

Energy-Related Policies, Agreements and Legislation

Movement of Petroleum to Hawaii - 2006
Barrels per Day - Average (P)

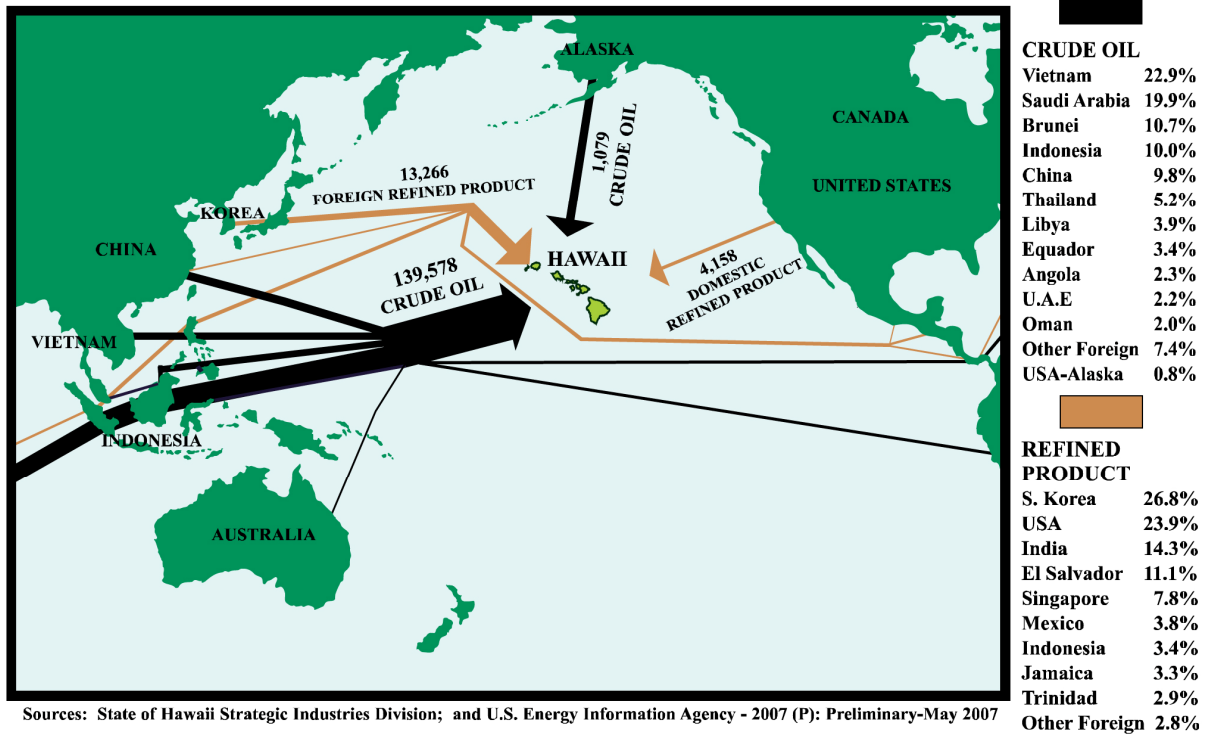
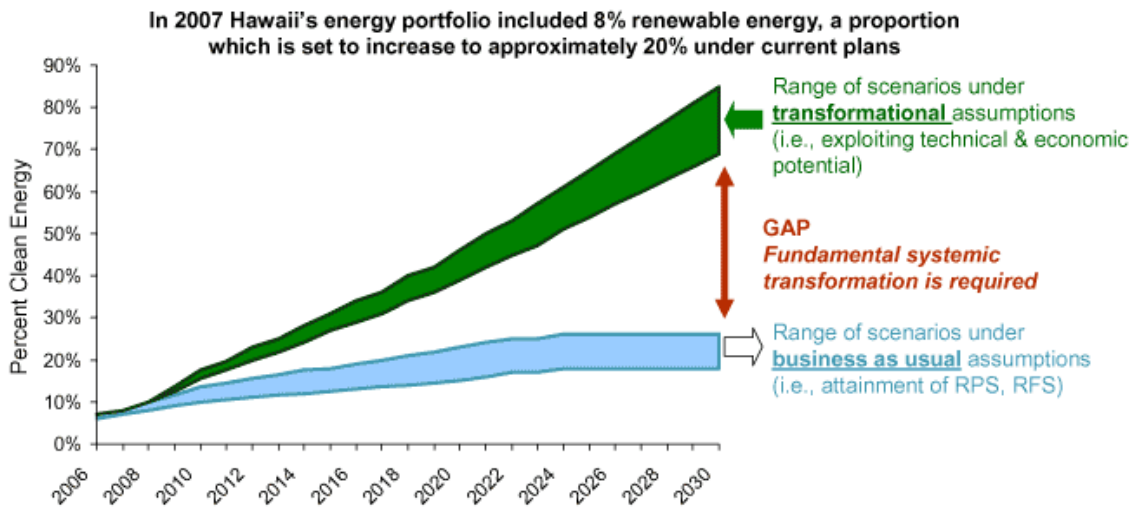


