



# HAWAII ENERGY

*Conservation and Efficiency Program*

**Rebuild Hawaii  
January 5, 2011**

**PUBLIC BENEFITS FEE ADMINISTRATOR**

***HAWAII ENERGY***

***1132 Bishop St, Suite 1800***

***Honolulu, Hawaii 96813***

***[www.hawaiienergy.com](http://www.hawaiienergy.com)***



Hawaii Energy

# Introductions

## Hawaii Energy Team

*Public Benefits Fee Administrator (PBFA)*



**Honeywell**



WALL-TO-WALL STUDIOS

**BennetGroup**  
STRATEGIC COMMUNICATIONS

- H. Ray Starling — *Program Manager*
- Michael Chang — *Deputy Program Manager*



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# Agenda

- American Recovery & Reinvestment Act (ARRA) of 2009
- State Energy Efficiency Appliance Rebate Program (SEEARP)
- State Energy Program (SEP) - Energy Star Residential
- SEP Solar Water Heating Programs
  - Supplemental Solar Water Heating
  - Solar Loan Interest Buydown “Hot Water, Cool Rates”
- SEP Government Supplemental Customized Program
- New Programs



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# The American Recovery and Reinvestment Act

## *State Energy Program (SEP) Purpose:*

- Stimulate the economy – create and retain jobs
- Save energy
- Increase energy generation from clean, renewable sources
- Reduce greenhouse gas (GHG) emission



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# SEEARP



- **“Trade Up for Cool Cash”** - Refrigerators
- Launched May 24, 2010
- Haul away and recycled old appliance via retailers and recyclers
- Rebate funds committed in 2 days!



Program	Unit	ARRA Funded	Total Incentives Paid
Trade Up for Cool Cash	3,972	\$250	\$993,000

Energy Savings = 3,264,984 kWh (based on 822 kWh/unit) = 6,000+ BBL of Oil



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# SEEARP

## *“Trade Up for Cool Cash”*

Average # of RF's in household	Average # of occupants	Age of removal	Average Replacement cost	Average Refrigerator Size
1.4	3	13.6	\$1,121	19.7 cu ft.





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# State Energy Program (Residential)

	Program	Unit	PBF	ARRA Funded	Total Incentives
Past	* Energy Star Refrigerators	3,223	\$ 50	\$ 200	\$ 805,750
Present	Energy Star Washing Machines	282	\$ 50	\$ 200	\$ 70,500
Future	Coming Soon	523	\$ 50	\$ 200	\$ 130,750

- Launched after SEEARP funds were exhausted
  - Haul away and recycle old appliance through retailers and Hawaii recyclers
- \*SEP Energy Star Refrigerators Savings: 2,648,895 KWH = 4,900+ BBL of Oil





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# Solar Water Heating Programs

Program	Goal	YTD	PBF	ARRA	Incentives Paid	Total Incentives
Solar Incentive	1,400	1,178	\$ 750		\$ 883,500	\$ 1,050,000
* ARRA Supplemental	1,355	-		\$ 750	\$ -	\$ 1,016,250
ARRA Interest Buydown "Hot Water Cool Rates"	1,355	39	\$ 250	\$ 750	\$ 39,000	\$ 1,355,000

