

US EPA ARCHIVE DOCUMENT



Hawaii Energy

Hawaii Energy Efficiency Program

Efficiency and Conservation The Other Side of Hawaii's Energy Equation

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Hawaii Energy

The Problem

Los Angeles

Posted on: Thursday, March 31, 2008

'War on potholes' to cost \$70M

Reporting a pothole

Sugar Leaving

Sunday, February 04, 2007

Honolulu potholes visible from space

Pineapple Gone



BUSINESS

Posted on: Sunday, August 31, 2008

Airlines prepare cutbacks on routes, flight frequency

LC

Posted



9/11 MOMENTS OF SILENCE



'A struggle for civilization'

Hawaii gas again stuck on high

Tourism Down



Honolulu > News > Industries > Travel - Airlines & Airports

Aloha Airlines to stop flying Monday night; CEO calls it 'an incredibly dark day'

Pacific Business News (Honolulu) - by Jim Kelly



HECO TALKS

Power outage necessary to save system, utility says

The need for WARP SPEED . . .



Hawaii Energy

The Problem / The Fix

Highest Energy
Costs in US

MOTIVATION

Totally
Dependent on
Imported Oil

Mild
Climate

OPPORTUNITY

Diverse
Renewable
Resources

Up to 50% of the energy used for air-conditioning is used just to remove humidity.