Image: Image from the State of Hawai'i [Energy Resources Coordinator 2007 Annual Report](#), courtesy of the State of Hawai'i Department of Business, Economic Development & Tourism ([DBEDT Website](#)).

Hawai'i is the most oil-dependent state in the country, relying on imported petroleum products to satisfy roughly 90% of our energy needs. On January 31, 2008, Hawai'i Governor Linda Lingle signed a [Memorandum of Understanding](#) with the U.S. Department of Energy creating the [Hawai'i - Department of Energy \(DOE\) Clean Energy Initiative](#). The Hawai'i Clean Energy Initiative aims to reduce the state's 90% dependence on imported oil to just 30% by 2030. The balance of the state's energy needs will be made up by "clean" energy sources.

Achieving this ambitious goal will lower energy costs, free up billions of energy dollars which are currently leaving the state to remain here within the islands' economies, bolster Hawai'i's energy self-sufficiency and security and reduce greenhouse gas emissions.

Hawaii needs to transition to an economy powered by clean energy, instead of imported oil...



...but doing so will require a substantive transformation of regulatory, financial, and institutional systems



Image: Courtesy of the [DBEDT Website](#).

The key goals of the Hawai'i Clean Energy Initiative (HCEI) can be summarized as follows:

1) Clean energy should make up 70% of Hawai'i's total energy use by 2030:

- Renewable sources (both new generation and substitution of clean energy for existing fossil fuel sources) should make up 40% of all energy uses by 2025, and
- Energy saved from efficiency, conservation and substitution should make up 30% of the total by 2025.

2) Reduce total energy used for every purpose (transportation and non-transportation uses):

- Flatten per capita energy use by 2015 so that no increases occur beyond this target date, and
- Hold statewide total energy use at 2008 levels (the HCEI baseline year) through 2030.