**4,110**

**\$ 3,421,250**

- ARRA Supplemental funding begins when PBFA funds are exhausted*

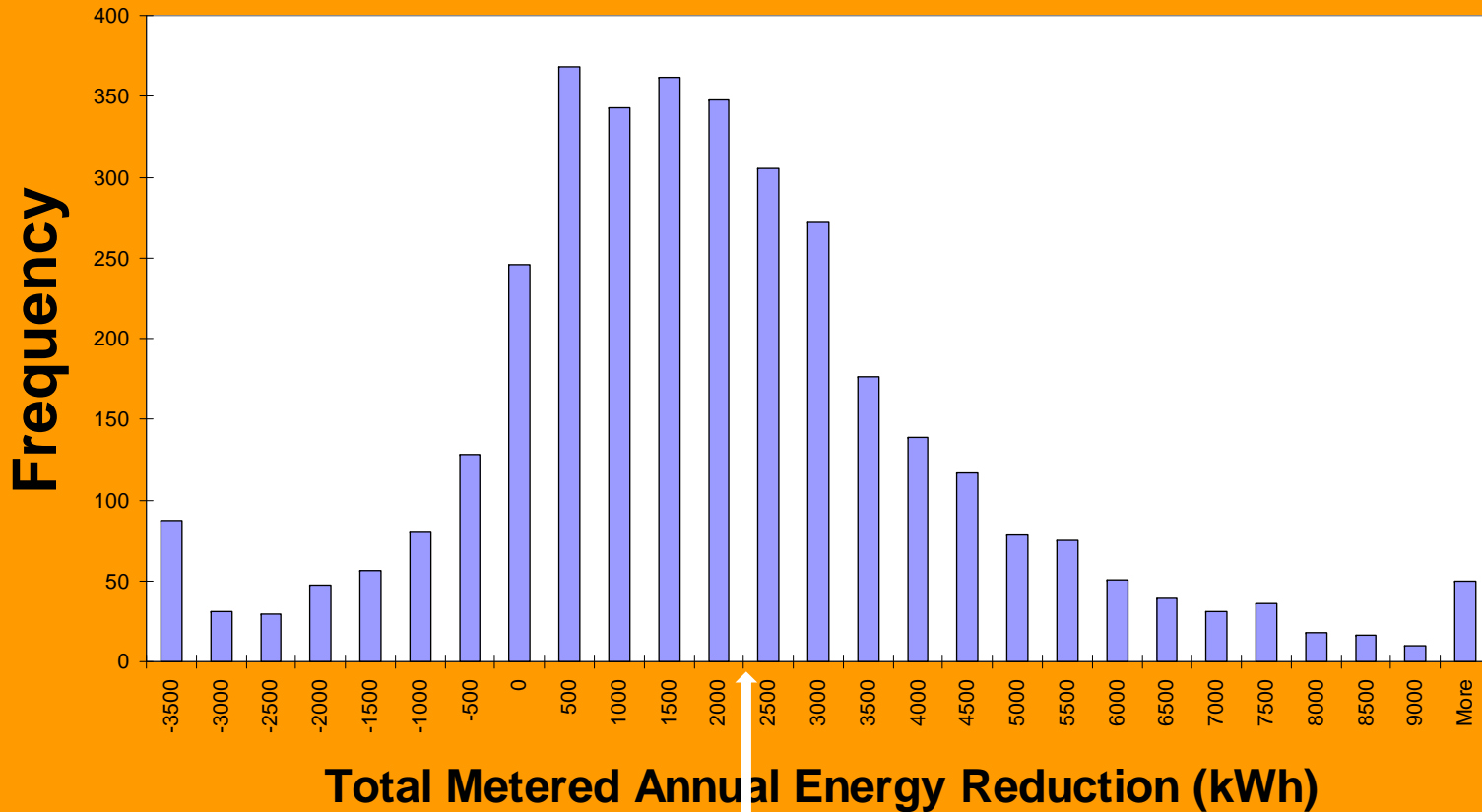




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# Solar Thermal Impact

## Solar Water Heater Incentive Participants Savings Review



Average = 2250 kWh



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# Solar Water Heating Program

Hawaii Energy's Existing Program provides a **\$750** rebate for solar hot water systems installed by qualified contractors – Financed \$5,850 at 6% for 5 years.

**Hot Water Cool Rates** Program will be co-funded from ARRA and the Program, it will provide an incentive of **\$1,000** towards the interest of the loan (paid directly to lender).

