



SIDS DOCK SUPPORT PROGRAM

Supporting Resilient, Sustainable Energy Sectors in
Small Island Developing States



Most small island developing states (SIDS) are highly dependent on imported petroleum products to meet their energy needs, including electricity. This has a number of impacts: high and often rising costs for electricity, vulnerability to oil price shocks, and supply interruptions. Many SIDS are now looking to transition to more sustainable energy systems, where improved energy efficiency and renewable energy play an increasingly important role.

Despite their significant renewable energy resource potential—solar, wind, ocean, geothermal, and biomass—many SIDS are limited by the existing infrastructure and capacity and capital for the development of such resources.

To help meet this transition challenge, the [SIDS DOCK Support Program](#) was launched by the World Bank's Energy Sector Management Assistance Program ([ESMAP](#)) with funding from the governments of Denmark (US\$7 million) and Japan (US\$15 million). The US\$22 million program is designed to help the transform the energy sectors in SIDS by focusing on two principal outcomes:

1. Creation of an enabling operational, legal, and institutional environment to implement renewable energy and energy efficiency policy reforms based on international best practices, and
2. Implementation of renewable energy and energy efficiency initiatives for potential scale-up through climate finance and other sources of funding.

To achieve these outcomes, ESMAP provides grants to SIDS DOCK member states to support analytical and advisory activities, as well as some investments, for renewable energy and energy efficiency initiatives. In the first phase of the program, six clean energy activities focused on creating the enabling environment for renewable energy and energy efficiency penetration were initiated in Dominica, Mauritius, São Tomé and Príncipe, Seychelles, and Vanuatu, complemented by a regional activ-

ity covering Saint Lucia and Grenada. Additionally, a World Bank-executed technical assistance program requested by SIDS was also launched at the global level, including analytical work on options for financing mechanisms to catalyze investments, establishment of a virtual knowledge exchange network, and an innovation competition to showcase successful clean energy initiatives with potential for scale up in SIDS. All the global technical assistance activities were completed by FY2014.

A second phase of larger activities is now under implementation.

RESULTS

In three years, the Program has supported technical assistance activities in 19 SIDS across the Caribbean, Pacific, and Africa regions; provided more than US\$10 million to support SIDS transition to low-emission, climate-resilient development; helped mobilize additional investments; and laid the foundation for significant investments in for geothermal development in the Caribbean:

- In **São Tomé and Príncipe**, the recommendations of the feasibility study influenced a World Bank US\$29 Power Sector Recovery Project (a US\$16 million IDA grant and US\$13 million from the European Investment Bank), to upgrade the country's largest hydropower plant and improve electricity supply reliability through distribution network rehabilitation and technical assistance.
- In **Saint Lucia and Dominica**, the technical assistance for geothermal resource exploration prepared the grounds for World Bank lending operations to facilitate further geothermal exploration and investments in geothermal power generation of up to 40MW.



The Energy Sector Management Assistance Program (ESMAP) is a global knowledge and technical assistance program administered by The World Bank. It provides analytical and advisory services to low- and middle-income countries to increase their know-how and institutional capacity to achieve environmentally sustainable energy solutions for poverty reduction and economic growth. ESMAP is funded by Australia, Austria, Denmark, the European Commission, Finland, France, Germany, Iceland, Japan, Lithuania, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom, as well as The World Bank.

ENERGY TRANSITION IN SEYCHELLES

About 97% of the Seychellois population has access to electricity. However, until very recently, Seychelles was entirely dependent on fossil fuels for its electricity generation. This dependence on fuel imports has significant economic and budgetary cost and is the single largest contributor to carbon emissions. As a tropical country with abundant wind and sunshine, Seychelles has great potential to displace its fossil fuel-based generation with solar and wind energy systems.

With funding from the SIDS DOCK Support Program, the World Bank assisted the Government of Seychelles in developing a grid absorption study to examine the impact of renewable energy generation on the power system. The study determined the maximum absorption levels of solar PV systems and wind and proposed operational changes and investments to achieve higher penetration levels over time. The project also developed a grid code with technical requirements for the connection of renewables to the power system and proposed a feed-in tariff design methodology. Finally, the support proposed model power purchase agreement to be used as a template for all installations not covered by the proposed feed-in tariff policy.

IMPACT

The project has prepared the Government of Seychelles for a planned scale-up of renewable energy that will enable it to fulfill its renewable energy targets. In fact, following the findings of the grid absorption study, the Government of Seychelles revisited its targets and now aims to cover 15% of their electricity demand by renewables by 2020 instead of 2030. Current solar PV under development is in line with the recommendations of the report.

COMPLETED ENGAGEMENTS			ONGOING ENGAGEMENTS		
COUNTRY	PROJECT	FUNDING (US\$)	COUNTRY	PROJECT	FUNDING (US\$)
São Tomé & Príncipe	Power Sector Efficiency Improvements	320,000	Dominica	Geothermal Project	895,000
Seychelles	Planning & Regulatory Support for Expanded Private Participation in Renewable Energy Supply	250,000	Saint Lucia	Geothermal Resource Development	1,250,000
Mauritius	Planning & Regulatory Support for Expanded Private Participation in Renewable Energy Supply	200,000	St. Lucia, Grenada, St. Vincent	Regional Solar PV Scale-up Project	2,000,000
Saint Lucia & Grenada	Eastern Caribbean Energy Regulatory Authority Project	1,500,000	Caribbean	Caribbean Regional Energy Initiative: C-SERMS Platform	575,000
Global	SIDS DOCK Virtual Network	400,000	Tuvalu	Energy Sector Development	2,100,000
Global	Promoting Innovation in Renewable Energy and Energy Efficiency in SIDS	400,000	Cabo Verde	Distributed Solar Energy Systems	1,000,000
Global	Assessment of Financing Mechanisms to Catalyze Renewable Energy & Energy Efficiency Investment in SIDS	165,000	Vanuatu	Energy Sector Development Project	1,000,000