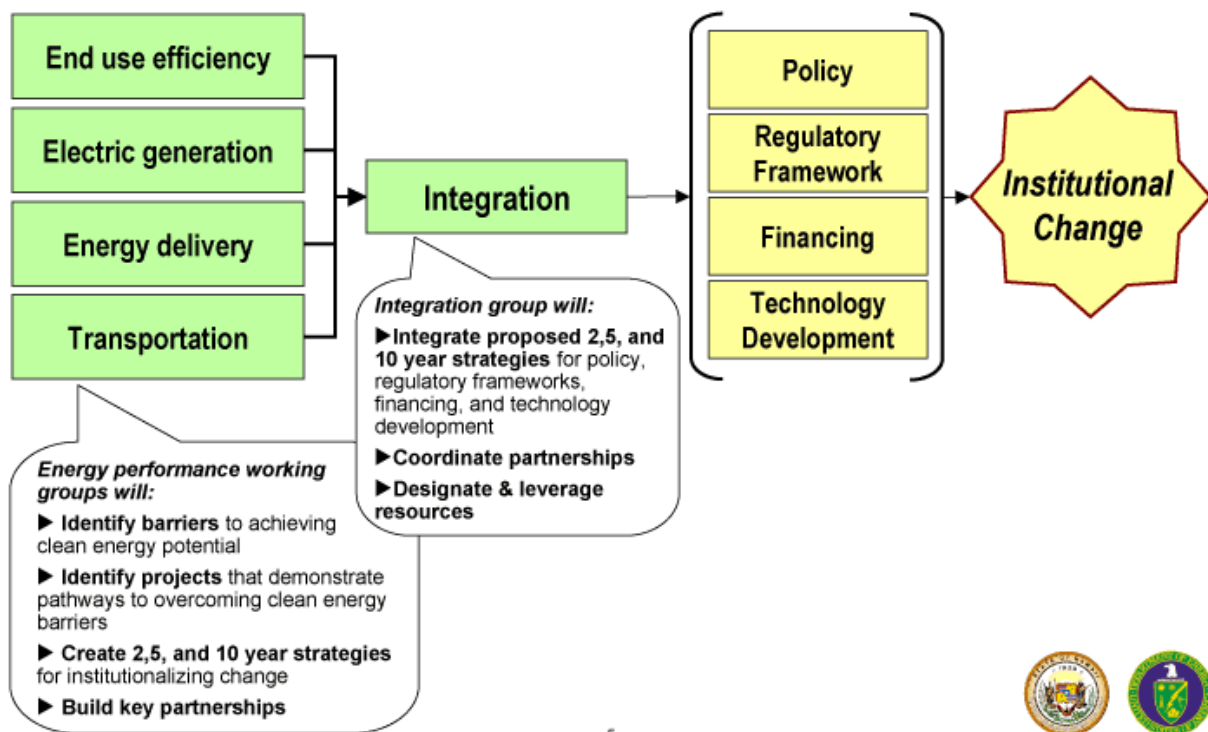
3) Improve energy self-sufficiency and security:

- Total barrels of imported oil and other fuels should be reduced by 50% by 2030, and
- Total energy created in-state should be 50% of the total usage by 2025.

4) Generate economic value:

- Funds exported from Hawai'i for energy imports should drop by 50% by 2025;
- Per capita cost per unit of energy to consumers should flatten or drop within 10 years;
- Electricity costs should be delinked from oil prices (in other words, the electricity price index should remain flat or grow slowly, even when oil prices go up);
- New jobs should be created in the clean energy sector; and
- Capital should be invested in clean energy.

The structural implementation plan will outline strategic changes needed in Hawaii's policy, regulatory, financial, & technology structures



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Image: Courtesy of the [DBEDT Website](#).

In order to achieve the HCEI goals, the U.S. Department of Energy (DOE) is working with the State DOE and with the Public Utilities Commission (PUC) on an incentive and regulatory framework for the state that will ensure a larger percentage of renewable generation and greater energy efficiency. The following key elements of this regulatory and policy framework is under discussion, but they have not yet been adopted by the PUC:

- Creating an Energy Scenario Planning process that replaces the utility's current Integrated Resource Planning (IRP) process.
- Having the utilities conduct detailed system studies every three years to produce Locational Value Maps that will guide geographic targeting and solicitation and location-specific

compensation for new energy efficiency, demand response, distributed generation and renewable substitution.