\$6,600	System
<u>\$(750)</u>	<u>Rebate Amount</u>
<b>\$5,850</b>	<b>Subtotal</b>
\$(1,755)	Federal Tax 30%
\$(2,047)	State Tax 35%
<u>\$936</u>	<u>Interest</u>
<b>\$2,984</b>	<b>Total</b>

\$6,600	System
\$(1,980)	Federal Tax 30%
\$(2,250)	State Tax 35% **
\$1,000	Interest
<u>\$(1,000)</u>	<u>Interest Rebate Amount</u>
<b>\$2,370 Total</b>	

Payback = 5 years

Payback = 4 years

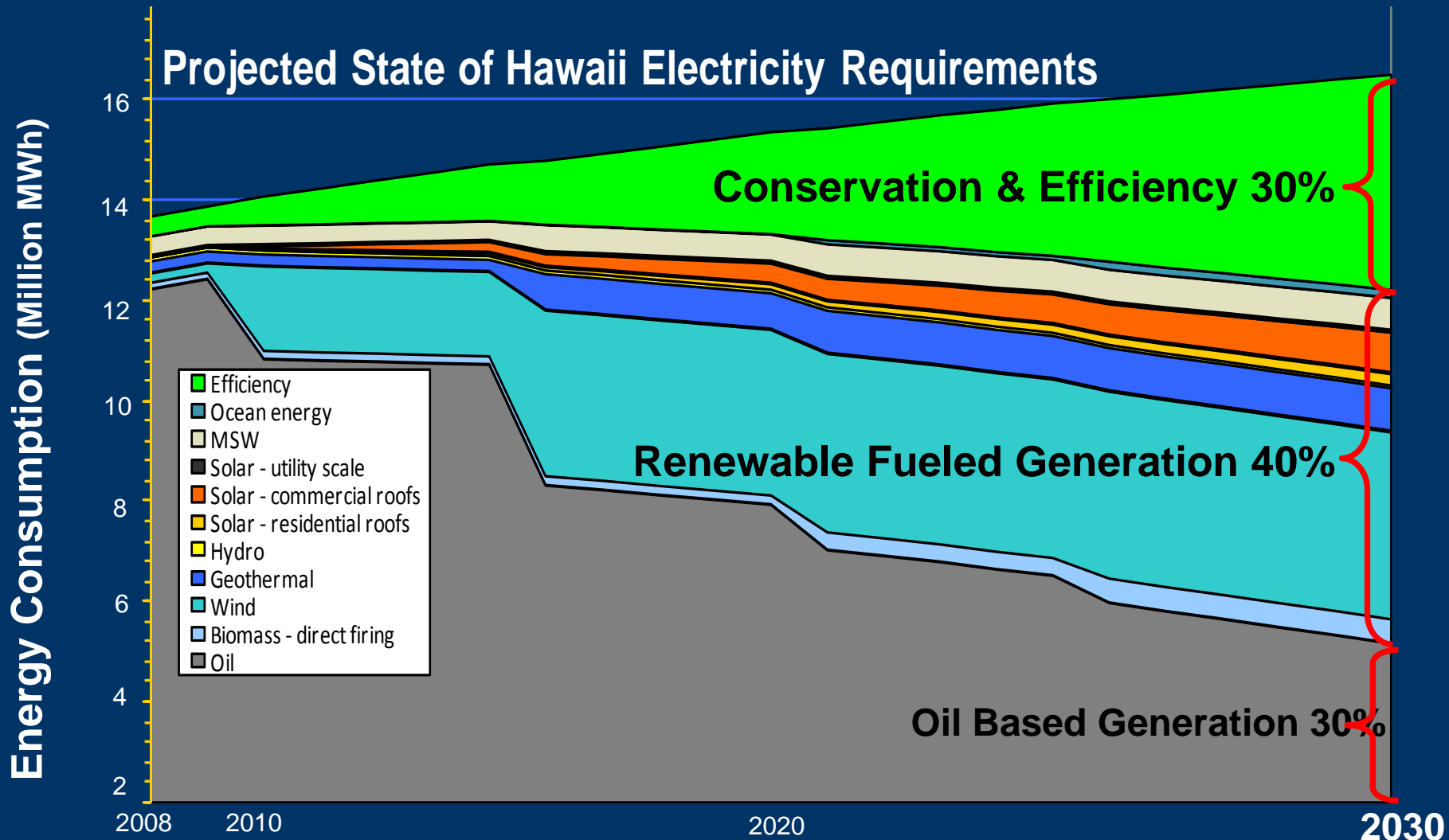
Family of four saves \$50 per month  
\*\* \$2,250 is the max for state tax credit



