628,912 (46.5%)

Electric Power and Renewable Energy: (\$16,844,500)

Objective: Offset nearly 10% of existing installed electricity generation capability through the installation and operation of one utility-scale PV project, one distributed PV effort on multiple government buildings, one solar hot water installation, and energy efficiency improvements to existing diesel engines.

Status of Projects: All contracts have been awarded and the following four projects are underway:

- Utility Intertie 1 MW PV Array Grid Connected: PV panels will be installed at the American Samoa Airport which is near the Tafuna Power Station. The PV array will be operated and maintained by the American Samoa Power Authority. ASAP has put out the solicitation for the PV array, which will close on March 7, 2011.

- Distributed Roof-Mounted Grid Intertie PV Arrays: An estimated 19 PV systems to be installed on the roof of Government and other buildings using net-metering. Total systems installed to date are fourteen. The 17th system is being installed; to date 175 kW of PV have been installed and brought on-line.
- Diesel-Organic Cogeneration Power Cycle: Rankine Cycle waste heat from diesel generators to generate electricity while reducing diesel oil usage. Expected reduction of carbon emission is 3% of total emission per year. The RFP for the project closed February 28, 2011.
- LBJ Tropical Medical Center Solar Water Heater: Installation of a solar water heating system designed for available 3,000 gallons-per-day at 140 degrees F. The solar water heating system is estimated to save 16 gallons of diesel fuel per day.

Policy Planning and Energy Security: (\$1,501,881)

Objective: Assess potential wind sites to provide information for future investment in wind technology options for electricity generation and contribute to American Samoa's goal of 10% renewable energy resources.

Status of Projects: American Samoa Power Authority is the sub-recipient of this project which will include the following actions:

- Purchase and installation of anemometry equipment at selected sites of Tula and Aunu'u (Project involves the installation of eight anemometers). The anemometers have been purchased, but not received. They will be installed at eleven sites.
- Documentation of wind speed and direction for one year and analyze results for potential turbine installation. Project involves the installation of eight anemometers (four in each location).

Supplementing Weatherization: (\$203,619)

Objective: American Samoa received funding from the Weatherization Assistance Program for the first time in 2009. Funding will be used to supplement the Weatherization Assistance funding in order to offer weatherization services to more eligible households.

Status of Project: The project will begin this spring. The ARRA/SEP funding will be used to provide solar water heaters to approximately 32 low income weatherization customers. This project will begin in the March/April time frame.

Commonwealth of the Northern Mariana Islands

Grant period: April 24, 2009 to April 30, 2012

Total award: \$18,651,000

Obligated: \$12,648,986 (68%)

Payments: \$5,896,921 (31.6%)

Buildings: (\$7,520,000)

Objective: Meet with CNMI Government agencies to recommend energy efficiency products and to implement energy efficiency measures in government facilities.

Status of Projects: The following projects are underway:

- Energy Efficiency Retrofits Government Buildings and Parking Lots: \$2,620,000
 - Retrofit existing parking lights to LED – government parking lots in Saipan, Tinian and Rota. Materials for Saipan and Tinian have arrived and will be installed early March.
 - Solar Power School Zone Flashers in Saipan and Tinian
 - Solar Powered Crosswalks – Saipan
 - Energy Efficient Air Conditioner Retrofits at Legislature and Judicial Buildings in Saipan. The project at the Legislature is complete, waiting inspection, and the Judicial Building unit is scheduled for the first week of March.
 - Energy Star Window Tinting at Government Health Centers – Saipan, Rota, and Tinian. The project on Saipan is complete.
 - Lighting Retrofit to replace T12 and T8; magnetic to electronic ballasts at Public Library, Commonwealth Health Center and Legislature – Saipan. The lighting at the Library has been completed.
- Energy Efficiency Retrofits at Commonwealth Utilities Corporation (CUC): \$4,900,000
 - Retrofit of Existing Streetlights to LED in Saipan, Rota and Tinian
 - Reclaiming Used Oil for Generator Fuel to Reduce Consumption of Diesel Fuel
 - Upgrade Lube Oil Centrifuge Machines to More Efficient Models
 - Upgrade Power Plant 1 Diesel Engine Turbochargers. The first set of turbochargers will be installed the first week of March.

Energy Education: (\$1,027,295)

Objective: To print, purchase and distribute current energy publications and other resource energy efficiency related materials to target audiences at workshops, schools, and organizations in order to increase energy awareness and education around Energy Efficiency concepts.

