

Discussion:

Public/Private Strategies to Promote Commercialization of Renewable Energy Technologies

- August 20, 2007 - 11:30 am - 1:30 pm - HEI Training Room #2

Co-Sponsors: Hawaii Energy Policy Forum & Hawaiian Electric Company

- 11:30 am - Welcome & Introduction of national panel members: Robbie Alm - Sr. VP for Public Affairs – Hawaiian Electric Company
- 11:35 am - Presentations by Joseph Neuhoff III – U.S. Dept of Commerce: Paul Dickerson – U.S. Dept. of Energy
- 12:05 pm - Discussion; Question & Answer
- 12:35 pm - Introduction of local panel members – Robbie Alm
- 12:40 pm - Presentations by John Rei – Sopogy; Robert Shleser – ClearFuels Technology Inc.; Janice Kato – HTDC
- 1:10 pm - Discussion; Question & Answer
- 1:30 pm - Closing remarks – Robbie Alm or Peter Rosegg (HECO)

Summary Notes:

Attendees:

Representatives from HI Dept of Agriculture; Agribusiness Development Corp.; University of Hawaii Hawaii Natural Energy Institute, College of Tropical Agriculture and Human Resources, UH Social Sciences Public Policy Center, Arctas Capital Group; Dept. of Education - Auxiliary Services Branch; Carlsmith Ball LLP; CEROS; ClearFuels Technology Inc.; CRAI; CTC/NDCEE; Dept. of Business, Economic Development & Tourism; College of Ag, UH – Hilo; Division of Consumer Advocacy; DLNR, Land Division; eHawaii.gov; Enterprise Honolulu; Environment Hawaii; Hawai'i BioEnergy LLC; Hawaii Agriculture Research Center; Hawaii Commercial & Sugar Co.; Hawaii Solar Energy Association; Hawaii Strategic Development Corporation; Hawaiian Electric Company, Inc.; High Technology Development Corporation; Hong Kong, China, Hawaii Chamber of Commerce; Hawaii Renewable

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Energy Alliance, Imperium Renewables, Jody Allione Company, Kauai Island Utility Cooperative, Lawrence Live National Lab, Lockheed Martin, Makai Ocean Engineering, McCorriston, Miho, Miller, Mukai, National Renewable Lab, Office of US Rep Neil Abercrombie, OHA, Pacific Biodiesel, Pacific West Energy LLC, Public Utilities Commission, RealGreenPower, Sopogy, Technology Marketing & Management, U.S. Commercial Service - U.S. Dept. of Commerce, U.S. Department of Energy, UH Economic Research Organization, USDA, USDA/NRCS

Presentations by:

- Joseph O. Neuhoff, III, Director, Office of Energy & Environmental Industries, U.S. Department of Commerce
- Paul Dickerson, COO, Office of Energy Efficiency & Renewable Energy, U.S. Department of Energy
- Janice Kato, COO & Manger of Federal Programs, High Technology Development Corporation
- Robert Shleser, Founder & CTO, ClearFuels Technology, Inc.
- John Rei, Executive VP & COO, Sopogy

From the Office of Energy & Environmental Industries, US DOC:

- International Trade Administration develops domestic and international markets and is developing a global environment for clean energy industries
 - With 1,700 employees and over 250 outside partners, the effort is on developing markets though trade mission such as the Asian Pacific Partnership
- Convening the Washington International Renewable Energy Conference in March 2008 in Washington DC.

From the Office of Energy Efficiency & Renewable Energy, US DOE:

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- The Administration is emphasizing that “being green is not a partisan issue,” as provided in two consecutive state of the state addresses by the President; and is focused on:
 - diversifying our energy supply
 - advancing the energy initiatives, speeding up the goal of replacing old by 20% in 2016
- The Office is
 - breaking down regulatory barriers to commercialization so they can push technologies to market
 - investing \$71 billion in renewable energy technologies
 - focusing investments (\$1.5 billion) on “tipping point” technologies
- Discussion
 - Focus of office is in driving more clean energy into the market rather than on conservation as growing economies
 - US is encouraging distributed generation delivery systems and indigenous resources
 - US is looking to provide incentives for long-term production of renewable energy
 - US strategy is to let the market to promote renewable energy technologies rather than a “top-down” approach unlike EU or Sweden
 - US DoE promotion of new technologies through \$1.5 billion of funding involves:
 - Meetings with experts to assist businesses, eg. biomass solicitation (\$250 million), with 10 subsidiary programs each with a program manager. See website: www.eere.energy.gov
 - Loan Guarantee Program (\$2 billion allocated this year; \$9 billion next year, with solicitation coming out in February-March 2008)
 - Natural Renewable Energy Lab . see website at www.nrel.gov
 - Of the \$1 billion solicitation, 75% is for R&D and 25% for commercialization