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# Hawaii Clean Energy Initiative Goals

*Hawaii Energy Role: 30% KWH Reduction by 2030*



*HCEI goal is to 70% Clean Energy by 2030.*



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# Hawaii's Energy Dilemma

## PROBLEM:

- Addiction to imported OIL
- 80% oil-fired generation or 12M barrels of oil per year



## SOLUTION:

- Abundant renewable resources
- Conservation and Efficiency



*A solar hot water heater can save 20%-30% on an average residential electric bill .12*



# Solar Thermal Market

Potential Market		
	512,881	Homes
40%	205,152	Condo/Apartment
60%	307,729	Single Family
	512,881	Homes
55%	282,085	Owned
45%	230,796	Rented
	56,000	Program Systems
	24,000	Existing/Outside
	<u>80,000</u>	<u>Installed Systems</u>





# Solar Contribution to HCEI

2010 to 2030	Component	Per year
200,000	Systems by 2030	10,000
2,250 kWh	Savings per System	2,250 kWh
450,000,000	kWh Savings	22,500,000
4,300,000,000	HCEI Goal	215,000,000
10.5%	Contribution to Goal	10.5%
\$ 7,000	Cost per System	\$ 7,000
\$ 1,400,000,000	Investment	\$ 70,000,000

Target Markets in order to achieve this are:

- Townhome Developments
- Investor owned properties/rented and leased
- Smaller families/homes



HOME

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ENERGY PROFESSIONALS

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ENERGY HEROES

## Match & Save on CFLs

Find out which ones work best.

More Info



## Federal Stimulus-Funded Programs

Learn More



## Like Cash?

Cut the costs for equipment that saves you energy. Apply for rebates today!



Homeowners

Renters

Property Managers

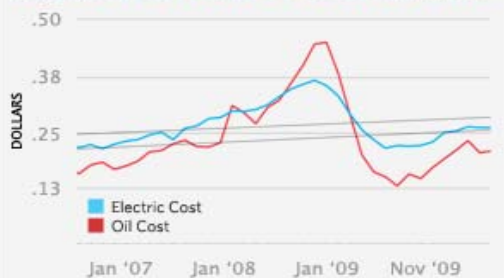
Business Owners

Vendors

## Hawaii's Energy Progress [More](#)

[Details](#)

### Hawaii Electric Cost & Oil Cost per kWh



Select a graph below to view Hawaii's progress

Hawaii Electric Cost & Oil Cost per kWh

## Featured News [More News](#)

Posted December 17, 2010

### Free CFL bulbs available Saturday, December 18 in Hilo

KAMUELA, Hawaii—December 17, 2010—The Kohala Center, Hawaii Energy, and the County of Hawai'i invite the public to pick up free Comp...

[Read More](#)

Posted December 15, 2010

### Gifts that Keep on Giving: Hawaii Energy's Top 5 Energy-Saving Gift List

This holiday season, Hawaii Energy would like to encourage everyone to promote energy conservation and efficiency by purchasing gifts that save electr... [Read More](#)

## Latest Media [More Media](#)

### Hawaii Energy - Shed Some Light



[Check out the Shed Some Light TV commercial!](#)



## Energy Professionals

- Energy Professionals •
- Solar Water Heating Contractors •



### Solar Water Heating Contractors



Hawaii Energy qualifies solar water heating contractors according to stringent criteria.