Status of Projects: The ARRA/SEP funding will be used for:

- Energy Star Awareness promotional campaign which purchases and distributes the Energy Take Action Kit with the compact fluorescent light bulbs (CFLs) and other energy efficient kits.
- Energy Code and Other Energy-Related Training: Off-Island consultants will be hired to train the new employees as well as key government and private industry employees in charge of building and other energy efficiency retrofits.
- Participation in school activities and school presentations.
- Maintenance of Energy Resource Center with current energy technology information.
- Energy Education is an on-going project. Several activities are complete, others are still in the planning stages.

Policy and Planning: (\$3,453,705)

Objective: Meet with policy and executive individuals to address energy conservation measures and encourage the development of policies and regulations on energy conservation.

Status of Projects: The ARRA/SEP funding will be used for:

- CNMI Energy Efficiency and Conservation Program - The program will provide on-site energy audits, analysis, and recommendations for energy conservation, efficiency improvements, and costs reduction measures, plus easy direct install measures at audited buildings.
- Grants Management/Grant Administration - A consultant will assist the staff to plan, organize, and manage the projects, and will develop appropriate metrics for measuring effectiveness and assist with all aspects of Recovery Act grants management.
- CNMI Renewable Energy Assessments and Energy Action Plan - Support the planning process by enlisting consultant services to support the Energy Planning Working Group's general activities and a series of feasibility studies.
- Commonwealth Utilities Corporation – Support a full Energy Audit and Assessment of all CUC Facilities. The assessment will evaluate energy performance associated with power generation and distribution, drinking water treatment and distribution, and wastewater collection and treatment.
- All activities are on-going.

Renewable: (\$6,650,000)

Objective: Develop programs that promote wind, solar geothermal, biomass and hydrogen as renewable energy sources in order to reduce energy consumption and to ensure reliability through renewable energy resources

Status of Projects: The ARRA/SEP funding will be used for:

- Green Energy Schools Projects at the Public School System for the installation of the full grid tie-in of solar photovoltaic arrays and a multiple wind generation facility capable of producing in excess of 120 kw of renewable energy. These will be installed at Saipan

Southern High School, Koberville Elementary School, Garapan Elementary School, Gregorio T Camacho Elementary, Kagman High School, Cha Cha Oceanview Junior High, Tinian Junior/High School, Rota Sinapalo Elementary School, Rota High School and Tinian Elementary School. Type of renewable installations will be determined for each school based on assessments.

- Materials are arriving on Island and inspections are underway on all three sites. Design and installation have been approved by the Construction Manager.
- Renewable Energy Demonstration at the Resource Information Center: Solar panels and a wind turbine will be installed at the Center to educate visitors. The installation of the wind generator was started the week February 21, 2011.

Territory of Guam

Grant period: April 24, 2009 to April 30, 2012

Total award: \$19,098,000

Obligations: \$15,386,373 (81%)

Payments: \$3,734,081 (19.6%)

Retrofit Public Buildings: (\$15,237,434)

Objective: Perform energy audits on public buildings, public housing, parks, community recreational centers, public medical facilities and public schools and retrofit facilities with recommended energy efficiency measures and technologies from the completed audits.

Status of Projects: The ARRA/SEP funding will be used for:

- Contractors who will conduct energy audits of selected Government of Guam agencies and issue recommendations.
- Implementation of recommendation of audits. Planning and execution of procurement to perform retrofits of projects.
- Audits for 26 buildings have been a completed on the public buildings and the retrofits are proceeding.
- MonitorMonitoring energy savings in buildings after consumption of retrofits.
- Sharing lessons-learned and success stories to retrofit projects.
- Sharing success stories of power consumption reduction.
- Conducting presentations at schools and village communities
- Holding energy and environment competitions for students
- Update website

Island Center for Sustainable Future: (\$455,323)

Objective: Work with the Micronesian Center for Sustainability at the University of Guam to coordinate sustainable energy development strategies and programs on shared knowledge and

cooperation and ensure all renewable energy, energy efficiency and alternative transportation fuel programs are coordinated effectively between local and Federal agencies.

Status of Projects: The ARRA/SEP funding will be used to:

- Establish an MOU between agency and UOG/Island Center for Sustainable Future
- Develop and coordinate the Pacific Islands Regional Integrated Sustainable Council to address climate change planning, regional energy strategic plans, etc.
- Plan, develop and implement communications portal to provide network of renewable and environmental energy activity (i.e., waste management and recycling)
- Establish task force, headed by Guam Energy Office, to include participation from all major energy end-users.
- Seek technical assistance and support from National Association of State Energy Officials, US DOE National Laboratories, and other entities to assist in the development of Strategies and Priorities for Sustainability through energy efficiency and a clean environment.
- The Memorandum of Understanding with the University of Guam is being drafted for review.

