REGULATOR’S PERSPECTIVE ON RENEWABLE ENERGY PORTFOLIO STANDARDS AND ENERGY EFFICIENCY

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Background

Regulatory Authority

- **General supervisory power over public utilities under Chapter 269, HRS.** HRS §269-6(a).

- “The public utilities commission may consider the need for increased renewable energy use in exercising its authority under this chapter.” HRS §269-6(b). Act 177 (SLH 2007).
Traditional Regulatory Objectives, Ch. 269 HRS

- **Reliable Electricity Service**
- **Just and Reasonable Rates**
- **Fair Opportunity to Earn Reasonable Rate of Return**
Balancing Traditional Regulatory Objectives

Reasonable Return ($) on Investment for Utility

Reasonable Rates ($) for Customers
Hawaii’s Dependence on Oil

Hawaii Fuel Mix

Percent of Fuel Used for Electricity Generation by HECO in 2007

Data Source: www.heco.com
Hawaii’s Fossil Fuel Dependence

Percent of Fossil Fuel and Renewable Energy Used in Electricity Generation 2007

Data Source: www.heco.com
Oil Price Volatility

OIL PRICES (WTI)

Data Source: U.S. DOE Energy Information Administration
http://tonto.eia.doe.gov/dnav/pet/pet_pri_spt_s1_m.htm
Vulnerability to Oil Price Volatility

EFFECTIVE RATES

Data Source: HECO Companies’ “Effective Rate Summaries” Reports
KIUC Fuel and Purchased Power Rate Adjustment Reports
Vulnerability to Oil Price Volatility

EFFECTIVE RATES AND OIL PRICE CHANGES
SINCE JANUARY 1, 2007

Data Source: HECO Companies’ “Effective Rate Summaries” Reports
KIUC Fuel and Purchased Power Rate Adjustment Reports
U.S. DOE Energy Information Administration
http://tonto.eia.doe.gov/dnav/pet/pet_pri_spt_s1_m.htm
Price of Oil Since 1980s

Daily Cushing, OK WTI Spot Price FOB

Source: U.S. Energy Information Administration
Climate Change
(Global Warming)
Priority Policy and Regulatory Objectives

• **Energy Security**
  – Reduce Imported Oil Dependence
  – Price Stability
  – Supply Security

• **Climate Change (Global Warming)**
  – Reduce Green House Gas Emissions
  – Reduce Fossil Fuel Use
Primary Energy Strategies

- **Energy Efficiency:**
  - Maximize Cost-Effective Energy Efficiency Programs

- **Increase Renewable Energy Generation**
  - Wind
  - Solar
  - Geothermal
  - Wave, OTEC, Biofuels, & Others
Maximize Energy Efficiency Aggressively

- **2004 HECO Rate Case 04-0113 DSM Application Bifurcated**
- **Energy Efficiency Docket 05-0069**
- **Public Benefits Fee, Act 162 (2006), HRS §269-121.**
- **Energy Efficiency Program Administrator Docket 2007-323**
Establishing Energy Policy to Increase RE Generation

- **Renewable Portfolio Standards**
  - Standards
  - Goals

- **Broad Policy Tool (Weapon)**
  - Requires % of RE Generation
  - Communicates Policy to Change
Establishing Policy to Increase RE Generation: RPS

- **RPS (includes EE), HRS §269-92**
  - 10% Renewable Energy by 2010
  - 15% Renewable Energy by 2015
  - 20% Renewable Energy by 2020

- **Penalties Established for RPS at $20 per MWh of deficiency.**
  (Order 12/19/2008 Docket 2007-0008)
BALANCING TRADITIONAL OBJECTIVES WITH NEW ENERGY POLICY

Traditional Objectives
- Reasonable Rates
- Reasonable Returns

New Energy Policy
- Energy Security
- Climate Change
- RPS & EE
Kaheawa Wind
Maui
Hawi Wind
Big Island
La Ola Solar Farm
Lanai
La Ola Solar Farm
Lanai
Renewable Energy Progress
Others on the Horizon

• Sea Water Air Conditioning
• Ocean Thermal Energy Conversion (OTEC)
• Biomass
• Biofuels
• Wave
• Others TBA
ALOHA