#### Hawaii Energy independent solar water heating contractors have proven that they have:

- Signed a memorandum of understanding (MOU) with the Hawaii Energy program; and therefore, allowed to use the Hawaii Energy logo, which can be revoked at any time.
- The following insurance policies:
  - **Commercial General Liability Insurance with \$1 million per occurrence for:**
    - Bodily injury and property damage
    - Products/completed operations
    - Personal and advertising liability
  - **Automobile liability insurance with:**
    - \$100,000 per person for bodily injury from accident for one-man operations
    - \$300,000 per person for bodily injury from accident for operations with multiple employees
    - \$100,000 per accident in property damage insurance
  - **Umbrella insurance of \$1 million per occurrence**
  - **Workers compensation insurance**
  - **Temporary Disability Compensation (TDI) for their employees**
- State contractor license
- No unresolved consumer complaints based on State of Hawaii contractors data
- **Contractors listed by county:**
  - **S** City and County of Honolulu
  - **B** Hawaii County
  - **A** Maui County

#### Contractors listed by county:

- City and County of Honolulu





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PARTICIPATING LENDER	INTEREST	TERM	LOAN AMOUNT
	0%	4 years	\$5,000-\$10,000
	3%	10 years	\$5,000-\$6,500
	0%	5 years	\$5,000-\$7,000
	1.99%	5 years	>\$7,000
	0%	3 years	\$5,000-\$8,000
	0%	5 years	>\$5,000
	3%	7 years	>\$5,000
	5%	10 years	>\$5,000

\*Loan amount must be greater than \$5,000 in order to qualify. Loan subject to credit approval.

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EnergySmart<sup>SM</sup> LOAN PROGRAM

THERE'S NEVER BEEN A BETTER TIME - or a smarter reason - to switch to a solar

Proudly voted one of the Best Places to Work 2010

KALANET ONLINE

PERSONAL LOGIN BUSINESS LOGIN

- HOME
- ABOUT US
- LOCATIONS
- WHAT'S NEW
- VIDEOS
- GENERAL STORE
- CAREERS
- CONTACT US

Get \$30 in ShareBucks for Deposit into your Aloha Pacific FCU Account.



LEARN MORE

- PERSONAL BUSINESS INVESTING

WHAT'S NEW

"Hot Water, Cool Rates"  
SOLAR WATER HEATING LOAN SPECIAL

HOT WATER, COOL RATES  
Solar Water Heating Loan Program  
Grab a hold of the savings and take advantage of our new Solar Loan Program. This offer is guaranteed to warm you up!

Hot Water, Cool Rates  
0.00% APR\*  
Fixed Rate  
Terms up to 4 years  
\$5,000 Minimum/\$10,000 Maximum

December 14, 2010

Site Map Contact Us Enter Keyword

Welcome to www.hawaii-usa-fcu.com | Apply For Solar Water Loan Now

Online Banking Login

Did You Know?

Applications & Forms

- Personal Finance
- Financial Services
- Online Services
- Rates and Terms
- Information Center
- Community
- What's New
- Member Tips
- Member Security
- Investment & Insurance Services
- Business Center
- Switch to HawaiiUSA
- Career Opportunities
- Invest in America SPRINT

HawaiiUSA FCU - Solar Loan Program

Thinking about switching to a Solar Water Heating System? We've got great news! Introducing, HawaiiUSA's Solar Loan Program!

- Finance your purchase and installation of a Solar Water Heating System
- Benefit from State and Federal Tax Credits\*\* with a qualifying system
- Get started by contacting an approved Contractor today!



To apply for HawaiiUSA's Solar Loan Program, visit any of our 11 branches or call our Member Service Center at (808) 534.4300 or (800) 379.1300 toll-free.

\*Annual Percentage Rate (APR). 0.00% APR applies to a 5 yr personal loan. 3.00% APR applies to a 7 yr personal loan. 5.00% applies to a 10 yr personal loan. APRs effective 11/01/10. (Payment example: Loan amount of \$7,000 at 0.00% on a 5 year term would have a monthly principal and interest payment of \$116.67). \$5000 minimum loan amount requirement: Purchase and installation of a solar water heating system through an approved contractor participating in Hawaii Energy's Hot Water, Cool Rates program required. This is a limited time offer and may be changed or cancelled at any time. All loans subject to HawaiiUSA loan policies and credit approval. Other restrictions apply. Refinancing of existing HawaiiUSA personal loans or lines of credit do not qualify for this offer. Membership guidelines apply. Federally insured by NCUA. \*\*Consult your tax advisor.

