

# **PT PLN (PERSERO) CLEAN ENERGY UTILITY EXECUTIVE EXCHANGE TO HAWAIIAN ELECTRIC COMPANY (HECO)**



**April 13 – 20, 2013**

**Oahu & Maui, Hawaii**

***Conducted by:***

UNITED STATES ENERGY ASSOCIATION (USEA)

***Under the:***

USAID INDONESIA CLEAN ENERGY DEVELOPMENT PROJECT

***Funded by:***

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)



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FROM THE AMERICAN PEOPLE

**INDONESIA CLEAN ENERGY DEVELOPMENT PROJECT OVERVIEW**

The Indonesia Clean Energy Development (ICED) project works with the Indonesian government agencies (central, provincial, and local), the electric utility (PLN), non-governmental organizations, communities, universities, and the private sector to provide support for Indonesia’s clean energy objectives. The project supports the Director General for Energy Conservation and Renewable Energy in the Ministry of Energy and Mineral Resources to improve energy sector policies and coordination; works with provincial and local governments in provinces, and PLN Pusat (headquarters) and Wilayah (regional units) in to increase the development of clean energy projects; and increases institutional capacity and public outreach of government and other stakeholders for clean energy.

**EXECUTIVE EXCHANGE OBJECTIVES TO HECO**

The primary objectives of this utility exchange are for Indonesian executives to:

- Be exposed to the **issues and challenges** facing renewable energy
- Gain exposure to **renewable energy technologies** being successfully used in the power sector
- Learn **policy, incentive and regulatory** best practices for the promotion of renewable energy
- Learn best practices in renewable energy project **development & financing**
- Learn utility best practices in **interconnection of intermittent resources**
- Learn best practices in **distributed generation**

**PARTICIPANTS**

Mochamad Sofyan	Head of New and Renewable Energy Division	PLN
Machnizon Masri	Senior Manager of Distribution System	PLN
Krishna Mulawarman Kartodirdjo	Team Leader of Biofuel Usage Program	PLN
Amir Hamzah	Manager of Renewable Energy Academy	PLN
Heri Priambodo	Manager of Planning Department	PLN
Daryanto Margono	Geothermal Engineer	PLN
Muhammad Arsyad Azis	Diesel Power Plant Manager	PLN
Dwi Hartono	Assistant Analyst of IPP Procurement Planning	PLN
Ahmad Syauki	Assistant Manager of Distribution at Mataram Area	PLN
Edo Adrianto	Assistant Engineer of Distribution Asset Management	PLN
Retno Setianingsih	Energy Program Specialist	USAID/Jakarta
Bill Meade	Chief of Party	USAID/ICED
Asclepias Rachmi Soerjono	Senior Energy Policy and Regulatory Advisor	USAID/ICED

**USEA STAFF**

Mr. John Hammond  
Program Manager  
United States Energy Association  
1300 Pennsylvania Avenue, NW  
Suite 550  
Washington, DC 20004-3022 USA  
Work: +1-202-312-1241  
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jhammond@usea.org  
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Mr. Andrew Palmateer  
Senior Program Coordinator  
Work: +1-202-312-1286  
Mobile: +1-315-244-1384  
apalmateer@usea.org

**LODGING**

Oahu (April 13-17):  
Sheraton Princess Kaiulani  
120 Kaiulani Ave, Honolulu, HI 96815  
1-808-922-5811

Maui (April 17-20):  
Courtyard Maui Kahului Airport  
532 Keolani Place, Kahului, Hawaii 96732 USA  
1-808-871-1800

**SCHEDULE**

***DAY 1 – SATURDAY, APRIL 13, 2013: ARRIVAL***

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Morning Delegates arrive into Honolulu from Indonesia. After passing through immigration, collecting baggage, and clearing customs, delegates will be met by USEA’s Andrew Palmateer with a sign for “HECO Executive Exchange” for transportation to the hotel.

Lodging: Sheraton Princess Kaiulani  
120 Kaiulani Ave, Honolulu, HI 96815  
1-808-922-5811

***DAY 2 – SUNDAY, APRIL 14, 2013: EXECUTIVE TIME & ORIENTATION***

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Morning Executive Time

Afternoon **Orientation**  
USEA’s John Hammond & Andrew Palmateer will meet the delegates in the hotel for program orientation, including agenda review, US power sector overview, and to address any outstanding issues.

