

How We're Working with You to...

Hawaii Energy

YOUR CONSERVATION & EFFICIENCY PROGRAM

Save Energy Strengthen the Economy Protect our Environment

Keith Block

COMMERCIAL PROGRAMS OPERATIONS MANAGER





HAWAII ENERGY IS:

- The energy conservation and efficiency program for Hawaii, Honolulu and Maui counties.
- Administered by Leidos Engineering, LLC under the direction of the Hawaii Public Utilities Commission.
- + Funded by electric ratepayers. We're funded by you.
- Helping to achieve Hawaii's goal of reducing electricity usage by 30% by 2030





WHAT WE DO

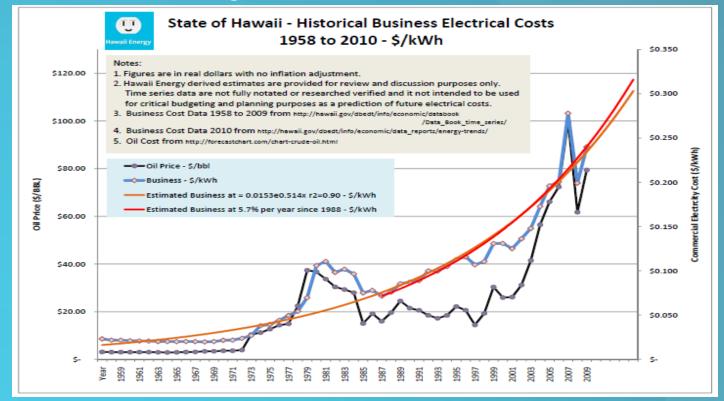
- Help you save energy and money on your electric bill
- Provide rebates and incentives for you to adopt energy efficiency measures. Examples of this include:
 - Changing out your old inefficient fluorescent lighting to more efficient fluorescents or LEDs
 - Installing the most efficienct Air Conditioning System when replacing your current system
- Support and provide education and training opportunities, ranging from teachers to energy industry professionals





WHY IS THIS IMPORTANT?

 We have the nation's highest electricity rates – 3 times the national average



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HIGHLIGHTS FROM LAST PROGRAM YEAR

\$10,354,214 In incentive paid to business customers

42.4 Million kWh saved per year

\$11.9 million in customer savings per year





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For Your Business Incentive Building Envelope Improvements Customized Projects Energy Services & Maintenance ENERGY STARB Appliances HVAC Lighting Pumps & Motors Submetering Water Heating Mater Heating Mater Heating Start Heating Mater Heating							
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	> 760,000	> 63.33	1.30	9.2	1.109	10.6
Variable Refrigerant Flow (VRF) air conditioning	New Construction \$250 per ton			Retr	Retrofit \$300 per ton	
	*Enhanced \$90 per ton Standard \$35 per ton					
			IECC 2006 IPLV (kW/to			
	Reciprocating	All	0.70		0.60	
Water cooled chiller	Rotary Screw and Scroll	< 150 tons	0.68		0.58	
(*See enhanced chiller program worksheet for details.)		150 – 300 tons	0.63		0.54	
uerans.)		> 300 tons	0.57		0.48	
	Centrifugal	<150 tons	0.67		0.57	
		150 – 300 tons	0.60		0.51	
		> 300 tons	0.55			
Variable Frequency Drive (VFD) control	Air Handler \$50 per hp (for retrofit only)			Chilled and Condenser Water Pumps \$80 per hp (for retrofit only)		
Electronically Commutative Motor (ECM) and speed control	Commercial Refrigeration \$85 per motor and control			Ean Coil Application \$55 per motor and control		
Consortium for Energy Efficiency (CEE) qualified premium efficient motors Visit <u>www.CEE1.org</u> for a list of motors.	1 - 200 hp: \$10 per hp (Submit customized application for motors greater than 200 hp or not listed and meet one band above NEMA Premium Efficiency level.)					
VFD pool pump system	\$225 per hp					
VFD domestic water pump system	\$3,000 plus \$80 per hp reduction for the system (for retrofit only)					
Solar thermal water heating system	\$250 per ton of de-rated installed capacity (12,000 BTU/hr)					
Heat pump water heater	\$100 per ton (12,000 BTU/hr) on high efficiency models					
Customized incentives & lighting	Measure of Life	Annual Reduction in Energy Use Incentive		ng Peak Dem Incentive o.m. to 9 p.m.	and (F	Peak Demand Incentive IVAC Only) p.m. to 2 p.m.
(not to exceed 50% of incremental project cost)	<u>≤</u> 5 years	\$0.08/kWh		\$125/kW		\$100/kW
	> 5 years	\$0.12/kWh		\$125/kW		\$100/kW