For More Information:

- Call our Member Service Center at (808) 534.4300 (Oahu) or toll-free (800) 379.1300 (neighbor islands & mainland)
- Email us at [contactus@hawaii-usa-fcu.com](mailto:contactus@hawaii-usa-fcu.com)
- Visit any of our 11 convenient branches

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- BUSINESS PERSONAL LOANS RESOURCES COMMUNITY ABOUT US

Personal Loans

Get behind the wheel of a new car, secure some extra cash or benefit from the convenience of a personal line of credit. Our personal and vehicle loans provide simple terms to fit your budget while offering competitive rates and terms for financing that fits your lifestyle.

- Personal Loans**
  - Loans made for personal use such as bill consolidation, travel, or education
- Automobile Loans**
  - An installment loan to purchase a new or used automobile or truck
  - Loan secured by the vehicle purchased
- V.I.P. Instant Loan Account**
  - An unsecured revolving personal line of credit accessed by special checks
  - Credit reserve is replenished as funds are repaid



using energy h or call us at

- Solar Water Heater Loan Program\***
  - 0% loan program designed to outfit your home with a solar water heater.
  - No loan fees, no prepayment penalty.
  - Click here for more information.

To talk with our experienced team of locally based loan professionals and product specialists, call (808) 528-7711 or visit one of our conveniently located branches on Oahu, Maui and Hawaii.

- \*Solar Water Heater Loan Program
- No down payment, no prepayment penalty.
  - 0.00% APR through December 31, 2010
  - 36 monthly payments of \$27.78 per \$1,000 financed.

# Advertising

Hawaii Energy, Your Conservation and Efficiency Program, is now offering federal stimulus incentives from the American Recovery & Reinvestment Act (ARRA) to help you finance a solar water heating system as an alternative to our standard \$750 instant rebate.

Hawaii Energy, in partnership with local lenders, is buying down the interest (up to \$1,000) on a solar water heating system loan of \$5,000 or more. With an average system cost of \$6,703, this is a great way to stretch your payments over the term of your loan.

To save even more, apply for federal and state tax credits. ACT FAST.

SYSTEMS MUST BE INSTALLED BY 12/31/10 IN ORDER TO QUALIFY FOR A TAX CREDIT FOR THIS YEAR.

Average Cost of Solar Water Heating System	\$6,703
30% Federal Tax Credit ( $\$6,703 \times 30\%$ )	(\$2,010)
35% State Tax Credit*	(\$2,250)
Interest (at 6%, 5 year term)	\$1,073
Interest Buy Down Paid to Participating Lender	(\$1,000)
<b>NET SYSTEM COST TO CUSTOMER</b>	<b>\$2,516</b>

THE PRICE OF YOUR SYSTEM WILL VARY BY THE REQUIREMENTS OF YOUR HOUSEHOLD AND MAY VARY BY CONTRACTOR. LOAN IS SUBJECT TO CREDIT APPROVAL.

\* STATE TAX CREDIT LIMIT IS \$2,250.



**Hawaii Energy**  
YOUR CONSERVATION & EFFICIENCY PROGRAM

Visit [www.hawaiienergy.com](http://www.hawaiienergy.com) for  
a listing of participating lenders.

HAWAII ENERGY IS A RATEPAYER-FUNDED CONSERVATION AND EFFICIENCY PROGRAM ADMINISTERED BY R.W. BECK (AN SAIC COMPANY) UNDER CONTRACT WITH THE HAWAII PUBLIC UTILITIES COMMISSION, SERVING THE ISLANDS OF HAWAII, LANAI, MAUI, MOLOKAI, AND OAHU.