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**DAY 3 – MONDAY, APRIL 15, 2013: RENEWABLE ENERGY & DISTRIBUTED GENERATION AT HAWAIIAN ELECTRIC COMPANY (HECO)**

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08:15                      Delegation meets John Hammond & Andrew Palmateer in hotel lobby for transportation to Hawaiian Electric Company (Ward Avenue Complex, 820 Ward Ave., Honolulu, HI 96814, Contact: Tony Koyamatsu, Ph. 808-226-4311)

For more than 100 years, Hawaiian Electric Company has provided the energy that has fueled the islands' development from a Hawaiian kingdom to a modern state. Hawaiian Electric Company, Inc. (HECO), and its subsidiaries, Maui Electric Company, Ltd. (MECO), and Hawaii Electric Light Company, Inc. (HELCO), serves 95% of the state's 1.2 million residents on the islands of O`ahu, Maui, Hawai`i Island, Lana`i and Moloka`i.

The State of Hawaii has the most aggressive clean energy goals in the nation. These targets were set in 2008, when the Hawaiian Electric companies joined the Governor of Hawaii, Hawaii Department of Business, Economic Development & Tourism and Office of Consumer Advocacy in signing the Hawaii Clean Energy Initiative energy agreement. The Hawaii Legislature then mandated the goals into State law. HECO's mission is to decisively get Hawaii off of imported oil for electricity and ground transportation through energy efficiency and a diverse portfolio of renewable energy technologies. The Hawaiian Electric companies aim to exceed these goals, adding as much renewable energy as possible as soon as possible—at prices that provide more stable and lower energy costs. Investing to support renewable energy now will provide greater energy security as well as environmental and economic well-being for Hawaii in the future.

In 2011, 12% of electricity sales came from renewable sources, well on HECO's way to Hawaii's next renewable mandate: 15% by 2015. More than 1,000 MW of renewable projects are in service, under construction, awaiting approval or being negotiated -- with more to come. The 110-MW Campbell Industrial Park Generating Station is the world's first commercial utility combustion turbine power plant powered entirely with biofuel. Hawaii has more EV charge stations per person than any other U.S. state: more than 200 are being installed at over 80 public sites, plus nearly 200 private charge spots, so far. By the end of 2011, more than 10,000 customer-sited PV systems on Oahu, Hawaii Island and on Maui County totaled over 78 MW of solar capacity with rapid growth continuing. Hawaii ranks second in the nation for installed solar watts per person.

09:00                      Introductions, Program Overview, Safety Reminders  
Host: Dan Giovanni, Senior Vice President, Operations

09:15                      **PLN (Perusahaan Listrik Negara or “State Electricity Company”)**  
**Machamad Sofyan, Head of New and Renewable Energy Division, PLN**

- History
- Assets
- Service territory

- 10:00            **Hawaiian Electric Company Overview**  
*Dan Giovanni, Senior Vice President, Operations, Hawaii Electric*
- History
  - Assets
  - Service territory
- 10:30            Coffee & Tea Break
- 10:45            **Hawaii Renewable Portfolio Standards & Clean Energy at Hawaiian Electric**  
*Robbie Alm, Executive Vice President*
- 12:00            Lunch
- 13:00            **Acquisition of Clean Energy Resources**  
*Scott Seu, Vice President, Energy Resources and Operations*
- 14:00            **Interconnection of Renewable Energy to Island Grids**  
*Colton Ching, Vice President, Energy Delivery*
- 15:00            **Challenges with Distributed PV on Island Grids**  
*Colton Ching and Scott Seu*
- 15:30            **Geothermal Development on the Big Island**  
**GMO Renewable Resources in Hawaii**  
*Don Johnson, General Manager, Production, Hawaii Electric Light Company, Inc.*
- 16:00            **General Discussion**
- 17:00            Adjourn & return to hotel
- 18:30            **Welcome Dinner** for Delegation & HECO hosted by USEA  
Hiroshi Eurasion Tapas  
500 Ala Moana Blvd.  
Honolulu, HI 96813
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**DAY 4 – TUESDAY, APRIL 16, 2013: SITE VISITS**

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08:00 Delegation meets John Hammond & Andrew Palmateer in hotel lobby for transportation to site visits.