Hawaii Energy

The Fix

- Hawaii Clean Energy Initiative

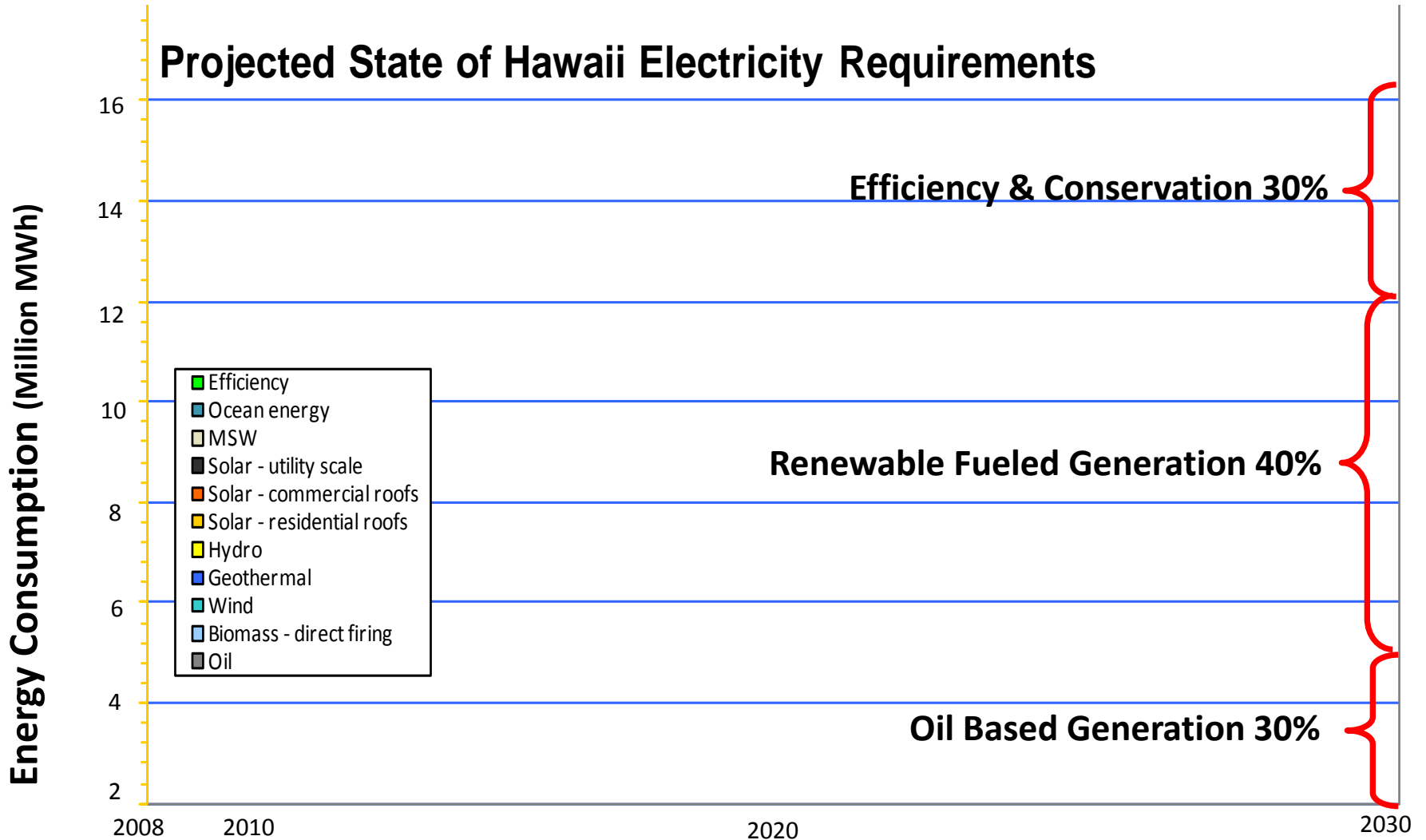


Hawaii's diverse renewable resources will take considerable time to develop.



Hawaii Energy

The Fix



A 100W light bulb on for a full year consumes about 2 barrels of oil.



Hawaii Energy

The Fix

Enhanced Energy Awareness



Hawaii Energy

The Fix – Interactive Website

The screenshot shows the Hawaii Energy website with a blue header. The main navigation menu includes: HOME, WHY ENERGY EFFICIENCY?, ENERGY SOLUTIONS, REBATES, ABOUT THE PROGRAM, FIND A VENDOR, FORUM, NEWS & EVENTS, and INNOVATION. The main content area features a large banner with a lightbulb and a woman's face, with the text "Not more energy. Smarter energy. Ideas for Energy Solutions". Below the banner are sections for "Energy Solutions for your home" and "Energy Solutions for your business". To the right, there are three promotional boxes: "Login to MyEnergy" (Track Your Usage, Join the Effort), "Incandescent Bulb? Not So Smart." (Watch Our New 15 Second Spot), and "Be Smart. Save Money." (Download Coupons to Start Saving Now). Below the banner is a navigation bar for user types: Home Owners, Renters, Property Managers, Business Owners, and Vendors. The main content area is divided into two columns. The left column is titled "Hawaii's Energy Progress" and includes a "Electric Consumption Graph" showing a line graph with months from Mar to Sep, and a "Cooling Degrees Days" section. The right column is titled "News & Events" and features a news article titled "Honolulu energy use increases by 15% since 2 years ago" dated September 14, 2009, and another article titled "2009 PCEA Conference & Expo in October" dated September 3, 2009. The footer contains copyright information for 2009 Hawaii Energy, contact links, and social media links for Facebook and Twitter.

- Interactive website
- Paperless on-line forms
- Peer comparisons
- Latest energy news
- Vendor advertising
- One-stop shop for energy info
- Customer blogs and critiques
- Links to other similar efforts