All incentives are subject to drange without prior end/faction or upon discretion of the Howen Public Utilities Commission, Howe's intergrits' and ender out-ford conservation and (effoncing program administered by SAC under contract with the Howe's Public Utilities Commission serving the indina's (Howe), (and , Mai, Mickel and Oaku, ProJuster Stock, and administration and administration of the service of the

TECHNOLOGY			INCENTIVE		
Whole Building Assistance (Pre-Approval Required) Energy study assistance Energy study project implementation Design assistance	Energy Audits 85% up to \$5,000 3¢ per ft ² for lights/HVAC - PLUS- 5¢ per ft ² for specialty and process loa	Energy Study Assistance 50% up to \$15,000 Capped at 15¢ per ft ²	Energy Study Project Implementation 100% up to \$25,000 Must perform projects with less than 2 yr. paybacks up to 50% of study cost	Design Assistance 50% up to \$15,000 • Energy modeling • New technology • Scenario reviews	
ENERGY STAR [®] office refrigerator	\$125 when	\$125 when you purchase a new ENERGY STAR® refrigerator and recycle your old mode			
Vending machine (occupancy sensor)		\$50 per system			
Office water cooler digital timer		\$15 per timer (privately owned)			
Window film (not shaded or on north-facing windows)	Solar hea	85¢ per ft ² Solar heat gain coefficient must be less than 0.435 or shading coefficient less than 0.5.			
Cool roof technology		20¢ per ft ² Only for the roof areas over air-conditioned space.			
Garage exhaust ventilation CO control syste	m	12¢ per annual kWh saved (up to 85% of project cost) Pre and post-metering required.			
Sub-metering for master-metered condomin and small businesses	ium	\$150	per tenant unit (billed)		
Hotel guest room thermostat control with occupancy sensor		\$1	00 per thermostat		
T12 to Standard T8 lamp with electronic ball (for retrofit only)	ast 2' lamp 3' lamp		4' lamp N/A 8' lamp N/A		
4' Reduced wattage 25W and 28W T8 lamp high performance electronic ballasts Visit <u>www.CEE1.org</u> for list of lamps & ballasts.	\$10 per l	n <u>T12 (40/36W)</u> amp (for retrofit only)			
Linear fluorescent de-lamping Must include removal of all disconnected ba and lamp holder (tombstone).	llast lamp 2' la 4' la	amp amp amp	h Reflectors \$5.00 \$10.00 \$15.00	Vithout Reflectors \$2.50 \$5.00 \$10.00	
Lighting occupancy sensor May not have a manual "ON" override switch	1.	\$20 per automa	tic infrared or ultrasonic sens	sor	
Compact Fluorescent Lamp (CFL)	La	\$2.00 per lamp (for retrofit only) Lamps must be purchased from a commercial lighting distributor/supplier		tributor/supplier	
Pulse-start metal halide fixture			to 200 Watt G 5 per fixture	reater than 200 Watt \$50 per fixture	
Induction lighting fixture			Customized		
LED exit sign Must replace entire fixture.		\$20 per Exit sign (for retrofit only)			
LED vertical reach-in refrigerated case lamp	s and kits \$30	\$30 per 4-foot lamp \$75 per 5-foot or 6-foot retrofit kit		or 6-foot retrofit kit	
LED ENERGY STAR [®] approved non-dimma Visit <u>www.energystar.org</u> for list of approved pr	ble lamp \$2.50 pe oducts. directional la	New Construction Retrofit \$2,50 per decorative and omni- directional lamp including A-19 shape \$5 per decorative and omni- sincluding A-19 shape \$6,00 per MR16, PAR20, 30 or 38 lamp \$9.00 per MR16, PAR20, 30 or 38 lamp		d omni-directional lamp A-19 shape	
LED ENERGY STAR [®] approved dimmable I Must be compatible with the dimming contro	amp \$5 per decor Iler. lamp ir	New Construction Retrofit \$5 per decorative and omni-directional lamp including A-19 shape \$7.50 per decorative and omni-directional including A-19 shape \$7.50 per MR16, PAR20, 30 or 38 lamp \$10 per MR16, PAR20, 30 or 38		nd omni-directional lam A-19 shape	
Stairwell bi-level dimming fluorescent		\$50 per fixture			

SPECIFICALLY FOR LED TECHNOLOGIES NOT LISTED ABOVE: LED lamps & fixtures that are not ENERGY STAR[®] rated are handled by our customized incentive process to ensure persistence of energy savings and cost effectiveness.