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- \$380 million is being used to build six plants to focus on different ethanol feedstocks
 - How is the agriculture-based fuel v food controversy being handled? USDoE is collaborating with Department of Agriculture
 - Export credit assistance policy is being addressed by an Interim Interagency Collaboration relating to clean energy technologies abroad enabling major projects worldwide for American companies to have competitive edge
- John Rei, Sopogy
 - Presented Sopogy's concentrated solar power (CSP) technology
 - Currently building a demonstration model at NREL
- Bob Shleser, Clear Fuels
 - Presented background on ethanol issues
 - Currently using Pearson technology at Gay & Robinson
 - Working with HNEI and DOE on reformation of biomass to hydrogen
 - MSW opportunities
- Janice Kato, High Technology Development Corp
 - Small Business Innovation Research Program. \$25 billion for R & D, with different
 - Provides \$75 million for feasibility study
 - Provides \$750 million for proof of concept/prototype development
 - Commercialization
 - Manufacturing Extension Partnership (MEP)

Biographies of Presenters

Paul Dickerson

Mr. Dickerson is the Chief Operating Officer of the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE). In this capacity, Mr. Dickerson is responsible for day-to-day operational oversight and management of the Office of the Assistant Secretary and for directing the implementation of the EERE priorities, policies, program development and execution, and strategic planning. With its \$1.47 billion budget, EERE invests in a diverse portfolio of energy technologies to provide efficient, clean and renewable energy leading toward a stronger economy, a cleaner environment, and greater energy independence for America.

Mr. Dickerson joins the Department of Energy having served as Chief of Staff for the United States and Foreign Commercial Service (Commercial Service) at the Department of Commerce where he was responsible for day-to-day management of the Commercial Service's worldwide network of 1,700 employees in 260 offices, and for directing the implementation of the Commercial Service's worldwide priorities and policies.

Joseph O. Neuhoff, III

Mr. Neuhoff is the Director of the Office of Energy & Environmental Industries at the U.S. Department of Commerce. In this role, he works closely with government and industry leaders worldwide to advocate for US industry on issues of domestic and international competitiveness. Before joining Commerce, Mr. Neuhoff worked in both the manufacturing and oil and gas sectors. He has a broad background in management and business development, including identification of new commercial opportunities, negotiation of alliances and joint ventures, as well as strategic planning. His last role was business development manager for a medium-sized Dallas, Texas metal fabricator, where he engineered a corporate turnaround of four consecutive quarters of profitability.

Janice Kato

Ms. Kato is Acting Chief Operating Officer and Manager of Federal Programs at the High Technology Development Corporation (HTDC), an agency of the State of Hawaii. She is responsible for managing HTDC's federal programs, including the Hawaii Small Business Innovation Research (SBIR) Matching Grant and Assistance Program. She also serves as Center Director for the Manufacturing Extension Partnership (MEP) in Hawaii, a program of the U.S. Department of Commerce's National Institute of Standards and Technology.

Ms. Kato oversees the provision of technical assistance to Hawaii SBIR and manufacturing firms; education and training on accessing technology R&D funding opportunities; and commercialization acceleration and business process improvement consulting for small technology businesses. In her thirteen years with HTDC she has also served as Business Development & Marketing Manager. Prior to her employment with the state, she was Business Development Manager at the Economic Development Corporation of Honolulu.

John Rei

Mr. Rei is the Executive Vice President & Chief Operating Officer for Sopogy. He brings over 13 years of strong operational leadership and management experience to the Sopogy team. In his 5 years as a management consultant with Booz Allen Hamilton, he provided strategic market analysis and business development expertise focused on Hawaii and the Asia Pacific region, most recently in renewable energy initiatives with State and Federal government agencies. Previously, he served as a Captain in the U.S. Army Special Forces. Mr. Rei graduated in the top 10% of his class with a B.S. in Aerospace Engineering from the United States Military Academy at West Point, and received his M.B.A. from Harvard Business School where his studies focused on operations strategy and general management.

Robert Shleser

Dr. Shleser is a founder and the Chief Technical Officer of ClearFuels Technology Inc. ClearFuels is working with Hawaii's sugar industry to demonstrate and implement technology to convert excess fiber (bagasse) to ethanol. Dr. Shleser has a BS in Agriculture and a Ph.D. in Biophysics from Purdue University. He is the author of the 1993 DBEDT report "Ethanol Production in Hawaii". During the period 1994-96, he managed the Sustainable Biomass Energy Program at the Pacific International Center for High Technology Research (PICHTR) evaluating technologies that might use waste biomass to produce ethanol as a means of improve to the economic performance of sugar production in Hawaii.