

## GSEII BACKGROUND

Small Island Developing States (SIDS) produce only a tiny fraction of global greenhouse gas emissions. However, their location makes them extremely vulnerable to the effects of climate change, such as sea level rise and extreme weather conditions.

SIDS also face unique challenges associated with the generation and use of energy since they depend almost exclusively on imported fossil fuels for their energy needs. This leaves these countries vulnerable to the volatility of international oil prices and results in tremendous strain on capital for imports and high costs for businesses and consumers.

The goal of the Global Sustainable Energy Island Initiative (GSEII) is to promote and support the efforts of SIDS to move toward more sustainable energy development based on environmentally sound renewable energy technologies and greater energy efficiency. The size of the islands makes them a viable starting point for the implementation of such policies and technologies that can then be reproduced elsewhere on a larger scale as demonstrations of sustainable development.

GSEII is a consortium of international NGOs and multi-lateral institutions coordinated by the Climate Institute (CI) to meet the above goals. Besides CI, the major partners are the Organization of American States (OAS) and the Energy and Security Group (ESG). The impetus for GSEII came from a 1998 request from the Chairman of the Alliance of Small Island States (AOSIS) to CI for assistance in implementing the provisions of the 1994 Barbados Conference on the Sustainable Development of SIDS.

Initial funding for GSEII was received from the Rockefeller Brothers Fund and from the UN Foundation (as administered by the U.N. Industrial Development Organization (UNIDO)). From 2001 to July 2009, approximately \$1 million have been spent in nine island nations for the preparation of national and sustainable energy plans, bio-fuel feasibility studies, energy-efficient lighting and training courses and renewable energy projects (wind, geothermal).

GSEII partners also work independently on projects that extend beyond the scope and scale of GSEII initiatives. They often coordinate their activities with other programs and regional organizations and carry out further activities to achieve goals of strong social, economic, and environmental improvements on SIDS.

## GSEII OBJECTIVES

*Toward energy independence, reduced greenhouse gas emissions, and socio-economic development*

- Assist SIDS to develop and implement national Sustainable Energy Plans.
- Build local capacity for, and reduce obstacles to, clean energy and energy efficiency projects.
- Increase international awareness of SIDS to influence global climate change mitigation.

## GSEII Consortium Members:

Climate Institute  
www.climate.org

United Nations Industrial  
Development  
Organization (UNIDO)  
www.unido.org

Alliance of Small Island  
States (AOSIS)  
www.aosis.org

Climate Care  
www.jpmorganclimatecare.com

Energy and Security Group (ESG)  
www.energyandsecuritygroup.org

Counterpart  
International  
www.counterpart.org

Organization of  
American States (OAS)  
www.oas.org

## GSEII Donors:

United Nations  
Foundation

Rockefeller Brothers  
Fund

Government of Italy  
Government of Austria

US Agency for  
International  
Development

Renewable Energy and  
Energy Efficiency  
Partnership

US Department of  
Energy

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CLIMATE INSTITUTE



Energy and Security Group



Organization of  
American States



# Global Sustainable Energy Islands Initiative

Power =  $0.01328D^2V^3$

77m

1.5 MW

10.1 - 20.4 rpm

85m

A Global Consortium working toward  
Energy Sustainability in Small  
Island Developing States

# GSEII in the Caribbean

Antigua & Barbuda, Bahamas, Dominica, Grenada, St. Kitts & Nevis,  
St. Lucia, St. Vincent & the Grenadines

## SUSTAINABLE ENERGY PLANS

### & NATIONAL ENERGY POLICIES

In conjunction with the Organization of American States, GSEII has been working with governments from all seven GSEII Caribbean nations and others not associated with GSEII to formulate both national energy policies (NEP) and sustainable energy plans (SEP). In 2008, the OAS renewed this commitment by launching the Caribbean Sustainable Energy Project (CSEP). Specifically, the objective of CSEP and NEP/SEP projects is to address market conditions for the development and use of renewable energy and energy efficiency systems by mitigating the barriers to their use. Thus far, a NEP has been adopted in St. Lucia, Grenada, and St. Vincent and the Grenadines.



## WIND ENERGY PROJECTS

- **St. Lucia:** while a LUCELEC wind farm at Point de Caille was abandoned after the proposed spot was purchased by the hospitality industry, GSEII continues to study future potential for wind farms on St. Lucia.
- **St. Kitts & Nevis:** OAS worked with supporting organizations to consider the potential for wind projects on Nevis. OAS then verified a wind resource assessment for the proposed site. As of May 2009, negotiations are underway for a 1.1 MW wind farm to be commissioned in 2010.
- **Dominica:** The potential for a 4.4 MW wind farm is being studied.
- **Grenada:** GSEII is examining the potential for a wind turbine on Carriacou Island.

## GEOTHERMAL ENERGY PROJECTS

- **St. Kitts & Nevis:** A Geo-Caraibes Project feasibility study and West Indies Power, Ltd. exploratory drilling found potential for geothermal sites to power the islands. GSEII drafted a 25-year Power Purchase Agreement between the Nevis Island Authority and a private developer for a 10 MW electric power station.
- **Dominica:** After an OAS feasibility study determined potential for geothermal energy on Dominica, GSEII helped the nation obtain EU funding for geothermal related renewable energy building. A three year 5 million euro geothermal resource development program is underway.
- **St. Lucia:** OAS is in the process of conducting a feasibility study on the development of an 100 MW electric power station.



## ENERGY EFFICIENT LIGHTING PROJECTS

- **St. Lucia:** The Climate Institute, Climate Care of UK, and the St. Lucian government launched the program during Energy Awareness week. Over 6000 bulbs were distributed.
- **Dominica:** The Climate Institute, Climate Care of UK, and the University of Vermont installed over 5,200 energy efficient lights in rural areas.
- **Grenada:** 10,000 energy efficient bulbs were scheduled to be installed in 2005.

# GSEII in the Pacific

Fiji  
Marshall Islands

## FIJI

- GSEII investigated potential for coconuts to serve as an energy source on Fiji and the Marshall Islands. Tests are being conducted on a coconut methyl ester fuel additive.
- GSEII is working with Fiji government toward goal of 100% renewable energy.

## MARSHALL ISLANDS

- 10,000 energy efficient light bulbs donated by Climate Care (UK) were installed in May 2008 to mitigate use of energy and decrease energy bill costs.
- GSEII is working with the government toward development of a Sustainable Energy Plan and a National Energy Policy.
- In Spring 2007, Actions for the Development of the Marshall Island Renewable Energy (ADMIRE) was launched with plans to light up the Marshall Islands sustainably by 2010.
- In Fall 2006, the Outer Island Electrification Project was launched, giving access to solar homes to Namorik Island and Mejit Island. Solar electrification was completed with assistance from EU, the Republic of China and the US.



## TRAINING & OUTREACH

A major part of GSEII's work to build local capacity for renewable energy and energy efficiency and to increase international awareness, GSEII has hosted around 20 training and outreach events in the Pacific, Indian, and Caribbean regions.

- Pacific Power Authority (PPA) with the e8: creating, operating and maintaining renewable energy. Also, demand side management and energy efficiency trainings.
- CARILEC annual engineers conference: CDM trainings and renewable energy and efficiency education sessions.
- Side events at multiple UNFCCC COP meetings.
- Side events at the international meeting in Mauritius on SIDS as examples of sustainable development.
- Many more!