- Requiring utilities to offer a green energy tariff that customers can buy on a voluntary basis.
- Creating a program for tradable Renewable Energy Credits that will be used for compliance with voluntary Green Energy Tariffs and the utilities' Renewable Portfolio Standard.
- Revising the Renewable Portfolio Standard to exclude existing renewable generation resources and energy efficiency and to include a set-aside for distributed renewable generation.
- Revising transmission planning processes to include identification of Renewable Energy Zones for preferred renewable generation development sites, with expedited transmission planning, siting, permitting and interconnection for new renewables.
- Creating a Clean Energy Infrastructure Surcharge account to be used as a "Construction Work in Process" mechanism for fast recovery of new utility investments in clean energy-related and grid modernization assets and technologies.
- Including renewable substitution (e.g., solar hot water heating or seawater air conditioning) with energy efficiency provisions administered by a third party administrator.
- Requiring investment in potential studies for energy efficiency, demand response, distributed generation, and renewable substitution, with the goal that Hawai'i invest in all cost-effective energy efficiency and other clean-energy, electric-load reducing technologies.
- Revising existing revenue recovery mechanisms to eliminate the utility's incentive to increase volumetric sales.

Current HCEI efforts are focused on electricity provision in Hawai'i. Natural gas utility rates and practices have not yet been addressed.

The [Hawai'i Energy Policy Forum](#) is assisting with the development of the HCEI policy framework. The Forum is administered by the Social Sciences Public Policy Center at the University of Hawai'i at Mānoa and it is dedicated to achieving the vision of "*smart energy solutions to sustain a healthy, prosperous, and secure Hawai'i.*" [Forum members](#) include representatives from electric utilities, oil and natural gas suppliers, environmental and community groups, renewable energy industry, academia, labor and Federal, State and local government.

In May 2002, UH Mānoa convened many of the major energy stakeholders in Hawai'i in order to develop an energy strategy for the state through the year 2030. This advisory group soon evolved into the Hawai'i Energy Policy Forum. The Forum's first task was to commission scientific studies to obtain baseline information on Hawai'i's energy structure. In December 2003, the Forum convened a Hawai'i Energy Policy Summit to review the results of the baseline studies and to develop a vision and strategy for Hawai'i's energy future. The outcome of this summit was a report titled [Hawai'i at the Crossroads: A Long-Term Energy Strategy](#), which laid out recommendations necessary to meet Hawai'i's long-term energy needs. This report was presented to the State Legislature in 2005.

Primary Energy Sources in Hawaii, 1970-2006, Selected Years

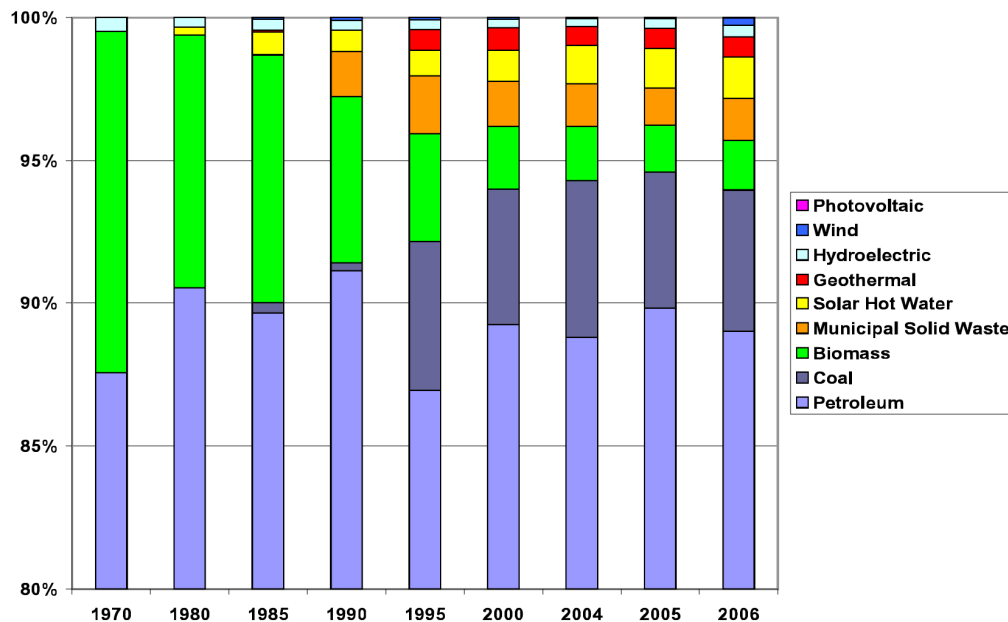


Image: Image from the State of Hawai'i [Energy Resources Coordinator 2007 Annual Report](#), courtesy of the [DBEDT Website](#).