# Advertising

...water heating  
accounts for about

35%  
of your electric bill

Hawaii Energy  
can help you purchase a solar  
water heating system...

which can  
cut your water heating  
costs up to

90%

## FIND A PARTICIPATING CONTRACTOR:

Adon Construction dba Green Vision	236-1110
Allen's Plumbing Inc.*	599-5511
Alternate Energy, Inc.*	842-5853
Accurate Plumbing	553-5357
Advantage Mechanical Plumbing, Inc.	572-2698
Dorvin D Leis Company Inc.*	841-2112
Haleakala Solar, Inc.*	871-8654
Kihei Plumbing	877-4863
Maui Pacific Solar, Inc.*	280-6627
Molokai Solar	567-6796
Poncho's Solar Service*	422-4266
Ricky's Plumbing	559-0860
Sun King, Inc.*	599-7793
Sonshine Solar Corp.	575-7444
Sunny Solutions, Inc.	283-2514

\*MEMBER OF THE HAWAII SOLAR ENERGY ASSOCIATION

hey,  
did you  
know...



# Advertising



## Hawaii Energy has big plans on the horizon.

We're here to help encourage positive changes for Hawaii's energy future, to help consumers and businesses reduce energy use by providing the tools to make those changes possible.

Earlier this year we introduced the ARRA "Trade-Up For Cool Cash" refrigerator rebate program which flooded Hawaii's appliance retailers with refrigerator buyers. Now we're looking for financial partners to work with on an exciting new Solar Water Heating Interest Buy-Down program.

Seeking Banks, Credit Unions, Lending Institutions & Financial Services Companies. For more information call us at 808.521.2189 or visit [www.hawaiienergy.com](http://www.hawaiienergy.com)



**Hawaii Energy**

EFFICIENCY & CONSERVATION PROGRAMS

HAWAII ENERGY IS A RATEPAYER-FUNDED ENERGY EFFICIENCY PROGRAM APPROVED AND AUTHORIZED BY THE PUBLIC UTILITIES COMMISSION.



# Customized Incentives

<i>Measure Life</i>	<i>Reduction in Energy use Incentive</i>	<i>Evening Peak Demand Incentive</i>	<i>Day Peak Demand Incentive</i>
		5 to 9 p.m.	* 12 to 2 p.m.
$\leq 5$ years	\$0.05 /kWh	\$125 / kW	\$100 / kW
$> 5$ years	\$0.08 /kWh	\$125 / kW	\$100 / kW

- 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, Thermal Energy Storage, etc.

\* HVAC Application



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# ARRA Supplemental Incentive

Your Federal  
Stimulus-Funded Programs



- Government and Non-Profit
- Customized Incentive Supplement
- SEP and Hawaii Energy incentive up to 25% of total project cost
- Hawaii Energy custom incentives limited to 50% of incremental costs
- Total projects cost must exceed \$60,000

**Purpose: To move idle projects forward**



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# Central Plant Optimization

Incentive	Amount	Responsibilities
Systems Commissioning Program	50% incentive up to \$0.20 per sq. ft.	<ul style="list-style-type: none"><li>• Preliminary Systems Review</li><li>• Metering &amp; Commissioning Plan</li><li>• Development of Sequence of Operations</li><li>• Recommended Operational Improvements</li><li>• Recommended System Upgrades</li><li>• Maintenance and Operations Plan</li><li>• Operational Training</li><li>• Owner commitment to implement recommendations and participate in the Optimization Competition</li></ul>
Metering System	100% incentive for approved metering equipment and data collection systems	<ul style="list-style-type: none"><li>• Access to performance data for five years.</li><li>• Owner commitment to perform operational and system upgrade recommendations with less than 2 year paybacks up to the cost of the metering incentive within two years or forfeit metering incentive</li></ul>
Energy Reduction	\$0.10 per kWh saved for one year	<ul style="list-style-type: none"><li>• 50% upon implementation</li><li>• 25% for performance at sixth month</li><li>• 25% for performance at one year</li></ul>

