



Hawaii Clean Energy Initiative

Hawaiian Electric Companies' Energy Agreement One-Year Progress Update

In October 2008, the Hawaiian Electric Companies joined the Governor of Hawaii; the Hawaii Department of Business, Economic Development and Tourism; and Office of Consumer Advocacy in an energy agreement as part of the Hawaii Clean Energy Initiative.

The agreement – the most aggressive such effort in the nation – aims to move Hawaii decisively away from imported oil for electricity and ground transportation toward diverse, local renewable energy and energy efficiency.

Our goal is energy and economic security for Hawaii and reduced greenhouse gas emissions responsible for the climate change to which our islands are especially vulnerable. Making the needed investments now can provide more stable energy costs in the long-run.

It will require unprecedented cooperation and commitment among individuals, businesses, institutions and government. We need unity of purpose through good and bad times, success and setbacks, no matter whether oil prices go up and down.

This list summarizes some key actions by the Hawaiian Electric Companies in cooperation with others after only one year.

Increased Renewable Portfolio Standards (Act 155 - 2009)

Hawaiian Electric Companies supported placing into law an increased renewable energy requirement of 40 percent of electric sales by 2030 and a new Energy Efficiency Portfolio Standard.

New HCEI proposals submitted to the Hawaii Public Utilities Commission (PUC)

- **Feed-In Tariff (FIT):** Creates standard rates to ease the process for private developers to add renewable energy to Hawaiian Electric Companies' grids. After detailed hearings to obtain input from a broad range of stakeholders, the PUC issued basic principles for such tariffs. Parties to the docket are currently working on next steps to have FIT effective in 2010.
- **Clean Energy Scenario Planning:** Replaces previous integrated resource planning with a broader, more dynamic process to meet future energy needs. Framework development with a broad group of stakeholders is underway.
- **Decoupling:** Changes the financial model for utilities to one that better supports energy conservation and integration of more clean energy rather than one based on electricity sales. Joint company/Consumer Advocate proposal was submitted to PUC. After detailed panel hearings for input from a broad group of stakeholders, the docket is pending PUC decision.
- **Advanced Metering Infrastructure (AMI):** Proposes project to install advanced meters for all customers and upgrade operations systems for smart grid allowing more customer options and improved reliability. PUC deliberations scheduled for 2010.

- **Lifeline Rates:** Proposes electric bill credits for low and fixed income customers.
- **Clean Energy Infrastructure Surcharge:** Proposes a surcharge to help pay for projects needed to support more renewable energy.
- **Pay As You Save (PAYS):** Proposal to expand and make permanent a pilot program to increase solar water heating penetration by financing installations on rented homes was deferred by the PUC for possible incorporation by public benefits fee administrator.
- **PV Host program:** Increases commercially-owned photovoltaic (PV) arrays by allowing utility to lease large roofs and other spaces from customers for PV.

Biofuels progress

- Campbell Industrial Park Generation Station biodiesel unit completed and available for service.
 - Completed contracts for initial supply of biodiesel to conduct air emissions tests and for two-year biodiesel supply for new unit.
- Filed contracts with PUC for supplies of biofuel to conduct tests at Maui Electric Company and Hawaiian Electric's Kahe Power Plant.
- Natural Resources Defense Council policy on procuring sustainably produced biofuel still in place; preference for local biofuels included in contracts.
- Participating in development of State Biofuels Master Plan.
- Continuing to support research on Hawaii-grown biofuel feedstocks, including algae.

Interisland Wind/Undersea Cable project (to import wind power to Oahu from Molokai/Lanai)

- Working with State of Hawaii, First Wind Hawaii and Castle & Cooke on system integration studies, coordinating environmental impact studies, community outreach and public information.
- Created www.interislandwind.com to provide information and receive public input on all aspects of the interisland wind and undersea cable project.

Critical integration work

- Formed a Technical Review Committee, with national and international experts (including from the National Renewable Energy Laboratory), to support the Interisland Wind project.
 - Studying what it will take – through modifications to generators, upgrades to the transmission grid and new technology – to reliably integrate ever increasing amounts of energy from variable renewable sources like sun and wind into our existing system.
- Other parallel integration studies underway to determine technical upgrades needed for specific renewable projects proposed on Oahu, Maui and Hawaii Island.

Complete and upcoming renewable energy projects

- La Ola, 1.2-MW photovoltaic solar energy farm with planned battery back-up system, built by Castle & Cooke to supply electricity to Maui Electric Company on Lanai.
- Holaniku at Keahole Point at the Natural Energy Laboratory of Hawaii Authority on Hawaii Island, planned by Sopogy, Inc. to be a 2 MW utility-scale concentrating solar power farm with thermal energy storage to buffer the variability. First increment in service December 2009.
- Honolulu International Airport Emergency Facility, a partnership to serve both the State of Hawaii Department of Transportation and Hawaiian Electric customers, is to include four biodiesel-powered generators which can provide 8 MW of power to the grid. Planned for service in mid-2011.

Support for other renewable energy projects

- Continuing discussions with and supporting research for future renewable technologies including ocean thermal energy conversion; wave energy; concentrating solar power and others.
- Supporting Honolulu Seawater Air Conditioning.
- Continuing discussions on geothermal energy; expansion of garbage-to-energy projects on Oahu and Neighbor Islands.

Greening transportation

- Made a national pledge with Edison Electric Institute and other utilities to commit to electrifying transportation.
- Agreement with Better Place to support a system of electric vehicle (EV) charging stations and battery swap stations throughout service territories. Coordination and implementation work proceeding.
- Agreement with Phoenix Motorcars to supply EVs for testing as part of Maui Electric Company fleet.
- Working with Idaho National Laboratory and others on EV testing projects.
- Adding hybrid light vehicles and trucks to Hawaiian Electric Companies' fleets.
- Working with Hawaii Automobile Dealers and transportation working groups of Hawaii Clean Energy Initiative and Hawaii Energy Policy Forum.

Other renewable energy projects in progress

400	MW	Lanai/Molokai wind farms
160	MW	Other Oahu projects
30	MW	Hawaii Island projects
40	MW	Maui projects
630	MW	Approximate, or more than 50% of the 1,100 MW envisioned in the HCEI energy agreement