AM & PM  
09:00

**Site Visits  
H-Power**

The primary function of H-POWER (Honolulu Program of Waste Energy Recovery) is to reduce the volume of municipal solid waste on Oahu. The plant is capable of consuming 2,160 tons of garbage per day, reducing the volume of refuse that goes to the landfill by 90%. H-POWER, owned by the City & County of Honolulu, processes the garbage and burns it in furnaces to produce steam that drives a turbine generator. The electricity is sold to Hawaiian Electric and distributed to customers. H-POWER is currently expanding by adding a third boiler and other equipment which should bring its capacity to about 73 MW. Hawaiian Electric and H-POWER are negotiating a power purchase agreement which will go to the Hawaii Public Utilities Commission for review.

Contact: Maylene Ogawa  
H-Power  
91-174 Hanua Street  
Kapolei, HI 96707  
Ph. 808-768-5455

10:30

**CIP-CTI Biodiesel**

Hawaiian Electric's 100 MW combustion turbine generating unit at Campbell Industrial Park (CIP-CTI) operated using 100% biodiesel. It is the first utility grade combustion turbine permitted to generate electricity using biofuel. Hawaiian Electric operates CTI as a peaking unit and receives biodiesel from Renewable Energy Group. The biodiesel is derived from yellow grease and/or animal fat.

Contact: Tony Koyamatsu  
Director, Fuels Portfolio Management  
Hawaiian Electric Company, Inc.  
91-196 Hanua St.  
Kapolei, HI 96707  
Ph. 808-543-7339  
Email: [tony.koyamatsu@heco.com](mailto:tony.koyamatsu@heco.com)

11:45

**Lunch** in HECO CIP 3<sup>rd</sup> Floor Conference Room  
**Hawaiian Electric Biofuels Overview**  
**Nick Paslay, Director of Fuels Operations, Hawaiian Electric Company**

13:30

**Kalaeloa Solar**

Kalaeloa Solar II is a 5 MW photovoltaic power plant being developed by SunPower near Kalaeloa airfield on land leased by the Department of Hawaiian Home Lands. It will use a tracking system to follow the sun, generating enough electricity to power over 1,000 Oahu homes. Kalaeloa II will sit adjacent to Kalaeloa Solar I, and together the two power plants will have a 10 MW capacity.

Contact: Riley Saito  
Senior Manager, Hawaii Projects  
SunPower Systems, Corporation  
73-1294 Awakea St  
Kailua Kona, HI 96740  
Cell Phone: 808-895-0646  
Fax: 808-325-6526  
Email: Riley.Saito@sunpowercorp.com

Evening

No scheduled activities

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**DAY 5 – WEDNESDAY, APRIL 17, 2013: SITE VISIT, DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM (DBEDT) HAWAII STATE ENERGY OFFICE & HAWAII PUBLIC UTILITIES COMMISSION (PUC)**

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- 08:00 Delegation meets John Hammond & Andrew Palmateer in hotel lobby for transportation to site visit. Delegates will check out of hotel in the morning, and the group will not return to the hotel before departure for Maui.
- 9:00 – 11:00 **Site Visit – North Shore**
- **Kawailoa Wind – Two – Operating Wind Power with Grid Limitations** (*confirmed*)  
First Wind plans its fourth wind farm in Hawaii with a capacity of 69 MW on former sugarcane land owned by Kamehameha Schools northeast of Haleiwa. When complete, it will produce enough energy to power 14,500 Oahu homes.  
  
Contact: Ryan Pierce, 808-347-0792  
Chris Caffyn, 610-737-7625
- 11:00 – 11:45 Picnic lunch at Waimea Bay
- 12:00 Lunch & delegation travels to Department of Business, Economic Development & Tourism (DBEDT) Hawaii State Energy Office

The Hawaii State Energy Office employs a range of programs designed to support Hawaii's clean energy goal of 70% by 2030 and spur economic development in the energy sector. The Hawaii State Energy Office's mission is to act as a catalyst for creating efficiency measures, renewable energy resources, transportation initiatives, and progressive policy that lead to green jobs and investments in Hawaii's economy.

With a goal to generate 40% clean energy, the Hawaii State Energy Office plans to (1) align government regulations and policies with clean energy goals, (2) increase certainty in the process for developing renewable energy, (3) deploy renewable generation and grid infrastructure, and (4) explore next generation technologies and new applications of existing technologies. Hawaiian Electric remains committed to taking direct action to mitigate the contributions to global warming from electricity production. Such action has and will continue to include promoting aggressive energy conservation and transitioning to clean, efficient and eco-effective energy production in all Hawaiian markets.