Promoting Guam's Building Code: (\$385,323)

Objective: Provide training and technical assistance to building owners, developers, architects and building code officials to ensure new and renovated buildings are designed and built with high efficiency measures. Adopt the Tropical Energy Code and refine Guam's Energy Building Codes to the equivalency to the International Energy Conservation Code for Residential Buildings and ASHRA Standard 90.1-2007 for commercial buildings.

Status of Projects: The ARRA/SEP funding will be used to:

- Hold meetings with Department of Public Works and building industries.
- Hold workshops and trainings for architects, engineers, contractors, and others.
- Hold training for building inspectors to ensure compliance of the code is met.
- Hold public hearings to adopt Model Tropical Energy Code and have Model Tropical Energy Code become law.
- Provide code awareness through media outlets and walk-thru website program.
- Attend Energy Code trainings and national code conferences abroad to obtain the latest information and lessons learned/success stories by other states.
- Building Codes training was held in mid-February.

Procure and Light Right, GovGuam!: (\$355,323)

Objective: Develop lighting standards that require energy efficient lamps, ballasts, reflectors and other commercial devices to be available for public buildings.

Status of Projects: The ARRA/SEP funding will be used to:

- Develop lighting efficiency standards
- Develop procurement regulations
- Print Procurement manuals and distribute for government use
- Train public officials from design to installation
- Establish lighting efficiency standards through policy or regulations
- Install new lighting efficiency and meters at pilot building project which will showcase data of savings and kilowatts reduction
- Demonstrate new lighting efficiency in one building versus another without lighting efficiency
- A Memorandum of Understanding is currently being developed.

Appliance Rebate: (\$203,535)

Objective: Use ARRA/SEP funds to supplement existing Appliance Rebate Program, providing financial assistance to more consumers for the replacement of old appliances with Energy Star energy efficient appliances.

N.B. The Appliance Rebate Program is being reviewed and may be adjusted due a slow response from consumers.

Administration: (\$1,550,416)

Objective: To implement project activities within projected timelines.

Status of Projects: The ARRA/SEP funding will be used to:

- Hire new staff to implement project activities.
- Provide training to existing staff with basic operations skills to track data and maintain critical records on project activities.
- Provide services to assist with office operations and project implementation.
- Collect information from Department of Administration when monitoring expenditures.
- Prepare and compile reports to Governor, Legislature and USDOE.
- On-going activity.

Outreach to Conserve and Be Efficient: (\$910,646)

Objective: Print, purchase and distribute current energy publications and other resource energy efficiency related materials to target audiences at workshops, schools, energy expos and Energy Month Activities to increase energy awareness.

Status of Projects: The ARRA/SEP funding will be used to:

- Develop and disseminate newsletters, informational brochures, fact sheets, etc.
- Develop ads and advertise in electronic media.
- Hold conferences, expos, Earth Day activities, and information booths at other events.

- On-going activity.

US Virgin Islands

Grant period: April 23, 2009 to April 30, 2012

Total award: \$20,678,000

Obligated: \$17,385,389

Payments: \$5,916,841 (28.6%)

Administrative Program Support: (\$1,171,267)

Objective: To provide funding to VIEO to hire additional staff for programmatic and financial management, as well as for conducting reporting, monitoring and compliance activities.

Discretionary Grant Program: (\$1,000,000)

Objective: This project provides grants to schools and non-profits through a competitive process for a range of activities including building retrofits, energy education and outreach, and renewable energy projects.

Status of Projects: To date seventeen applications have been approved; additional projects are pending. Projects which have been awarded include: St. Croix Foundation, St. Croix Country Day School, Pistarckle Theater, St. Thomas Humane Society, Virgin Islands Environmental Resource Station, Nana Baby Home, Montessori School, St. Croix Animal Shelter, St. Thomas Reform Church, UVI—Community Education Lifelong Learning

Energy Alliance Incentive Program: (\$9,500,000)

Objective: ARRA funding will be used to provide grants to USVI government agencies to implement energy projects under a master ESPC contract vehicle immediately; this can be done quickly within the authority of the VIEO. The initial work done by the ESCOs will be converted into final proposals with competitive bids from their contractors. Task orders can then be written under the MESA to allow work to commence under a condensed timeframe and shorten the procurement process. The proposal review and award process will follow Federal Energy Management Program (FEMP) guidelines established for the Federal ESPC process, including an Independent Government Estimate (IGE) to establish price reasonableness for the work proposed.