Forum members continue to work together toward the goals articulated in this report, to conduct [research](#) on various policy issues and promising technologies and to provide [briefings to the State Legislature](#) on energy related issues.

Working together with the Hawai'i County Department of Research and Development, with the County's Energy Specialist and with other experts throughout the state; The Kohala Center (TKC) and the School of Forestry and Environmental Studies at Yale University have developed a comprehensive set of [energy recommendations specific to the Island of Hawai'i](#). These recommendations were officially adopted by the Hawai'i County Council in October 2007. The plan recommendations provide a blueprint for Hawai'i Island to transition to greater energy self-sufficiency.

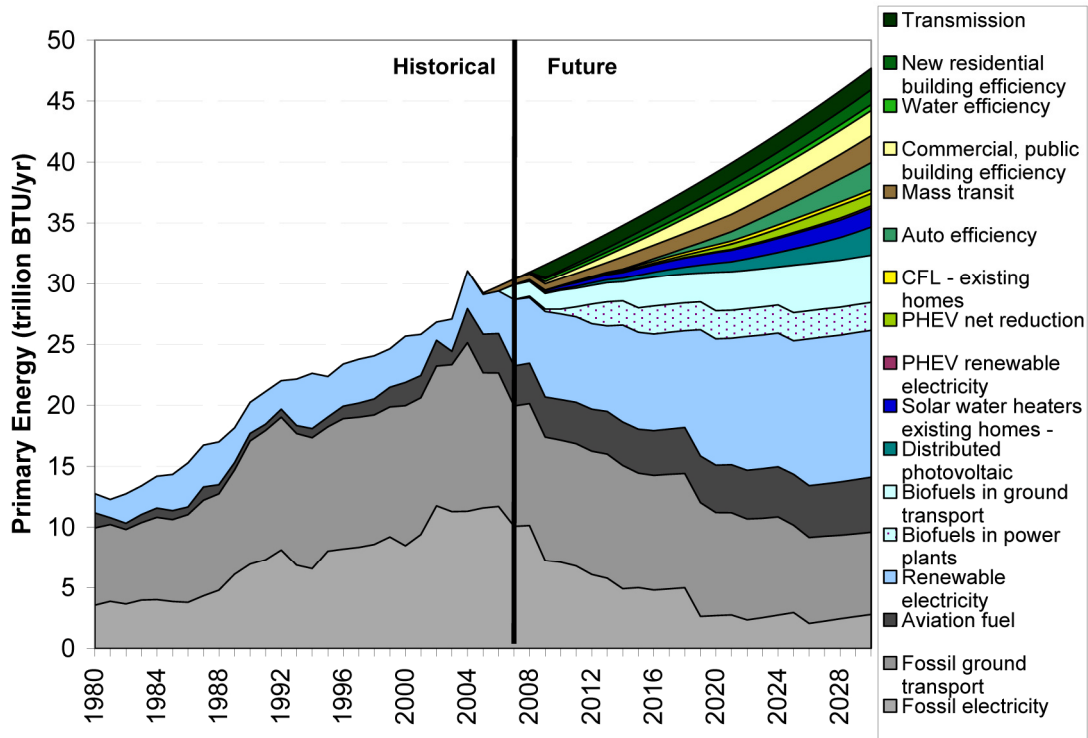


Figure ES-3: Primary energy use in Hawai'i County with future energy efficiency and renewable energy actions

Image: Courtesy of [Analysis and Recommendations for the Hawai'i County Energy Sustainability Plan, October 3, 2007](#).