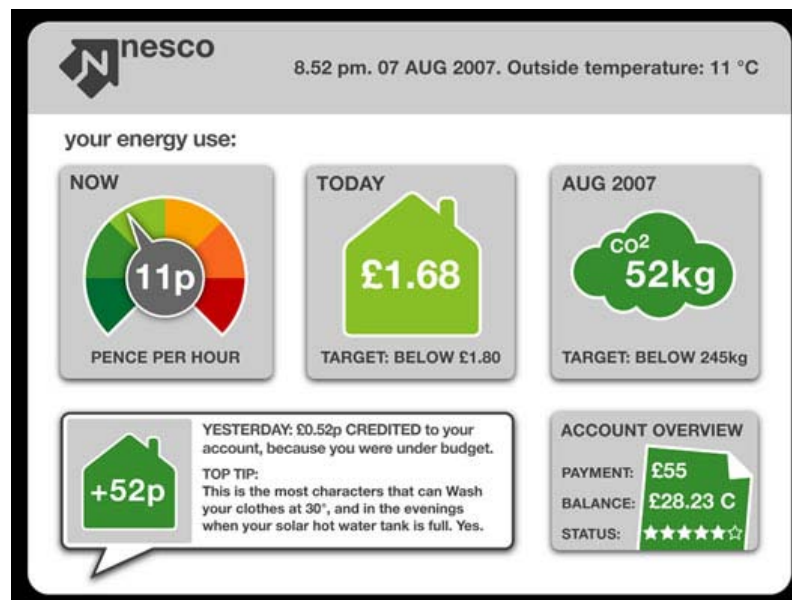


Hawaii Energy

The Fix – Enhanced EE Program

• Efficiency Program Overview

- Energy efficiency and renewable energy promotion
- Funded by electric utility rate payers
- Using financial incentives, market outreach and education
- All market sectors:
 - Residential
 - Commercial
 - Industrial
 - Government