Status of Projects: At present, the proposed work includes energy and water efficiency upgrades at 11 schools on St. Thomas and St. Croix including: Cancryn JHS, Benjamin Oliver ES, Bochulte JHS, Bowsky ES, Charlotte Amalie HS, Ken HS, Lockhart ES, Christian JHS, Woodson JHS, Lew Muckle ES, Central HS.

Energy Star Appliance Rebate: (\$1,000,000)

Objective: Incentivize the purchase of energy efficient appliance within the community. This rebate program conforms to the SEEARP guidelines for energy efficient appliance rebates and has provided over 2000 cash payments to local residents for the purchase of appliances which both stimulate the local economy and reduce energy consumption.

Hybrid and Electric Vehicle Rebate Program: (\$260,000)

Objective: This program provides cash rebates to local residents for the purchase of hybrid and electric, as well as other highly fuel efficient, vehicles to incentivize the purchase of energy efficient vehicles.

Public Education Outreach: (\$356,733)

Objective: This market title provides funding for the VIEO to advertise its ARRA programs through local media sources, including newspaper, television, and radio. In addition, it supports the VIEO's presence in the community through the production of informational videos and testimonials as well as maintaining a presence at local events.

Renewable Energy Rebate Program: (\$2,540,000)

Objective: This program has provided over 100 rebates to local residents for the installation of solar photovoltaic systems, solar thermal hot water systems, and small wind turbines. The program aims to incentivize the purchase and installation of renewable energy systems which reduce the demand on imported fuel oil for base load generation.

Solar Thermal in Moderate Housing Communities: (\$600,000)

Objective: This program provides funding for the installation of solar hot water systems in moderate income publicly-owned housing units.

Status of Projects:

To date, five have been installed and work is ongoing for additional installations.

Solar Thermal Installers Training Program: (\$300,000)

Objective: The Solar Thermal Installers Training Program is intended to provide vocational training to both students and tradesmen to become certified solar thermal installers. On St. Croix, this training is conducted at the St. Croix Technical Education Center.

Status of Projects: The program consists of three different modules: the first is a core curriculum in basic construction principles, safety, and business leading to an NCCER

certificate. The second component is an online solar thermal installation course run and certified by Sun Pirate Inc, (an IREC and NABCEP certified training program). The third and final component is a hands-on "laboratory session" involving the construction of several different model and configurations of solar thermal systems. To date, there have been two sessions on St. Thomas and two sessions on St. Croix which have certified 48 people, several of whom are currently employed as installers in the Virgin Islands.

Solar Thermal Revolving Loan Program: (\$3,500,000)

Objectives: To provide homeowners with an affordable means to reduce both their energy costs from heating water, and dependence on imported fuel oil through a Solar Thermal Revolving Loan Program.

Status of Projects: The Solar Thermal Revolving Loan Fund is combined with the Renewable Energy Rebate Program to create an innovative program for financing residential solar thermal systems. The loan is capped at \$3,500 and can provide up to 50% of the installed cost of the system. In addition, a rebate for up to \$2,500 (not to exceed 50% of the total installed cost of the system) is available to offset the remainder of the system. The average cost of a residential solar thermal system is \$4,500. The loan is recovered through on-bill financing by the Virgin Islands Water and Power Authority (WAPA) and the loan is processed and issued through the VI Economic Development Authority (EDA). This program is notable because 1) it allows homeowners to avoid the high up-front cost associated with the more efficient technology, and 2) due to the high cost of electricity (\$0.33/kWh), the investment is generally expected to be cash-flow positive as the savings are greater than the monthly payment.

Tropical Energy Code Implementation: (\$250,000)

Objective: To bring Virgin Islands energy codes up to date, increase applicability, and improve compliance.

Status of Projects: The first focus of this market title is to adapt IECC 2009 energy codes for the specific climate of the Virgin Islands. The second is to provide education and training for building code inspectors in order to increase rates of compliance and the capacity to enforce existing codes.

Wind Resource Data Mapping Program: (\$200,000)

Objective: This project funds a professional services contract with WeatherFlow Inc. for the temporary installation of towers and anemometers to characterize wind resources and several sites throughout the Virgin Islands. The improved wind data can be used to inform future decisions regarding wind energy development.