The Hawaii State Energy Office's overall strategy for energy independence is to focus on the Hawaii Clean Energy Initiative's (HCEI) community-based efforts to create high impact, clean energy solutions that encourage innovative, economic development. This will be accomplished, in part, by leveraging resources and partnerships with business, government, and the public at large.

13:00

### **Meeting with Hawaii State Energy Office**

Location: Conference room -1403 State Office Tower (235 S Beretania Street)

Contact: Kym Sparlin, Executive Assistant to Mark B. Glick, Administrator (808-586-2352; [Kymberly.M.Sparlin@dbedt.hawaii.gov](mailto:Kymberly.M.Sparlin@dbedt.hawaii.gov))

- Introductions
- Hawaii State Energy Office Overview
  - History
  - Organizational structure
  - Programs
- Renewable Energy Laws & Incentive Programs
- Renewable Energy Developer & Investor Assistance

The Public Utilities Commission (PUC) regulates all franchised or certificated public service companies operating in the State prescribes rates, tariffs, charges and fees; determines the allowable rate of earnings in establishing rates; issues guidelines concerning the general management of franchised or certificated utility businesses; and acts on requests for the acquisition, sale, disposition or other exchange of utility properties, including mergers and consolidations.

- 15:00                    **Meeting with Hawaii Public Utilities Commission**  
Location: Hearing Room #B-3 – Hawaii Public Utilities Commission  
465 South King Street, #103  
Honolulu, Hawaii 96813  
Contact: Ms. Audrey Chigawa (Audrey.K.Chigawa@hawaii.gov)
- Introductions
  - Hawaii Public Utilities Commission Overview
    - History
    - Organizational structure
    - Programs
  - PUC Oversight of Renewable Energy Laws & Incentive Programs
- 17:00                    Adjourn & Travel to airport
- Evening                    Travel to Maui

**DAY 6 – THURSDAY, APRIL 18, 2013: RENEWABLE ENERGY & DISTRIBUTED GENERATION AT MAUI ELECTRIC COMPANY (MECO)**

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- 08:30 Delegation meets John Hammond & Andrew Palmateer in hotel lobby for transportation to Maui Electric Company
- 09:00 Introductions, Program Overview, Safety Reminders  
**Sharon Suzuki, President, Maui Electric**
- 09:15 **PLN (Perusahaan Listrik Negara or 'State Electricity Company') Overview**  
**Mochamad Sofyan, Head of New and Renewable Energy Division, PLN**
- History
  - Assets
  - Service territory
- 10:00 **Maui Electric Company Overview**  
**Sharon Suzuki, President, Maui Electric**
- History
  - Assets
  - Service territory
- 10:30 Coffee & Tea Break
- 10:45 **Maui Renewable Energy**
- Commercial Portfolio
  - R&D Projects
- 12:00 Lunch
- 13:00 **Challenges and Opportunitites for Renewable Energy**
- System Operation
  - Curtailment (excess energy)
  - Wind
  - PV
- 14:00 **General Discussion**
- 15:00 Adjourn & return to hotel
- 18:00 **Dinner with MECO hosted by USEA**  
Café O'Lei at The Dunes  
1333 Maui Lani Parkway  
Kahului, Maui, HI 96732

**DAY 7 – FRIDAY, APRIL 19, 2013: SITE VISITS**

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08:00                      Delegation meets John Hammond & Andrew Palmateer in hotel lobby for transportation to site visit.

AM                              **Site Visit**

- **Kaheawa Wind I & II- Operating High Volume Wind Power with Curtailment**

First Wind's 30 MW Kaheawa Wind was the first operating U.S. wind farm to complete a Habitat Conservation Plan to protect the Kaheawa area's endangered species.

<http://www.firstwind.com/projects/kaheawa-wind-I>

Contact: Ryan Pierce, 808-347-0792

Chris Caffyn, 610-737-7625

12:00                      Lunch

13:00                      **Meeting with Pacific Biodiesel**

Afternoon                      Adjourn & Return to Hotel

**DAY 8 – SATURDAY, APRIL 20, 2013: DELEGATES DEPARTURE**

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