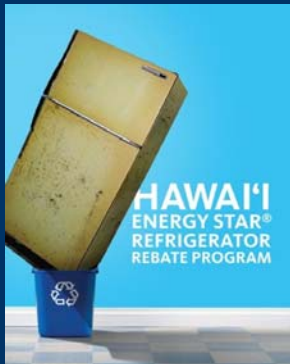




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# New Programs

Program	Rebate	Launch Date	Goal
Trade in – Refrigerators/Recycling	\$50/\$75	January	2,000
Bounty – Refrigerators and Window AC	\$ 25-?	January	1,667
SWH Tune Up	\$ 50	January	644
Whole House Fan	\$ 50	1 <sup>st</sup> Quarter	250
Solar Attic Fan	\$ 50	1 <sup>st</sup> Quarter	250
Occupancy Sensor	\$ 5	1 <sup>st</sup> Quarter	300
Home Energy Audit	TBA	TBA	600

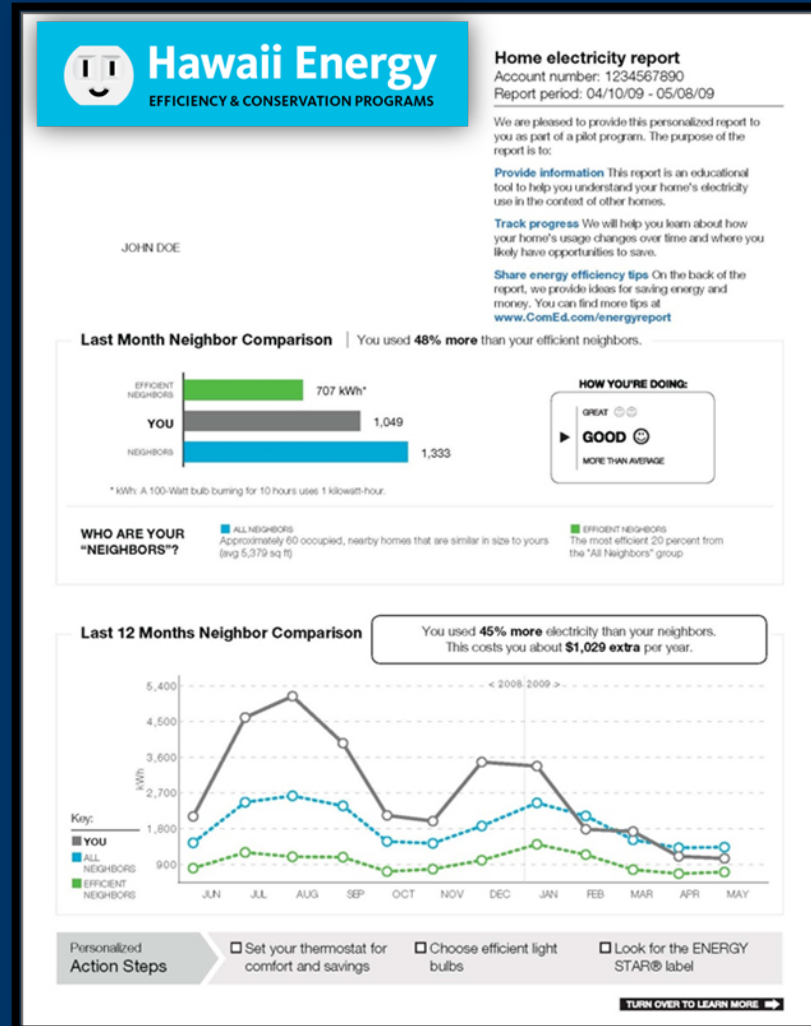




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# Peer Group Comparison

*Induced  
behavior  
change*



*The average Hawaii residential customer uses 641 kWh of electricity each month.*

Steve Chang  
(808) 521-2029  
steve.t.chang@saic.com



# Hawaii Energy

[hawaiienergy.com](http://hawaiienergy.com)

Hawaii Energy is a ratepayer-funded energy efficiency program  
approved and authorized by the Public Utilities Commission.