

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE STATE OF HAWAII
AND
THE U.S. DEPARTMENT OF ENERGY**

I. Background

The State of Hawaii depends on imported fossil fuels to meet over 90 percent of its energy needs. This dependence leaves Hawaii vulnerable to supply disruptions and high energy prices with estimates showing that every 10 percent increase in world oil prices results in a 0.5 percent reduction in the State's GDP.

At the same time, the islands of Hawaii have abundant natural resources, including wind, sunshine, and geothermal sources for electricity generation, and land for energy crops that can be refined into biofuels to address transportation needs. Economic and culturally sensitive use of natural resources can provide energy supply security and price stability for the people of Hawaii as well as significant environmental benefits and economic growth opportunities. Successfully developing Hawaii's energy economy will make the State a global model for achieving a sustainable, clean, flexible, and economically vibrant energy future.

The State, counties, utilities, private sector, non-governmental organizations, and other entities are taking steps to decrease State-wide energy use through the investment in and utilization of efficiency technologies while also increasing development of renewable energy projects. Projections indicate that current plans and development activities could result in approximately 20 percent of the electric energy supply generated from renewable resources by 2020. However, even achievement of this goal will still leave the State heavily dependent on imported fossil fuels and subject to supply disruptions.

It is estimated that Hawaii can potentially meet between 60 and 70 percent of its future energy needs from clean, renewable energy sources. However, achieving this level market of penetration will require substantive transformation of the financial, regulatory, legal, and institutional systems that govern energy planning and delivery within the State.

II. Purpose

The purpose of this Memorandum of Understanding (MOU) is to establish a long-term partnership between the State of Hawaii and the U.S. Department of Energy (DOE) that will result in a fundamental and sustained transformation in the way in which renewable energy efficiency resources are planned and used in the State. Successful development and execution of the objectives contemplated in this partnership will provide a replicable global model for achieving similar results.

The DOE-Hawaii Partnership will build upon the dynamic, ongoing work of public and private organizations at the State, county, and grassroots levels in order to achieve several key goals:

- *To define the structural transformation* that will need to occur to transition the State to a clean energy dominated economy
- *To demonstrate and foster innovation* in the use of clean energy technologies, financing methodologies, and enabling policies designed to accelerate social, economic and political acceptance of a clean energy dominated economy
- *To create opportunity at all levels of society* that ensures wide-spread distribution of the benefits resulting from the transition to a clean, sustainable energy State
- *To establish an “open source” learning model* for others seeking to achieve similar goals
- *To build the workforce with crosscutting skills* to enable and support a clean energy economy.

III. Collaboration

The State of Hawaii and DOE will each accept the following roles and responsibilities to meet the goals of this MOU to the extent practical and authorized by law to:

(A) Together

- Agree on near-term goals that demonstrate the accelerated deployment strategies anticipated herein and work collaboratively to support the implementation of these goals
- Develop a set of intended outcomes and designate working groups to produce long-term clean energy deployment plans in each of the major energy performance areas articulated in the Appendix to this MOU
- Designate points of contact for overall collaboration, as well as for each of the energy performance areas listed below
- Produce strategic plans for review and comment by the public
- Support communications and education campaigns that inform consumers, businesses, and major stakeholders in Hawaii of the goals and benefits of this initiative.

(B) DOE

- Serve as a conduit between the State of Hawaii and the appropriate organizational entities (such as DOE national labs, Federal programs, research and development entities, and operations organizations) that can facilitate the strategic planning process and contribute to the execution of core activities within each of the energy performance areas

- Designate a lead for each energy performance working group and cross-cutting issue working group responsible for working with the State to coordinate the activities of the working group
- Provide technical assistance to the State for producing the technical and economic tools necessary to realize the goals of the initiative, as well as coordinate pilot activities to enhance the sustainability of these activities
- Facilitate participation of national, non-governmental entities in the initiative.

(C) State of Hawaii

- Identify the critical State-based stakeholders needed to participate in the working groups
- Establish the State-mandated processes needed to review and ultimately enact the policies, educational programs, and other provisions of the strategic plans within each of the energy performance areas listed below
- Promote the goals and recommendations of the working groups to consumers, businesses, and other organizations within the State to ensure that the transformational goals are broadly understood and embraced by the greatest cross section of the State's population possible
- Develop the technical and economic tools necessary to realize the goals of the initiative.

Additional details regarding plans for implementing this MOU are set forth in the attached Appendix, entitled "Structure and Time Frames the DOE-Hawaii Clean Energy Partnership." The Appendix is hereby incorporated by reference in this MOU and is subject to all terms thereof.

