

A PECC International Project
Energy Transition and New Economic Models 2013-2014

**SEMINAR 3. ENERGY TRANSITION:
A Challenging Perspective for the Pacific Islands and Coastal Areas
November 26-28, 2014 | Nouméa, New Caledonia**

Co-organized by FPTPEC and SPC (Secretariat of the Pacific Community)

BACKGROUND

Taking into consideration global needs for new sources of energy to meet the growing industrial and household demands in the midst of rising energy costs and diminishing fossil fuels, it is imperative that PECC economies invest more in developing and optimizing new types of energy. It is one of top priorities for PECC economies to explore the most efficient ways of ensuring smooth transition from fossil fuels to renewable and sustainable energy. Lessons can be learnt by sharing how PECC economies are transitioning from being high energy consumers to becoming more eco-friendly and energy-efficient.

The project aims to design the framework for new economic models that will make way for smooth energy transition; it will bring together the energy-exporting and importing economies, energy producers or distributors as well as energy-related policymakers. It will put into perspective new initiatives and strategies designed to facilitate energy transition that will be critical to achieving sustainable living environment.

Several PECC economies are more advanced than others in rolling out forward-looking energy transition policies, in providing funding and implementing environmental regulations conducive to such transition. Based on extensive discussions and exchange of views gathered at the seminar, policy recommendations for facilitating energy transition using renewable and sustainable energy will be produced.

This project, led by FPTPEC in partnership with other PECC committees, was endorsed by the PECC Standing Committee at its Vancouver meeting in June 2013, and two seminars have been held since (one in Victoria, Vancouver Island in November 2013, one in Santiago in June 2014).

FIRST SEMINAR: VICTORIA, BC, CANADA - NOVEMBER 2013

The first seminar was jointly organized by FPTPEC and CANPEC. Four issues were addressed:

- An overview of energy transition
- Promoting the potential for renewable energy in the islands or isolated territories
- Energy transition and innovation
- Shale gas/ oil: Opportunities and challenges

Summary of key points and recommendations:

- Draft energy flow charts for PECC economies (i.e. regulations, incentives)

- Promote the development of new and renewable energies
- Help promote policy initiatives and access to financing to shorten the time needed for new or emerging technologies to reach the market
- Help the private sector to identify and evaluate the best , viable technologies
- Help promote, directly and indirectly, early buy-in and acceptance for energy transition initiatives and their rationale from all stakeholders including the public-at-large.

SECOND SEMINAR: SANTIAGO, CHILE - JUNE 2014

The second seminar was organized by FPTPEC and CHILPEC. Four following issues were discussed:

- Renewable energies to meet industrial demands and needs of isolated locations
- Development of marine and renewable energies: Promoting early acceptance
- Setting appropriate policies to develop renewable energies
- Developing cooperation between stakeholders to promote energy transition

	Solar CSP	Wind	Wave	Tidal Current
Development Status	Early Commercial	Commercial	Pre-Commercial	Pre-Commercial
Source	Sun	Uneven solar heating	Wind blowing over water	Gravity of moon & sun
Intermittency	Day-night; clouds, haze, and humidity	Atmospheric fronts and storms (local winds only)	Sea (local winds) and swell (from distant storms)	Diurnal and semi-diurnal (advancing ~50 min./day)
Predictability	Minutes	Hours	Days	Centuries

Summary of key points and recommendations:

- PECC economies should look for an efficient management of marine energy resources.
- Ocean accumulates thermal energy, and returns it in many forms. Energy demand will weigh increasingly on water resources and emerging countries could soon face a double stress, water and energy.
- Climate change will exacerbate this challenge, with a greater variability in the availability of water resources and intensification of weather events, such as severe floods and prolonged droughts.
- Renewable energy policies are to be welcomed, but governments should pursue incremental and realistic energy transition paths, suited to their respective development stages.
- Multilateral cooperation would be needed for unlocking financial challenges faced by renewable energy sectors including solar and wind powers.
- Successful energy transition is feasible with balanced and realistic international frameworks in place.

THIRD SEMINAR: NOUMEA, NEW CALEDONIA - NOVEMBER 2014

Bearing in mind recommendations made at the two previous seminars and two concurrent sessions of the PECC General Meeting held in Beijing, September 2014, the Nouméa seminar will discuss the new models for energy policy in the island and coastal cities.

Pacific islands rely heavily on fossil fuels to meet their energy needs. How should one develop renewable energy sources both onshore and offshore to prepare for energy transition on these remote places? What are the energy models to be developed on the islands to limit the use of fossil fuels such as coal to mitigate pollution?

