

Island Energy – Status and Perspectives

Institute of Applied Energy (IAE)
Tokyo, Japan,
5-6 October 2015



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Hosted by the Institute of Applied Energy (IAE), Tokyo, Japan

Rationale

Small island communities and remote, sparsely populated areas are vulnerable to impact of climate change and despite significant renewable energy resource potential they are often highly dependent on imported fossil fuels to meet their energy needs. This has high impact in terms of high electricity and energy costs, vulnerability to oil price fluctuations, supply interruptions and environmental degradation. However, over the years an increasing number of island and remote area communities are seeking the transition to a more sustainable energy system, where improved energy efficiency and renewable energy play an important role.

This workshop will focus on the energy challenges, strategies and technological solutions on islands and remote, sparsely populated areas. The workshop will explore the similarities and differences in a variety of cases in order to summarize lessons learned, not least in terms of technological solutions. Further, the question will be raised whether it will make sense to exchange experiences and lessons learned between islands and isolated areas, and densely populated areas like cities.

Key questions

- How do islands and remote, sparsely populated address the energy challenges – access to energy at affordable prices and with minimum impacts for the environment and climate?
- What are the similarities, major differences and lessons learned from islands and remote, sparsely populated areas?
- Which technological solutions are available to address the energy challenges on islands and remote, sparsely populated areas?
- Can these technological solutions be scaled up and used in densely populated areas and vice versa?
- What are the similarities and differences in technological solutions between islands, remote, sparsely populated areas and densely populated areas like cities?

Target audience

In addition to EGRD national experts, we are seeking input from RD&D decision-makers, strategic planners, and programme managers from industry and local authorities concerned with energy systems and sustainability.

Day 1: 5th October

Session 1: Welcome and introduction

The Session provides background and context for the Workshop. It reminds participants of the purposed, interactive nature of presentations, dialogue and social interactions, and the expected outcomes, and post-meeting activities and communications.

INTRODUCTION			
<i>Moderator: Atsushi Kurosawa</i>			
9:00		Welcome	<i>Atsushi Kurosawa, Director of Global Environmental Program, R&D Division, The Institute of Applied Energy (IAE)</i>
9:10		Introduction - ERGD and this workshop	<i>Rob Kool, Manager, Chair EGRD, NL Agency</i>
9:30	1	Key note A "New Era" of the IEA's Energy Technology Network and Implementation Agreements	<i>Toshiro Okada, Vice-Chair of CERT, Senior Energy Advisor, Agency for Natural Resource and Energy, Ministry of Economy, Trade and Industry, Government of Japan</i>
10.00	2	Clean Energy Systems for Islands: Insights from IEA Analyses	<i>Eric Masanet, Head, Energy Demand Technology Unit, International Energy Agency</i>
10.30		Break	

Session 2: Sustainable islands

A large number of small islands around the world have developed into great showcases for a range of promising solutions for the energy system of the future. The session will explore what has been the driving force behind these ambitious cases and assess the reliability and costs of technological solutions chosen. Not least, the question will be raised what are the lessons learned for the overall energy system, also in densely populated areas.

SUSTAINABLE ISLANDS			
<i>Moderator: Atsushi Kurosawa</i>			
11.00	3	Japanese Island Grid Experience	<i>Satoshi Morozumi, Smart Community Department Director General, New Energy and Industrial Technology Development Organization (NEDO)</i>
11.30	4	DC-based Open Energy System: A Bottom-up, Distributed Power System for Self-Sustaining Islands	<i>Mario Tokoro, Founder & Executive Advisor, Sony Computer Science Laboratories, Inc.</i>

12.00		Lunch	
13.00	5	Electricity storage for island transitions: A strategic niche?	<i>Ruud Kempener, Analyst, IRENA</i>
13.30	6	Integration of Hydro-Wind Power Generation on El Hierro Island (<i>remote presentation</i>)	<i>Gabriella Németh, Energy Directorate. Electric Energy Department, Spain</i>
14.00		Discussion	

Session 3: Sustainable cities

This session will explore similarities and differences in technology and other solutions for cities and islands as well as sparsely populated areas. Globally, cities are growing rapidly and municipal governments are being challenged to adapt to changing demands for energy, infrastructure and space. As providers of energy services to the majority of the world's population, cities are uniquely positioned to accelerate the transition to energy efficiency and renewable energy. The goal of expanding renewable energy uptake is intertwined with other objectives in increasing efficiency and enhancing livability.

The session will be organized as a world café with an inspirational speech and a true workshop with interventions and discussions of participations.

SUSTAINABLE CITIES			
<i>Moderator: Rob Kool</i>			
14.30	7	Yokohama Smart City Project : Large-scale Demonstration and Future Implementation	<i>Yuki Murai, Officer of Project Promotion Division, Climate Change Policy Headquarters, City of Yokohama</i>
15.00	8	JST's activity towards the realization of a dynamic and affluent low carbon society	<i>Kenichi Furuhata, Director, Center for Low Carbon Society Strategy, Japan Science and Technology Agency (LCS/JST)</i>
15.10		Group work	
16.10		Discussion	
16.40		Wrap up	

Reception at The Institute of Applied Energy (1 minute walk)

Day 2: 6th October

Session 4: Island states

Many small island states are highly dependent on import fossil fuels to meet their energy needs. This has a number of impacts: high and often rising costs for electricity, vulnerability to oil prices shocks and supply interruptions. Therefore many small island states are looking to more sustainable energy systems, where improved energy efficiency and renewable energy play an increasingly important role.

ISLAND STATES			
<i>Moderator: Birte Holst Jørgensen</i>			
9.30	9	De-risking System-wide Investments through Energy Transition Planning – cases of Puerto Rico, Hawaii and the US Virgin Islands	<i>Stephen Walls, Department of Energy, USA</i>
10.00	10	The Advanced Technology and Future Prospect of OTEC for Island -towards to Stable Energy and Sustainable Development-	<i>Yasuyuki Ikegami, Professor, Institute of Ocean Energy, Saga University</i>
10.30		Break	
11.00	11	Appliance Labelling And Standards in the Pacific Islands	<i>Timothy Clifford Farrell, Copenhagen Centre on Energy Efficiency, Senior advisor UNEP DTU Partnership</i>
11.30	12	Renewable energy developments in the Faroe Islands	<i>Bjarti Thomsen, Faroese Earth and Energy Directorate, Ministry of Industry, the Faroe Islands</i>
12.00		Discussion	
12.30		Lunch	

Session 5: Discussion and lessons to be learned

SYNTHESIS AND CONCLUSIONS			
<i>Moderator: Rob Kool</i>			
14.30		Discussion, key recommendations	
15.30		Workshop conclusions	
16.00		End of workshop	

Venue

Koku Kaikan Building Room 501/502 (5F)
http://www.aero.or.jp/map/map_kaikan-English.htm
1-18-1 Shimbashi, Minato-ku, Tokyo 105-0004, Japan
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**Innovation for Cool Earth Forum – 2nd Annual Meeting
(Registration is closed)**

October 7-8, 2005

Venue: Hotel Chinzanso, Tokyo

ICEF is high level conference hosted by the Ministry of Economy, Trade and Industry (METI) and the New Energy and Industrial Technology Development Organization (NEDO) and co-hosted by the Ministry of Foreign Affairs (MOFA) and the Ministry of the Environment (MOE).

<http://www.icef-forum.org/>

ICEF networking plaza (reception) will start at 20:00, October 6, at Hotel Chinzanso.