



Japan-IRENA joint workshop:

**Accelerating renewable energy deployment in the Pacific region
- Meeting the challenges -**

26 May 2012, Okinawa, Japan

Background

The increasing cost of fossil fuels is a key driver for accelerating the use of renewable energy in the Pacific Islands Countries and Territories (PICTs). Almost 99% of all energy use is dependent on fossil fuel, particularly diesel. A median share of nearly 15% of GDP of the region as a whole is spent on fuel imports. Typical power supply costs are in the range of USD 0.3-0.6 per kWh, even higher for remote islands due to high transport costs. Overall, about 75% of petroleum is used for transport while 25% is used for electricity generation. As the demand for electricity continues to grow in the region, reducing dependency on fossil fuels is crucial for securing their access to energy and addressing climate change issues. Accelerating renewable energy deployment can be a viable solution to diversify the energy mix of the PICTs, reducing dependency on fossil fuels.

IRENA has a strong mandate to take the lead at the global, regional, and national levels for promoting renewable energy deployment and provide countries the means for an accelerated renewable energy technology uptake tailored to their specific needs while considering national conditions in resource endowment as well as social and economic factors. The Pacific region is one of IRENA's geographical focus areas. The engagement of IRENA in the Pacific region started with the workshop held in October 2011 in Sydney. This resulted in the development of proposed IRENA work activities for the region based on the challenges identified. In January 2012 in Abu Dhabi, UAE, the Pacific Leaders Meeting agreed to support the implementation of the proposed IRENA activities in the region. Subsequently, the IRENA Work Programme and Budget for 2012 which focuses heavily on the Pacific region was adopted at IRENA's second Assembly in January 2012 in Abu Dhabi.

One of the key challenges that need to be addressed is integrating high shares of renewable energy into island grids. There is a need for identifying the technical requirements for ensuring grid stability through improved grid assessment and transition, system operations and designs, and storage technologies. Another challenge is the role of renewables in the transport sector which is usually one of the largest components of total energy use in the region.

The Government of Japan has been active in supporting a wide range of activities for many years, including those of renewable energy in the PICTs. At the 5th Pacific Islands Leaders Meeting (PALM5), the leaders of Japan and the Pacific Islands Forum (PIF) agreed to commit to work together to address environment issues including climate change in the form of the Pacific Environment Community (PEC), under which Japan made a 6.8 billion yen contribution to the PIF, including specifically for solar power generation, grid systems, and seawater desalination with solar energy. Other various experiences in the region include assisting the increased implementation of solar PV systems and supporting the capacity development for operation and maintenance of renewable energy systems. Japan is also a leader in the development of various advanced storage technologies that can be applied to the integration of renewable energy in island electrical systems.

The Okinawa islands, where the 6th Pacific Island Leaders Meeting (PALM6) is to be held on 25-26th May 2012, have themselves been carrying out various renewable energy deployments and activities in order to reduce their dependency on fossil fuels. A good example is the Clean Energy Cooperation



between Okinawa and Hawaii to foster renewable energy, energy efficiency, and smart grid technologies under the Japan-US Clean Energy Technology Cooperation framework.

Building on Japan's own experiences and its support for the PICTs, IRENA can help accelerate the deployment of renewable energy in the PICTs through providing reliable technology solutions.

Objective

The goal of the workshop is to discuss the specific technology solutions to address the challenges of accelerating renewable energy deployment in the PICTs, focusing on the areas of grid stability and renewable energy use in transportation.

Output

The output of the workshop will be a Summary of the discussions which include recommendations and action plans for possible technology solutions and for accelerating renewable energy deployment in the PICTs. This Workshop will also be a contribution to the PALM 6.

Venue

Date: Saturday 26 May, 2012 (the 2nd day of PALM 6)

Location: Okinawa Institute of Science and Technology Graduate University (OIST), Onna-son, Okinawa, Japan



Agenda

26 May 2012		
8:30 - 9:00	Registration	Entrance Hall of the Central Building, OIST
Opening		
9:00 - 9:05	Opening remarks	Adnan Amin, Director General, IRENA
9:05 - 9:10	Welcome speech	Masahiko Saito, Deputy Director General, Economic Affairs Bureau, Ministry of Foreign Affairs
9:10 - 9:15	Guest Speech I	Marc Knapper, Director, Office of Japanese Affairs, U.S. Department of State
9:15 - 9: 20	Guest Speech II	Toshiaki Taira, Director General, Department of Commerce, Industry and Labor, Okinawa Prefecture
[Morning Session]		
Renewable energy deployment in the Pacific region: Current situation and efforts		
9:20 - 9:35	Renewable energy strategies for Pacific islands: the IRENA approach	Dolf Gielen, Director, IRENA Innovation and Technology Centre (IITC)
9:35 - 10:05	Japan's experience and lessons learned in supporting renewable energy implementation in the Pacific region	Government of Japan
(9:35 - 9:45)	Japan's experience of renewable energy deployment as a climate change policy	Masaki Suzuki, Director General, Global Environment Bureau, Ministry of the Environment
(9:45 - 9:55)	Current situation of renewable energy deployment in Pacific islands and possible support from Japan	Hisashi Hoshi, Board Member, Director, New and Renewable Energy & International Cooperation Unit, the Institute of Energy Economics, Japan (IEEJ)
(9:55 - 10:05)	JICA's support for the Pacific region	Hiroshi Sumiyoshi, Director, Energy and Mining Division, Natural Resources and Energy



