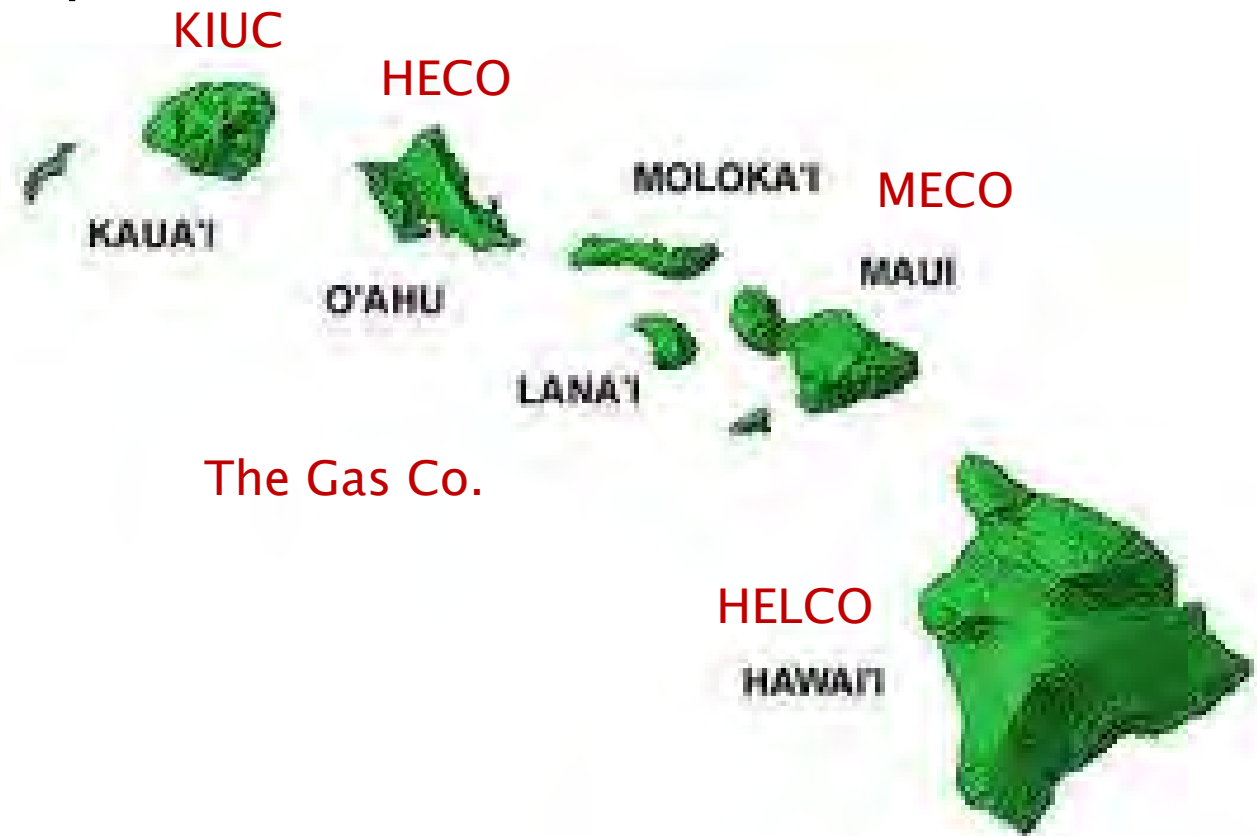


Third Party Electricity Sales in Hawaii

- ▶ Hawaii Utilities
- ▶ Legislative History
- ▶ Regulatory History
- ▶ Stakeholders
- ▶ Results



Hawaii Energy Utilities

▶ Hawaiian Electric Industries, Inc. (HEI)

- Powers ~94% of HI's 1.2M residents
- HECO formed in 1891, went public in 1965, HEI created in 1983 HECO re-org
 - Local bank, insurance group, interisland barge/tug, real estate, wind farm
 - Hawaiian Electric Company, Inc. (HECO) – O`ahu
 - Maui Electric Company, Ltd. (MECO) – Maui, Lana`i, Moloka`i
 - Hawaii Electric Light Company, Inc. (HELCO) – Hawai`i Island