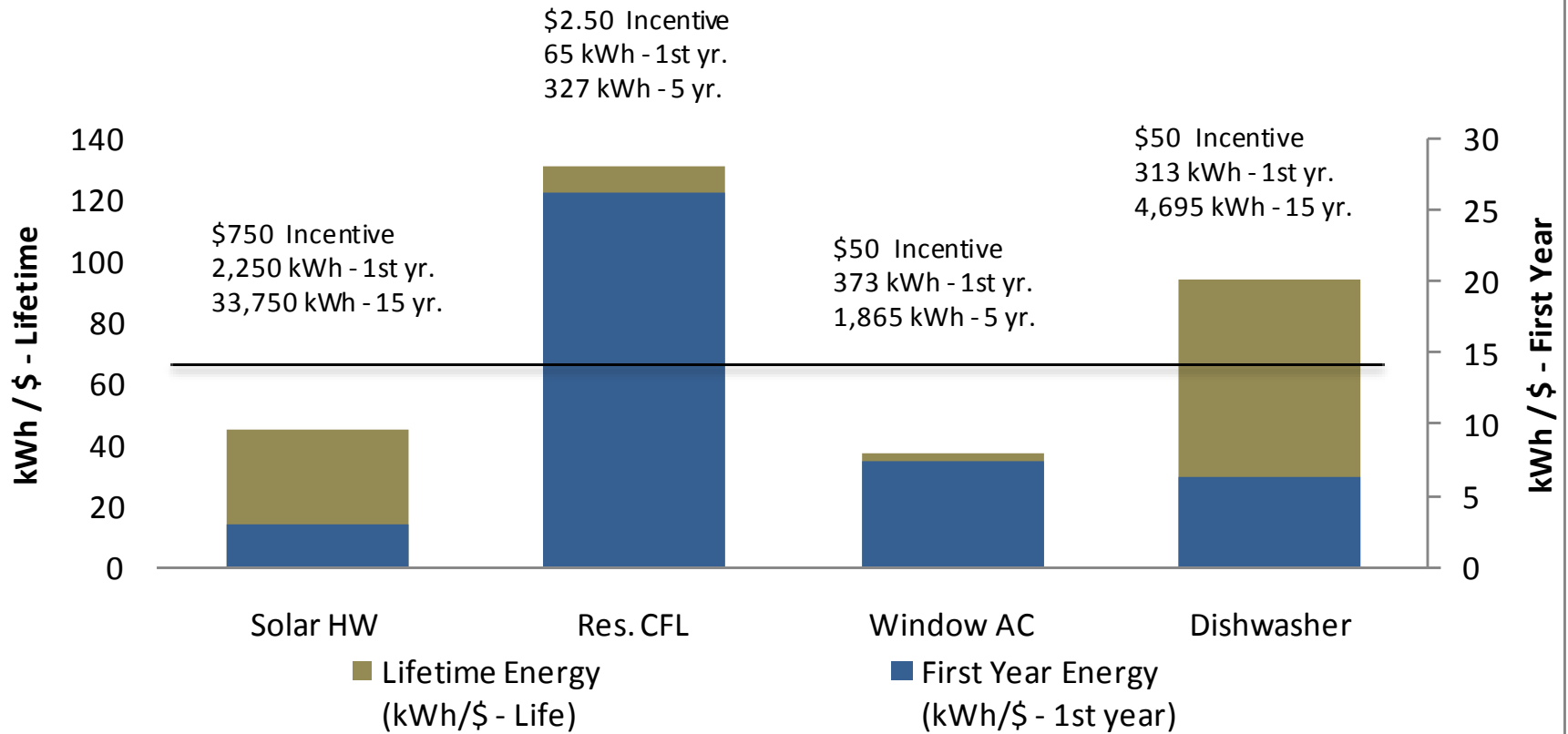


Measurement is fundamental to real energy awareness.



The Fix

Energy Saved per Dollar Invested





Hawaii Energy

The Fix - Program Evolution

Existing

- Prescribed Measures
- Pre-Set Rebates
- Pre-Set Savings
- Widely Available Products



Future

- Motivating Behavior Changes
- Individual Energy Awareness
- Market Supplier Engagement
- Peer group Comparisons
- Whole Building Approach
- Renewable Technologies
- Targeted Audits
- Tune-Ups
- Custom Incentives



Market Intervention Strategies

- Natural markets to promote program activity
- Supply “channels”
- Business “clusters” of end-use groups
- Targeted vs. “Shotgun” approaches
- Market assessments
- Building Codes advancement



The Fix - HVAC Incentives

Prescriptive Incentives

- Room Window Units
- Package Units & Splits
- Water Cooled Chillers
- Premium Efficient Motors
- Domestic Water Pump Systems
- VFD – AHU Applications
- VFD – Chilled Water / Condenser Water Applications



The Fix - Customized Incentives

- \$ 0.05 / kWh for first year savings
- \$125 / kW demand savings between 5 and 9 p.m.
- Up to 50% of Incremental Cost
- May require modeling and metering
- Examples - Forced Draft to Induced Draft Towers, Chilled Water Loop conversions, Outside Air Control etc.



The Fix - Energy Studies

- 50% matching up to \$10,000
- Load / Existing Performance Measurements
- Modeling new systems
- Actionable recommendations



The Fix – Design Assistance

- 50% matching up to \$10,000
- Above and beyond Code Requirements
- Targeted Energy Efficiency Levels
- Actionable recommendations