		Group, Industrial Development and Public Policy department, JICA
10:05 - 10:15	Hawaii-Okinawa Partnership in Clean and Efficient Energy Development and Deployment and its applicability to the Pacific region	Richard Rochelleau, Director, Hawaii Natural Energy Institute
10:15 - 10:30	Okinawa's efforts toward a smart energy island	Katsuya Furugen, Deputy Director, Industrial Policy Division, Department of Commerce, Industry and Labor, Okinawa Prefecture (and Okinawa Enetech Co., Inc)
10:30 - 10:40	Questions and Discussions	All
10:40 - 10:55	<i>Coffee Break</i>	
10:55 - 12:00	Panel discussion: Challenges and opportunities for renewable energy implementation in the Pacific	<p>Participating PICTs:</p> <ul style="list-style-type: none"> • Cook Islands • Kiribati • Samoa • Solomon Islands • Papua New Guinea; <p>Su'a Kevin Thomsen, Director, Strategic Partnerships and Coordination Programmes, Pacific Islands Forum Secretariat (PIFS); Dolf Gielen, Director, IRENA Innovation and Technology Centre (IITC);</p> <p>Moderator: Yo Osumi, Director, Economic Security Division, Economic Affairs Bureau, Ministry of Foreign Affairs</p>
12:00 - 12:10	Questions and Discussions	All
12:10 - 13:10	<i>Lunch</i>	
[Afternoon Session]		
Technical solutions for renewable energy deployment towards low carbon society in islands		
(1) Integration of high shares of renewable energy into island grids		Moderator: Solomone Fifita, Deputy Director for Energy,



		Secretariat of the Pacific Community
13:10 - 13:25	Challenges in renewable energy integration to island grids	Gordon Chang, Deputy Executive Director, Pacific Power Association
13:25 - 13:40	Cutting edge technologies for self-reliant and distributed energy system for the Pacific	Kimio Yamaka, President, Institute of Energy Strategy
13:40 - 13:55	Renewable energy integration to island grids - King Island	Simon Gamble, Manager, Small Renewable Asset Development, Hydro Tasmania
13:55 - 14:10	Renewable energy integration to island grids – Island of Graciosa; A Solution for a 100%-Renewable Energy base Island System	Ina Hahndorf, Head of R &D, Yunicos AG
14:10 - 14:25	Renewable energy integration to island grids – Miyako Island	Shinji Uehara, Vice general manager for Research & Development Dept., the Okinawa Electric Power Company, Incorporated
14:25 - 14:40	Renewable energy integration to island grids – Hawaii	Leon Roose, Hawaii Natural Energy Institute
14:40 - 15:10	Panel discussion: Technology solutions for grid stability for renewable energy integration to island grids	All presenters of the Session (1) ; Participating PICTs: <ul style="list-style-type: none"> • Niue • Marshall Islands
15:10 - 15:25	<i>Coffee Break</i>	
(2) Use of renewable energy in the transportation sector		Moderator: 'Akau'ola, Special Advisor to the Prime Minister of Tonga
15:25 - 15:40	Prospects of the use of renewable energy in transportation sector	Solomone Fifita, Deputy Director for Energy, Secretariat of the Pacific Community
15:40 - 15:55	Potential renewable energy technology solutions for shipping	Fabian Juers, Team Leader Sales, SkySails
15:55 - 16:10	Introduction of electric vehicles in a smart grid project in Rokkasho village	Akira Kobayashi, Chief Project Manager, Smart City Systems Engineering Department, Smart Infrastructure Systems Business Division, Hitachi,



		Ltd., Infrastructure Systems Company
16:10 - 16:20	Bioethanol production in sugarcane without competition with foods	Takayoshi Terauchi, National Agriculture and Food Research Organization
16:20 - 16:30	Deployment of bioethanol-blended gasoline using bioethanol produced from domestic sugarcane in Okinawa	Bernardo Hideki Endo, Vice President, Brazil-Japan Ethanol
16:30 - 16:55	Panel discussion: Technology solutions for the use of renewable energy in the transportation sector	All presenters of the Session (2) ; Participating PICTs: <ul style="list-style-type: none"> • Tuvalu • Fiji
(3) Opportunities for renewable energy implementation in the Pacific		Moderator: Dolf Gielen, Director, IRENA Innovation and Technology Centre (IITC)
16:55 - 17:40	Panel discussion: <ul style="list-style-type: none"> • Robert Guild, Director, Transport, Energy, and Natural Resources, Pacific Department, Asian Development Bank (ADB) • Satoshi Morozumi, Director, Smart Community Department, New Energy and Industrial Technology Development Organization (NEDO) • Participating governments <ul style="list-style-type: none"> - Tonga, Palau, Micronesia - Axel Strang, General Directorate for Energy and Climate Change, French Ministries of Energy and Environment, Government of France 	
17:40 - 17:55	Questions and Discussions	All
Summary and way forward		
17:55 - 18:05	Summary and way forward	Yo Osumi, Director, Economic Security Division, Economic Affairs Bureau, Ministry of Foreign Affairs; Dolf Gielen, Director, IITC
18:05 - 18:10	Closing remark	Joe Nakano, Parliamentary Vice Minister for Foreign Affairs
19:00 - 20:30	Dinner reception hosted by the Government of Japan	