“The systems analysis and policy recommendations developed with our academic partners are now resulting in positive community and Council action,” reports Betsy Cole, deputy director of The Kohala Center. Key energy-related legislation passed since the start of 2008 includes legislation which:

- Recommends that the County purchase fuel-efficient (average 35 MPH) vehicles for its fleet (Resolution 546-08);
- Recommends that the County install solar water heating systems and photovoltaic systems on new County buildings (Resolution 550-08);
- Recommends that new County facilities comply with the energy-efficient building practices contained in the current International Energy Conservation Code (Resolution 578-08);
- Recommends that the Department of Water Supply seek out ways to increase energy efficiency in its water pumping and delivery systems; seek out ways to use distributed and renewable energy generation to pump and transmit water within its system; and draft a comprehensive water conservation policy which identifies ongoing practices to reduce water and energy demand within the County on a day-to-day basis (Resolution 593-08); and
- Recommends that the Hawai'i County Transit Agency and the County administration draft a strategic plan designed to increase ridership 20% per year through 2015 in order to meet the target established by the Hawai'i County Energy Sustainability Plan; the strategic plan

will include short- and long-term measures to expand the County's public bus service (Resolution 623-08); and

- Recommends that the Department of Environmental Management investigate the feasibility of installing a solar system designed to handle the energy demands for one or more of its wastewater treatment facilities; such analysis should determine the size and type of solar system to be installed, recommended locations for such installation and a financial analysis for determining the value of the County's investment in said system (Resolution 758-08).

In June 2008 TKC convened an [Energy Forum](#), at which island leaders gathered to discuss challenges and opportunities presented by the current energy "crisis." National, State and County leaders spoke at the Forum, and summaries of their talks along with [copies of their presentations](#) are available online.

For The Big Island

- Maximize Your Opportunity with Efficiency to reduce costs
- Insist that Renewable Energy Assets be Developed to Full Potential (HELCO, PUC transformation)
- Insist that Consumer Benefits are Derived from the Shift to Renewable Energy
- Develop Big Island Energy Independence Roadmap to Guide the Policy and Investment Environment
- Work to Gain Support from consumer, environmental, and youth constituencies
- Insist that policymakers take this seriously, hold them accountable

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Image: Courtesy of [Wake Up-The Crisis Is upon Us!](#) - Presentation by Maurice Kaya, Strategic Energy & Management Consultant and former Chief Technology Officer at DBEDT, at the June 6, 2008 [Energy Forum](#).

Prior to the 2009 legislative session, The Kohala Center will help to brief County and State representatives about energy policy and the choices being presented to the legislature and to the Public Utilities Commission. Throughout 2008 and 2009 the Center will continue to collaborate with nonprofit groups throughout Hawai'i and with the State-sponsored HCEI to provide relevant energy information to the press and to citizen groups. "With the right information, we can all make decisions that promote the sustained health and prosperity of our families, our communities, and our islands—and take our place as a model for the world," says Cole.

To get involved with other like-minded individuals who support a more sustainable vision for Hawai'i, visit [Kanu Hawai'i](#). According to their Web site, "Kanu Hawai'i is a movement working to make Hawai'i a model of environmental sustainability, compassionate community and economic

resilience. By practicing island style activism, Kanu members lead by example.” Read articles on the [Kanu Web](#) site archives, covering topics which include renewable energy, *malama ʻāina* or living lightly on the land, using only what we need and reusing more and green building and design.

[Life of the Land](#) (LOL) is a Hawaiʻi-based environmental and community action group which was founded in 1970. The mission of Life of the Land is “to preserve and protect the life of the land through sustainable land-use and energy policies and to promote open government through research, education, advocacy and when necessary, litigation.” On November 3, 2008, LOL filed motions to intervene in the following two PUC (Public Utilities Commission) dockets: *Instituting a Proceeding to Investigate the Implementation Of Feed-In Tariffs* (PUC Docket 2008-0273) ([LOL's Motion to Intervene](#)) and *Instituting a Proceeding To Investigate Implementing a Decoupling Mechanism for HECO, MECO, & HELCO* ([LOL's Motion to Intervene](#)). Learn more about the [history of LOL](#).