SEMINAR 3: PROGRAM AGENDA
(Venue: SPC Headquarters, Nouméa, New Caledonia)

DAY ONE: Wednesday, November 26th

- 8.30-9.00 Welcome remarks
Cameron Diver, Deputy Director, SPC;
Dominique Chu Van, Chair, FPTPEC New Caledonia;
Philippe Gomes, Chairman, ENERCAL;
Vincent Bouvier, High Commissioner in New Caledonia
- 9.00-9.30 Introduction to the seminar - Lessons from Victoria and Santiago seminars and 22nd PECC General Meeting; Way forward for developing renewable energies to improve the energy mix in favor of energy transition in the Pacific islands and coastal areas
Henri Boyé, Climate and Energy Coordinator, Ministry of Ecology, Sustainable Development and Energy, France/ FPTPEC
- SESSION 1: Policies for renewable energies in the Pacific islands and coastal areas**
Session chair: Dominique Chu Van, Chair of FPTPEC New Caledonia
- 9.30-10.00 Mapping of energy policies for energy transition in the Pacific islands - What role for renewable energy in the energy mix?
Makereta Lomaloma, Energy Division, SPC
- 10.00-10.30 Renewable energy in the Pacific islands and its storage - Availability, cost today and at the 2020/2030 horizon (photovoltaic, onshore and offshore wind, renewable marine energies)
Henri Boyé, Ministry of Ecology, Sustainable Development and Energy, France
- 10.30-11.00 Coffee break sponsored by EEC/UNELCO
- 11.00-11.30 IRENA's role in islands' transitions to renewable energy
Apisake Soakai, Pacific Coordinator, IRENA
- 11.30-12.00 Energy transition in Vanuatu

Yves Morault, COO of EEC (Electricity and Water of Caledonia)/CEO of UNELCO, Vanuatu

LUNCH hosted by FPTPEC NC for speakers, Nouvata Hotel

SESSION 2: Technological challenges: Energy storage and efficiency, integration to existing networks

Session chair: Cameron Diver, Deputy Director, SPC

13.30-14.15 Integration of renewable energies into the grid: TSO (Transmission System Operator) in French OCTs (overseas countries and territories) – associated problems and potential solutions

Jean-Michel Deveza, CEO, Enercal, New Caledonia;

Joseph Maire, Technical Director, Smartgrid program, EDF SEI, France

14.15-14.45 Hybrid renewable energy production system and connection to existing network

Marc Rivard, Vergnet SA, France

14.45-15.15 Integration of renewable energies into the grid: Intermittent availability, storage, available technologies and costs (from a recently published study for the Ministry of Ecology, Sustainable Development and Energy of France)

Henri Boyé, Ministry of Ecology, Sustainable Development and Energy, France

15.15-15.45 Coffee break sponsored by Synergie

15.45-16.15 Island smart grid project on Maui - JUMPSmartMaui

Kazuyuki Takada, Deputy Director, Smart Community Department, New Energy and Industrial Technology Development Organization (NEDO);

Fumitoshi Emura, General Manager, Smart Energy Solution Division, Hitachi Ltd.

16.15-16.45 Solutions towards energy autonomy: Development of renewables, smart grids approach and storage in small islands

- Case study of fuel saving: Isle of Pine, a smart island? *JM Deveza, Enercal*

- Pegase Project: La Reunion/ El Hierro Island *Joseph Maire, EDF*

DAY TWO: Thursday, November 27th

SESSION 3: Towards greater energy efficiency in coastal areas and Pacific islands

Session chair: Chris Campbell

9.00-9.30 Deep ocean water: A catalyst for economic development, food, water and energy security

Jan C War, Operations Manager, Natural Energy Laboratory of Hawaii Authority (NELHA), USA

9.30-10.00 Geothermal resources development issues in the PIC

Kifile Kahsai, Geoscience Division, SPC

- 10.00-10.30 Coffee break sponsored by A2EP
- 10.30-11.00 Organic Rankine Cycle (ORC) technology: A convenient solution for power, CHCP (Combined heat, cooling and power) in islands at MW scale
Pierre Du Baret, Enertime, France/ Pierre Kolb, A2EP (Agency of Water and Environment of the Pacific), New Caledonia
- 11.00-11.30 Marine Renewable Energy (MRE) in French Polynesia, existing operations - (i.e. ORC in the Brando Island and Bora Bora) and potential for MRE to meet the local demand
Michel Paoletti, FPTPEC French Polynesia

LUNCH hosted by FPTPEC NC for speakers, Nouvata Hotel

SESSION 4: Energy transition policies in the Asia-Pacific
Session chair: Henri Boyé

- 13.30-14.00 How do cities make energy transition? A lesson from Seoul
Taedong Lee, Assistant Professor of Political Science and International Relations, Yonsei University, Korea
- 14.00-14.30 Development plans for renewable energy for a smooth energy transition - the Japanese model
Mutsuyoshi Nishimura, Visiting Fellow, Japan Institute of International Affairs
- 14.30-15.00 Canadian policy for new and renewable energies
Chris Campbell, Executive Director, Marine Renewables Canada
- 15.00-15.30 Australia's energy policy in a Pacific context: Current policy and future prospects
Heidi Bootle, Consul- General of Australia in Nouméa
- 15.30-16.00 Coffee break sponsored by FPTPEC NC
- 16.00-16.30 Summary of recommendations
All session chairs
- 16.30-17.00 Concluding session: Wrap up and follow-up
Dominique Chu Van and Henri Boyé
- 17h30-19h00 Cocktail sponsored by CESE (Conseil Economique Social et Environnemental de la Nouvelle-Calédonie)
Welcome words by Yves Tissandier, Chair CESE New Caledonia

DAY THREE: Friday, November 28th

Field visit (8h00-16h00) sponsored by ENERCAL and QUADRAN
Yaté Dam, Southern Province, NC