IV. General

- (A) This MOU and the attached Appendix are strictly for internal management use of each of the parties. It is not legally enforceable and shall not be construed to create any legal obligation on the part of either party. This MOU and the attached Appendix shall not be construed to provide a private right or cause of action for or by any person or entity.
- (B) This MOU and the attached Appendix can be terminated by either party at any time by providing notice in writing to the other party.
- (C) This MOU and the attached Appendix in no way restrict either of the parties from participating in any activity with other public or private agencies, organizations or individuals.
- (D) This MOU and the attached Appendix are neither fiscal nor funds obligation documents. Nothing in this MOU authorizes or is intended to obligate the parties to expend, exchange, or reimburse funds, services, or supplies, or transfer or receive anything of value.
- (E) This MOU and the attached Appendix shall not be construed to impact procurement or financial assistance activities of either DOE or the State of Hawaii.

The Department of Energy enters into this MOU under the authority of section 646 of the Department of Energy Organization Act (Pub. L. 95-91, as amended; 42 U.S.C. § 7256).

All agreements herein are subject to, and will be carried out in compliance with, all applicable laws, regulations and other legal requirements.

DEPARTMENT OF ENERGY

THE STATE OF HAWAII

By_____

By_____

Print Name:_____

Print Name:_____

Title:_____

Title:_____

Structure and Time Frames for the DOE-Hawaii Clean Energy Partnership

The joint actions by Hawaii and DOE under consideration will fall into several categories:

1. Establishment of Short-, Medium- and Long-Term Clean Energy Deployment Plans (2008-on)

Hawaii and DOE plan to establish working groups in each of the energy and cross-cutting focus areas identified below. The objective of these groups will be to define, in specific detail, the structural, technical, regulatory, financial and other barriers that would prevent the state from achieving—and maintaining—its clean energy potential, as defined in this document.

Energy Performance Working Groups will address:

- ***End-use efficiency***, with the ultimate goal of achieving zero net-energy buildings and communities, and dramatic reductions in other significant end-use areas, including military bases and installations;
- ***Electric generation***, including expanding and optimizing the use of renewable energy at central and remote locations, improving generation efficiency at existing plants, and facilitating the installation of distributed renewable generation across the State;
- ***Energy delivery***, including transmission and distribution improvements, grid management improvements, and energy storage to ensure that the existing and future infrastructure facilitates optimal use of renewable resources and readily adapts to and incorporates new developments in system planning and transmission technologies while maintaining system reliability; and
- ***Transportation***, including the establishment of a long-term, sustainable strategy for the production, distribution, and use of alternative transportation fuels, thereby accelerating the adoption of advanced vehicle technologies such as plug-in hybrids, and promoting mass transit.

Cross-Cutting Issue Working Groups will consider addressing:

- ***Technology integration***, including consideration of current clean energy technologies that have been demonstrated in Hawaii and elsewhere, state of the art technologies that have not yet been demonstrated on the commercial scale, integration of transportation and electricity energy systems, and solutions for technology reliability and economic viability;

- ***Creating sustained sources of financing***, with particular emphasis on developing innovative public and private financing vehicles for alternative energy sources and clean technologies at the state and county levels; and
- ***Policy and regulatory mechanisms***, including design and enactment of comprehensive regulatory mechanisms that provide appropriate incentives for all stakeholders in the energy supply chain to proactively transition to a renewable energy-based future.

The working groups will be co-chaired by the State and DOE, with the mandate to produce two-, five- and ten-year operational plans to transform the investment in and use of energy resources in each energy performance area. These plans will include date-specific goals for major actions and mechanisms for leveraging the expertise, creativity, and resources of the major stakeholders.

The planned timeline for producing and executing the strategic plans is as follows:

- **January 2008:** Launch DOE-Hawaii Partnership and establish working groups in each of the working group areas outlined above.
- **March 2008:** Issue draft strategic implementation plans in each of the working group areas.
- **June 2008:** Issue final strategic implementation plans that include a set of initial actions needed to jump start activity in each of the energy performance areas, two-, five- and ten-year goals, and specific actions that will be taken to meet the transformational goals required in each of the major areas.

2. Institutionalization of Financial, Policy, and Regulatory Mechanisms Needed to Transition to a Clean Energy Future (2009-on)

The results of the deployment planning and pilot activities articulated in the first two stages of this initiative should identify a set of financial, regulatory, and policy activities that should be pursued in Hawaii over the long-term to ensure a sustainable energy future. In addition, working groups may identify key education and training activities that are needed to develop and maintain well-functioning energy infrastructure on a very large scale in each of the Hawaiian islands. Through this process, the State and DOE agree to have a standing committee to identify these needs and to promote their adoption by the relevant state and/or federal agencies involved.

3. Communicating the Goals, Benefits, and Accomplishments of this Partnership with Citizens of Hawaii, the United States, and the Pacific Rim (2007-on)

Both parties will seek to work collaboratively to establish multi-stakeholder outreach campaigns that highlight the economic, environmental, security, and other benefits of the transition to a clean energy future in Hawaii. These campaigns should be on-going throughout the process and specifically designed to provide pertinent, actionable information to consumer, trade, education, business, and other groups in Hawaii as well as throughout the U.S., the Pacific Rim, and the world.