The Fix - Service Incentive

Residential AC Service Program

- Registered Contractors
- Central Ducted AC Systems



The Fix - HVAC Potential Items

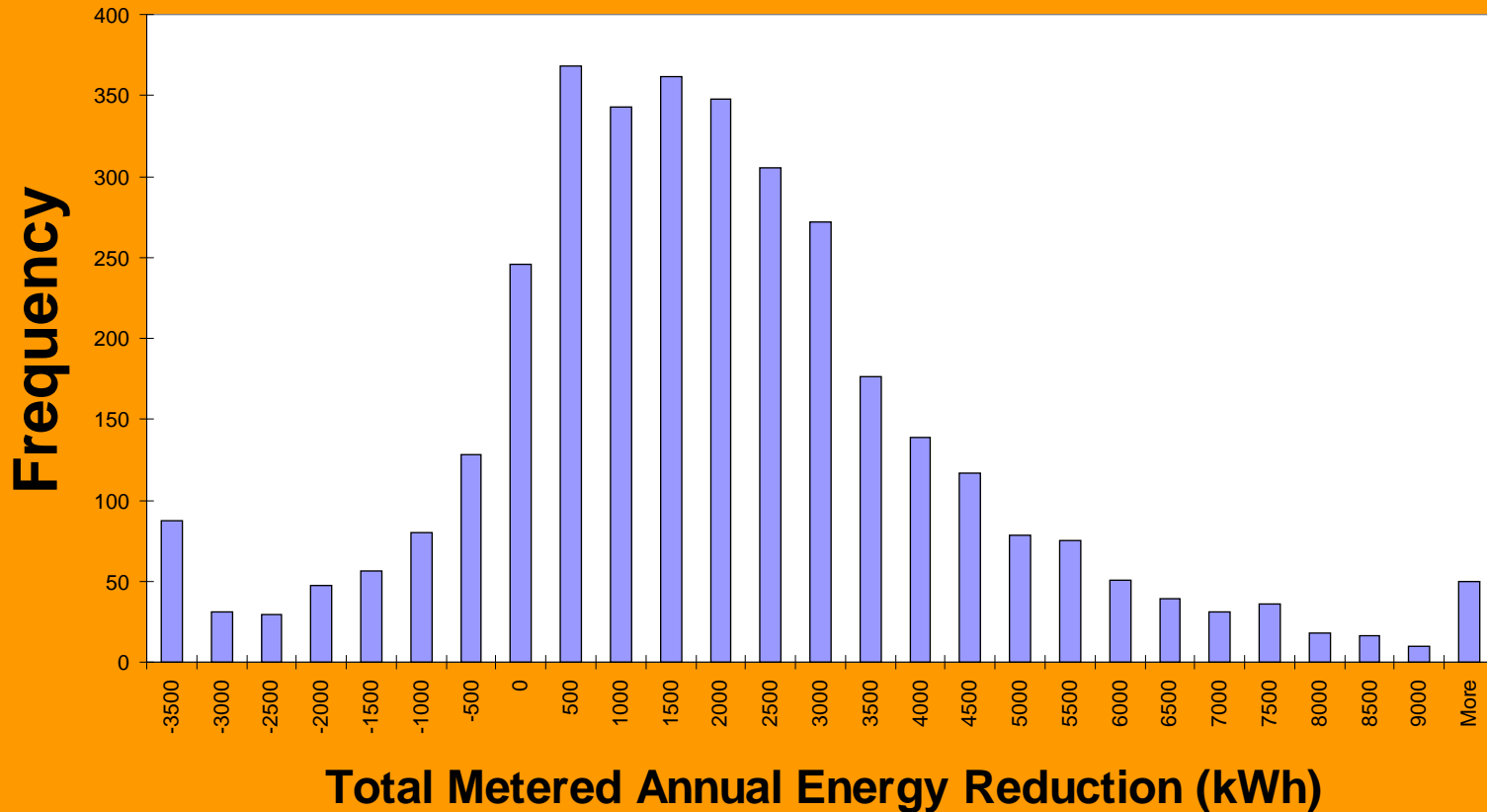
Potential Incentives Discussion

- Air Cooled Chillers
- Compressor Controllers
- Heat Pumps
- Central Plant Annual Tune Ups
- Split System Annual Tune Ups