▶ Kauai Island Utility Cooperative (KIUC)

- Powers ~3% of HI's residents (most of Kauai)
- Kauai Electric originally formed in 1905 to build 2.4M hydro plant
- Kauai business group (KIUC) purchased Kauai Electric Co. in 2002
 - One of newest electric cooperatives in U.S. (900 electric coops in U.S.)
 - Not-for-profit organization owned and controlled by ratepayers
 - Aggressive renewable energy penetration goals

▶ The Gas Company

- Powers ~3% of HI's residents (90% customers on Oahu)
- 2.4% renewable generation counts towards Hawaii RPS
- Only natural gas company in U.S. using renewable feedstock
 - Oils and fats from animal/fish/farm waste

Legislative History

- ▶ **Hawaii Public Utilities Commission (1913), Hawaii Statehood (1959)**
- ▶ **Federal Power Act (1935)**
 - Limited Jxn (navigable waters only) + FIT not interstate = FIT without considering FPA issues, no FERC cert.
- ▶ **Public Utilities Regulatory Policies Act (1978)**
 - Many of Hawaii first IPPs gained grid access via PURPA co-gen contracts
- ▶ **Renewable Portfolio Standards Law (2001, 2009, 2011) – HRS 269–91 to 95**
 - 10% by 2010, 15% by 2015, 25% by 2020, 40% by 2030 (>2015, CANNOT include energy displacement)
- ▶ **Net Energy Metering , Act 272 (2001) – HRS 269–101 to 111**
 - Originally capped customer generators at 0.05% of utilities peak demand, PUC increased amount in 2005
- ▶ **HEI/State of Hawaii Energy Agreement (2008) – DOE, Gov, HEI, HECO, DBEDT, CA, HREDV**
- ▶ **Act 162 (2006) – HRS 269–27.2**
 - Removed state requirement that PUC factor avoided costs when pricing non-fossil fuel power contracts
- ▶ **Act 9 (2009) – HRS 269–1**
 - Exempts 3P energy suppliers sited on customer property from definition of “public utility,” regulation
- ▶ **SB2785 (2012)**
 - Establishes regulatory structure for the installation and implementation of an interisland cable system and for the construction of on-island transmission infrastructure
- ▶ **SB2787 (2012)**
 - PUC to (1) develop, adopt, enforce reliability standards and interconnection requirements, (2) contract 3P Hawaii Energy Reliability Administrator, and (3) create electricity reliability surcharge

Regulatory History

- ▶ **Competitive Bidding Framework – Doc. No. 03–0372 (closed Sep. ‘10)**
 - Stimulate wholesale electricity market (was primarily utilities and PURPA “qualified facilities”)
 - HECO (>5MW), MECO (>2.72MW), HELCO (>2.72 MW) must bid for renewable acquisition
 - PUC grants KIUC exemption b/c owners and customers are same, KIUC already competitive bidding
- ▶ **Renewable Energy Portfolio Standards – Doc. No. 2007–0008 (closed Dec. ‘08)**
 - Penalties for energy utilities (HECO, KIUC) failing to meet RPS, \$20/MWh penalty
- ▶ **Intragovernmental Wheeling – Doc. 2007–0176 (open, last filing Mar. ‘11)**
 - PUC to explore ways to allow transmission of power from state seller to customer via 3P transmission
- ▶ **Renewable Energy Infrastructure Program – Doc. No. 2007–0416 (closed Dec. ‘09)**
 - HECO Renewable Energy Inftr. Surcharge: recover costs from Oahu ratepayers for Maui, Hawaii projects
 - KIUC named as party as REIS likely to impact all utilities
- ▶ **Feed-in Tariff – Doc. No. 2008–0273 (open, last filing May ‘12)**
 - Stimulate 3P renewable sales onto grid (result of 2008 HEI/Hawaii Energy Agreement)
 - FIT mechanism established for HECO, Tiers 1&2 issued Sep. ‘09, Tier 3 issued Nov. ‘11
 - KIUC not signatory to Energy Agreement or FIT Docket, uses Schedule 2 Tariff Program (>100kW)
- ▶ **Decoupling – Doc. No. 2008–0274 (closed Jan. ‘11)**
 - Delinked HECO revenues from power sold to encourage more IPP onto grid (HEI/Hawaii Agreement)
 - HECO compensated through revenue balancing rate adjustments approved by PUC (cost, taxes, ROI)
 - KIUC not signatory to Energy Agreement or Decoupling Docket
- ▶ **Hawaiian Electric Rule 14H – Doc. No. 2010–0015 (open, D&O Nov. ‘11)**
 - Requires streamlined IRS review and approval by HECO companies, reliable renewable penetration
- ▶ **Implementation of Reliability Standards – Doc. No. 2011–0206 (open, last filing May ‘11)**
 - HECO to develop standards to reliably integrate high penetration of renewable energy
 - Reliability Standards Working Group (TECH SUPP GRP, TECH REV COMM)