Qualifications include but are not limited to:

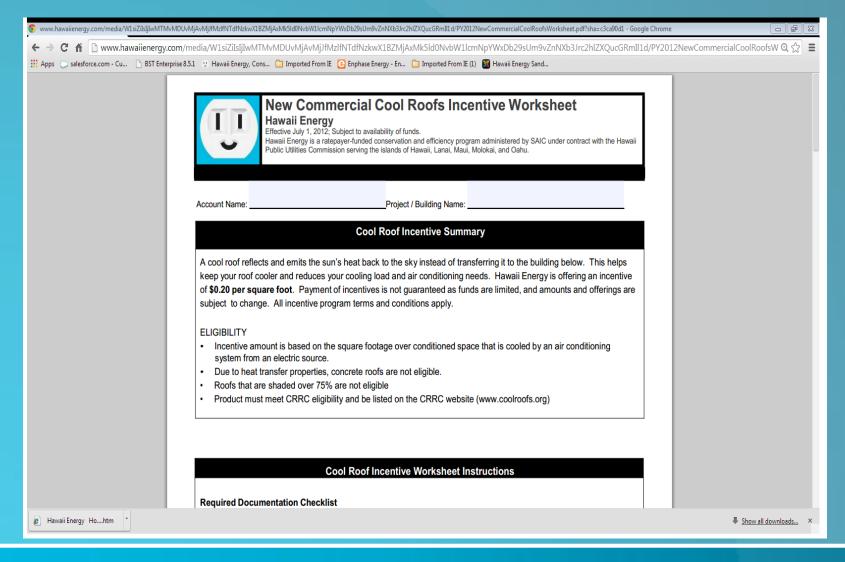
- IES LM79 testing results are required for power, photometric, color temperature and power input vs. light output.
- IES LM80 testing results are required for lumen maintenance.
- UL or ETL listing is required for safety.
- 3-year warranty with a clear description of how defects are determined and replacements are handled.
 Acknowledgment that the lamps must be in place for 5 years. If replaced with higher wattage consumption technologies, the incentive must be refunded.
- Payback must be 6 months or longer.

All incertises are subject to change without prior antification or upon discretion of the Howard Public URBies Commission. Howard incerpts to caratepose - Houder conservation and efficiency program administered by SAC under constract with the Howard Public URBies Commission serving the klands of Howard, Land, Maul, Molokari and Oahu. 19/333-59713-30-300





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ENERGY STAR[®] LED LAMPS

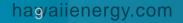
- Energy Star[®] or DLC Approved LED Lamps
- Non-Dimmable
 - A19 \$5
 - MR16 & PAR Lamps \$9
- Dimmable and Compatible with Controls

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- A19 \$7.50
- MR16 & PAR Lamps \$10







VARIABLE REFRIGERANT FLOW

- HVAC units with inverter driven variable speed compressors, air handler fans, condenser fans and high efficiency motors provide 20-35% reduction in energy use.
- \$300 per ton



REFRIGERATED CASE LED LIGHTING

- Reach-In Refrigerated Case Lamps
- 4, 5 and 6 foot Lamps
- Can save up to 45%
- \$30 per 4-Foot Lamp
- \$75 per 5-Foot or 6-Foot Lamp

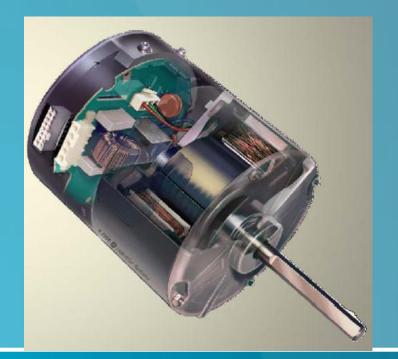






REFRIGERATED CASE ECM MOTOR/CONTROLLER RETROFITS

- Dramatic improvement over older shaded pole motors commonly used in refrigeration systems.
- Can save 30-40%
- \$85 per motor with controls







GARAGE ON-DEMAND VENTILATION CONTROL

- There are opportunities to reduce runtimes 60-90% with active CO monitoring systems.
- \$0.12/kWh







CONDOMINIUM & SMALL BUSINESS SUB-METERING

- Program will provide incentives and education for the installation of billing sub-meters
- Tenants within a master metered facility
- Motivation and ability to directly benefit from energy efficiency improvements and behaviors
- \$150 per submetered unit

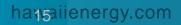






Measure Life	Reduction in	Evening Peak	Day Peak Demand
	Energy Use Incentive	Demand Reduction	Reduction (HVAC Only)
		(5-9 p.m. Weekdays)	(12-2 p.m. Weekdays)
≤5 years	\$0.08/kWh	\$125/kW	\$100/kW
> 5 years	\$0.12/kWh	\$125/kW	\$100/kW







Mahalo!

Stay Connected: Oahu: 1-808-537-5577 Neighbor Islands: 1-877-999-7242

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