The Fix - Data Mining and Refining

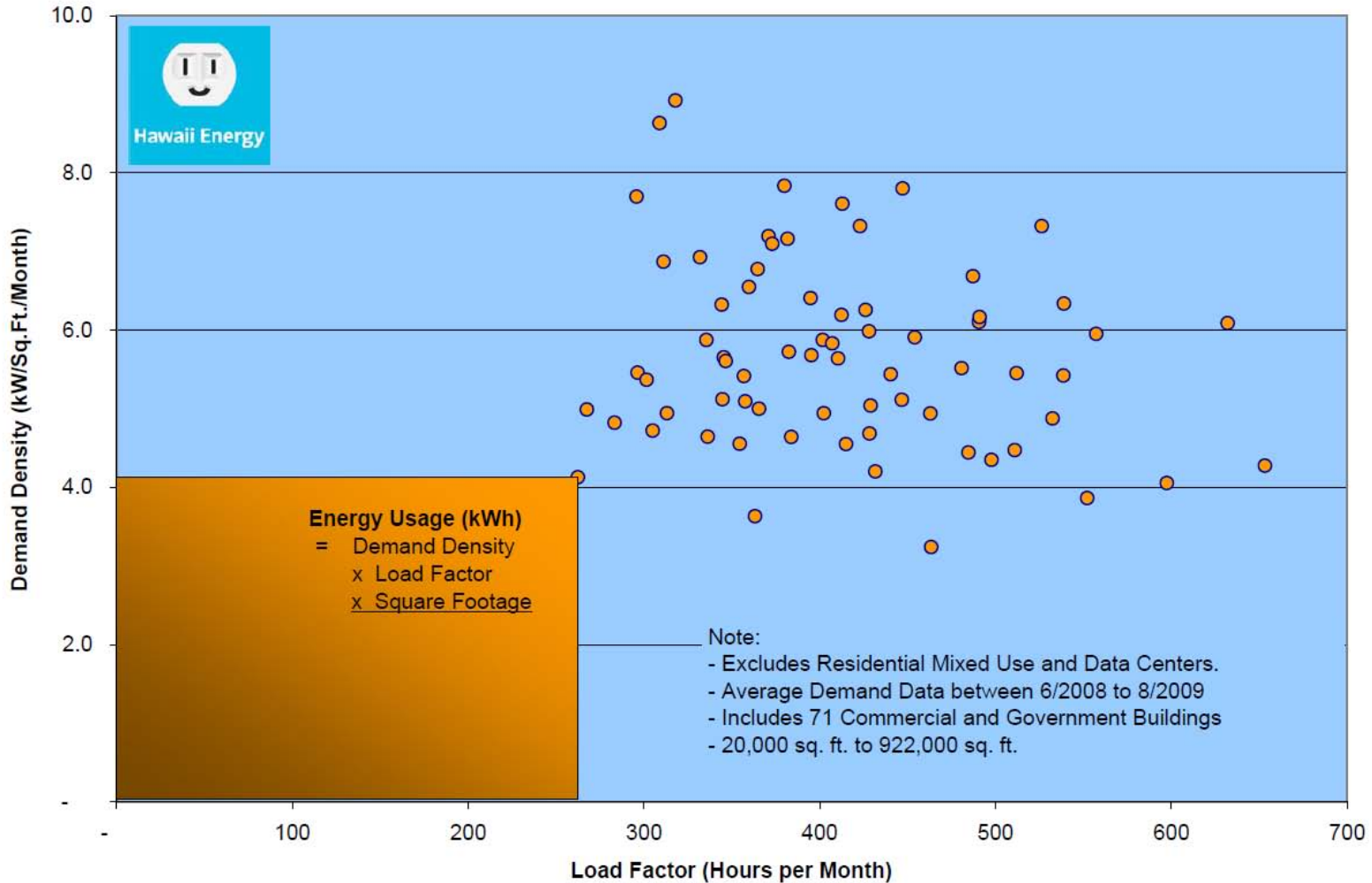
Solar Water Heater Incentive Participants Savings Review





