



# Hawaii Clean Energy Initiative Plenary Session Lead by Example Program

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Carilyn Shon  
State Energy Office  
DBEDT

# ARRA Funding for Energy Efficiency

- **\$8.2M State Energy Program for EE Programs**
  - **\$1M High Performance Buildings** (LEED, Energy Star buildings, building code update, performance contracting, training and and technical assistance)
  - **\$500,000 Weatherization Assistance Program** for energy efficiency for low income families
  - **\$200,000 SWAC** Environmental assessment , education, outreach to attract financing for Waikiki District
  - **\$300,000 KIUC** for solar water heating, appliance rebates , government and nonprofits energy efficiency rebate program
  - **\$6.2M to Hawaii Energy for rebate programs**
    - \$1.5M for solar rebate program
    - \$1.5M for solar interest buy-down program
    - \$1.2M for Energy Star refrigerator rebate /bounty program
    - \$250K for education program (O Power)
    - \$1.8M for government/nonprofit

- **\$1.236 M State Energy Efficiency Appliance Rebate Program** (Energy Star refrigerator/bounty program)
  - \$1.136M Hawaii Energy
  - \$100K KIUC
- **\$9.6M Energy Efficiency and Conservation Block Grant Program**
  - \$2.9M Hawaiian Home Lands Residential Program (solar water heating /CFL/education)
  - \$3M Dept. of Accounting and General Services (PV system on Kalanimoku Building)
  - \$3.5M DBEDT (Loan Loss Reserve Program, 2 staff, state agency Energy Star and Lead by Example program support)
  - \$200K KIUC rebate program

**Total ARRA EE Programs: \$19.036M**

# State of Hawaii Lead by Example

- **American Council for an Energy Efficient Economy (ACEEE)**  
National Review and Recognition of Exemplary State Energy Efficiency Programs  
One of four states as “Best In U.S.” (December 2010)  
Recognized nationally for State of Hawaii’s Lead By Example Program
- **National Governors Association**  
Center for Best Practices  
Policy Academy on State Building Efficiency Retrofit Programs  
2010 Team Hawaii: DBEDT/DOT-Airports/UH- Community Colleges/DAGS

# Lead by Example

- Between FY09 and FY10 state agencies' energy consumption dropped 2.8% and the state paid \$20M, or 12.1 %, less than FY09.
- From baseline year 05 to FY10, energy consumption dropped 5.1%, but, due to the increased cost for electricity, costs rose 38.5%.
- 13 state buildings received ENERGY STAR® ... rank in the top 25% of similar buildings nationwide.
- 7 state buildings are Leadership in Energy and Environmental Design (LEED) certified. 52 LEED projects are in the process toward the goal of certification.
- First LEED Silver, Commercial Interiors, Airport Lounge renovation.

# Lead by Example

- State agencies received more than \$5.1 million in rebates since 1996 ... estimated cumulative dollar savings of over \$111 million and electricity savings of 570 million kilowatt-hours...enough to power about 77,235 households for a year.
- Dept. of Transportation: First state agency to execute a power purchase agreement  
Total of about 4+ megawatts for estimated value of \$28M (Phase I and II)
- UH Community Colleges power purchase project:  
Total of 2 megawatts for estimated value of \$\_\_M
- DAGS reviewing power purchase project potential

# Airports

## Leading by Example

With the PPAs State DOT is immediately

- Reducing monthly utility costs.
- Increasing savings on utility costs...As the cost per barrel of oil rises (\$112.69 per bbl. for crude), the savings per month to DOT will be greater.
- Benefitting for 20 years from fixed-price, solar-generated electricity and not paying for electricity generated from fluctuating/increasing costs of imported fossil fuel.

# Performance Contracting

## **DAGS Phase I : 10 downtown buildings**

Projected Savings: \$64M over 20 year term (reduced water/sewer/electricity operating costs)

Est. Value of Project: \$33- \$34M

401 local jobs

\$1.5M in state tax revenues

## **Public Safety (Halawa High and Medium security, OCCC)**

Projected Savings: \$46 M over 20-year term (water,sewer,electricity operating costs)

Est. Value of Project: \$25M+

283 jobs created during construction phase of 24 months

## **DAGS Phase II performance contracting project for 33 buildings (Status: site visits by prospective proposers)**

## **DOT performance contract (Status: Documents drafted, aggregating data)**

## **UHCC (four Oahu CC)**

Projected Savings: \$58 million of the 20-year term (incl. \$16M in deferred maintenance costs)

Est. Value of Project: \$26M

# Total Annual Consumption and Cost: Meter #20210019-349 at Lihue Airport

Fiscal Year	kWh	Cost
2006	4,046,100	\$1,195,573
2007	4,164,000	\$1,263,272
2008	4,468,500	\$1,630,965
2009	3,955,200	\$1,326,944
2010	3,317,700	\$1,058,533

11.5%  
decrease  
from 2008

25.8%  
decrease  
from 2008.

35.1%  
decrease  
from 2008.

18.6%  
decrease  
from 2008

# Total Annual Consumption and Cost: Meter #98529/127031 at Hilo Airport

Fiscal Year	kWh	Cost
2006	3,484,800	\$855,909
2007	3,625,200	\$930,517
2008	3,630,100	\$1,100,291
2009	3,110,400	\$980,567
2010	3,078,000	\$870,619

14.3% decrease  
from 2008

15.2% decrease  
from 2008

20.9%  
decrease from  
2008

10.9%  
decrease from  
2008

# Total Annual Consumption and Cost: Meter #85081 at Kahului Airport (T-Hangar)

Fiscal Year	kWh	Cost
2006	84,880	22,580
2007	91,200	25,610
2008	100,160	31,150
2009	78,120	27,111
2010	9,280	4,857

22% decrease  
from 2008

90.7%  
decrease  
from 2008

84.4%  
decrease from  
2008

13% decrease  
from 2008

# Total Annual Consumption and Cost: Meter #95696 at Kahului Airport (ASAP)

Fiscal Year	kWh	Cost
2006	11,205,600	\$2,503,091
2007	11,109,600	\$2,693,135
2008	11,150,400	\$3,079,986
2009	11,061,600	\$3,217,023
2010	11,384,400	\$2,662,371

0.8% decrease  
from 2008

2.1% increase  
from 2008

13.6%  
decrease from  
2008

4.4% increase  
from 2008

# Total Annual Consumption and Cost: Meter #81734/115335 at Kona Airport

Fiscal Year	kWh	Cost
2006	5,744,400	\$1,354,149
2007	6,012,000	\$1,505,236
2008	6,213,600	\$1,809,034
2009	5,826,000	\$1,837,714
2010	5,962,800	\$1,598,994

6.2% decrease  
from 2008

4% decrease  
from 2008

11.6% decrease  
from 2008

1.6% increase  
from 2008



Thank you