Stakeholders

- ▶ **Hawaii Public Utilities Commission (PUC)** – set rates, determine allowable rate of return for Hawaii public utilities, issue guidelines, act on requests for acquisition, sale, disposition, exchange
- ▶ **Hawaii Consumer Advocate** – “objective advocate” dual role: represent ratepayer interests, while providing audit and analysis services to PUC
- ▶ **DBEDT (Hawaii State Energy Office)** – provide catalyst through investment, policy, and regulatory framework to enable local energy development
- ▶ **Third Party Administrators** – manage/deliver programs/services under PUC oversight (i.e., energy-efficiency, demand-side management, reliability standards), paid by ratepayer surcharge
 - Hawaii Energy (HECO only) –
 - Independent Observer (HECO only) – monitor HECO power purchases
- ▶ **Utilities** – meet RPS goals reliably and cost effectively, generate adequate revenue
- ▶ **Working Groups** – created by state legislature and HCEI efforts
- ▶ **Interveners**
 - DBEDT
 - Life of the Land
 - Hawaii Renewable Energy Alliance
 - Blue Planet
 - Haiku Design
 - Renewable Energy Developers
 - Industry Groups
 - Interested Public

The Results

- ▶ **47.4 MW Net Energy Metering systems installed statewide***
- ▶ **Diversity of PPAs submitted to PUC for review and approval**
- ▶ **HECO Companies 2011 consolidated RPS: 24.5% of total sales****
 - One RFP issued by HECO for 100MW (2008), HECO 200MW+ RFP to be issued 2012
 - 12% Renewable Generation (most produced by independent power producers)
 - 12.5% Displacement tech, Demand-side Mgt, Distributed Generation (DG)/Energy Efficiency (EE)
 - HECO – 19.8% (13.1% EE > DG, 6.7% MSW > wind > biofuel > PV)
 - MECO – 29.1% (12% EE > DG, 17.1% wind > biomass > biofuel > hydro > PV)
 - HELCO – 49.9% (8.8% EE > DG, 41.1% geothermal > wind > hydro > PV)
- ▶ **KIUC 2011 consolidated RPS : 14.5% of total sales**
 - 8.76% Renewable Generation
 - 5.69% % Displacement tech, Demand-side Mgt, Distributed Generation (DG)/Energy Efficiency (EE)
- ▶ **Electricity rates throughout state continue to rise**
 - April 2011 average statewide residential rate: \$0.37/kWh, April 2012 average: \$0.39/kWh
- ▶ **Robust solar installation and “green jobs” industry**
 - Based on permits issued: 20% of construction work is solar related
- ▶ **Public cautiously supportive of renewables**
 - Environmental, land use, siting impacts
 - Equitable cost distribution (tax credits, revenue, maintenance)

Sources: PUC Annual Report (November 2011), 2011 HECO Renewable Portfolio Standard Status Report, KIUC Annual RPS Report (2011), Counties

* Hawaii statewide electricity demand is approx. 1.7 GW (statewide grid capacity approx. 2.35 GW)

** Increased 4% from 2010 (20.5%), total HECO/MECO/HELCO sales in 2011: 9.5M MWh

*** Increased 2% from 2010 (12.39%), total KIUC sales in 2011: 460,971 MWh