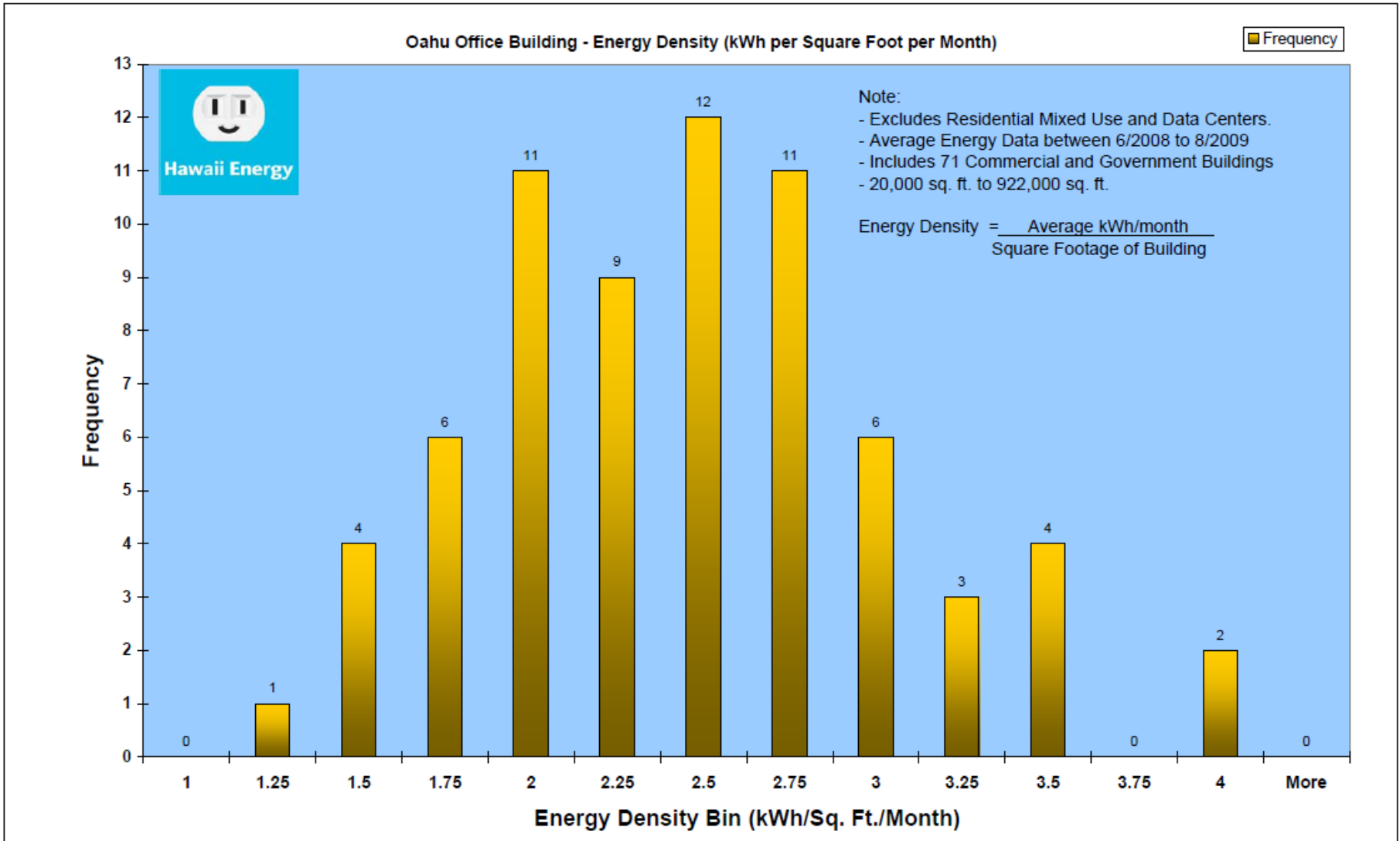
The Fix - Office Building Review

Office Buildings - Energy Use Load Factor Review



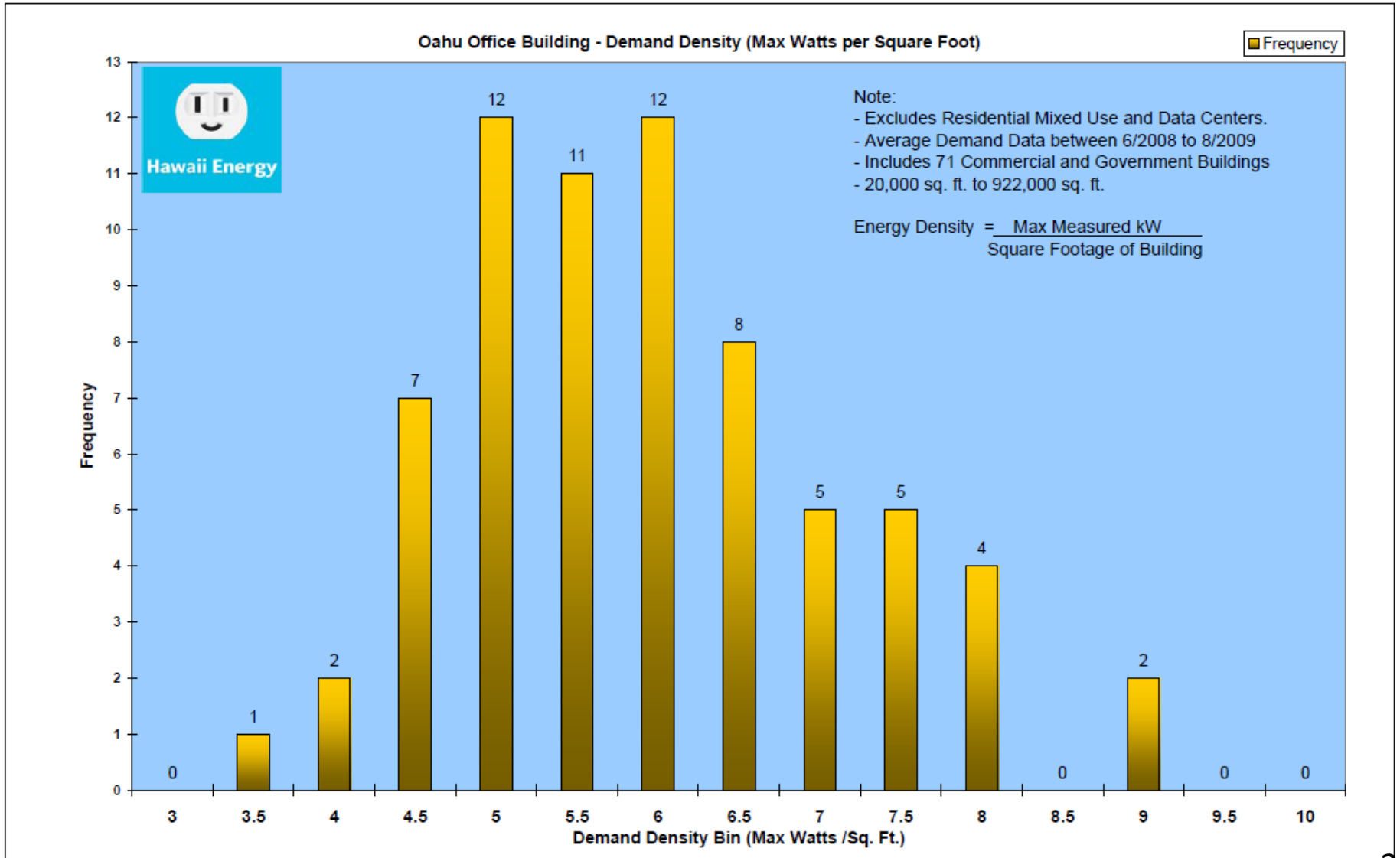


The Fix - Energy Density





The Fix - Demand Density



Next Steps . . .

- Continue Program enhancements (internal and external)
- Expand all programs to neighbor islands
- Build collaborations with customers, vendors and allies
- Bring in ARRA stimulus \$\$
- Engage marketing plan and new interactive website
- Develop existing usage info to build peer comparisons
- Stay on top of Hawaii Energy's performance goals





Hawaii Energy

www.hawaiienergy.com

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