“Breaking down the barriers to efficiency improvements in the rental housing market: A comparison of two utility approaches”

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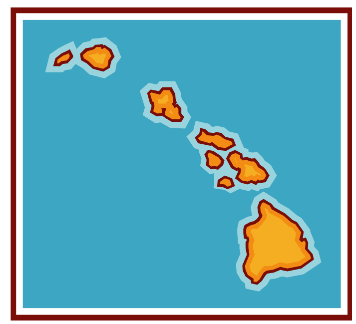
Hawaiian Electric Company

Hawaiian Electric Company
Giving you the power

Hawaiian Electric Company has provided the energy that has fueled the islands' development from a Hawaiian kingdom to a modern state.

- Subsidiaries include: Hawaiian Electric Company, Inc. (HECO), Maui Electric Company, Ltd. (MECO), and Hawaii Electric Light Company, Inc. (HELCO)
- Provides electricity for 95% of Hawaii’s residents (300,000+)
- Established in 1891, Hawaiian Electric remains one of the few locally owned and operated major companies in Hawaii.



Midwest Energy

Midwest Energy Inc.

- Midwest Energy, Inc. (Midwest Energy) is an electric and gas cooperative that serves 48,000 electric and 42,000 gas customers in central and western Kansas.
- Has its own transmission system and generates electricity from owned sources or procures it contractually

- Its gas system is not vertically integrated, containing no upstream transmission "pipes" or gas production.
- It is a local distribution company (LDC) in the traditional sense. The largest city served is Hays, Kansas with a population of roughly 20,000.

Challenges in the Rental Market

The rental market is a difficult segment to target for residential energy efficiency improvements.

- Due to the "split-incentive" in which the landlord has little interest in paying for energy efficiency improvements because the tenant pays the utility bills.

- Several utilities have implemented on-the-bill financing programs, patterned after the Pay-As-You-Save Program® Model.

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On-the-Bill Financing Program Features

Utility provides the up-front capital as a way to encourage the investment in these energy efficiency improvements. Other program features:

- No up-front capital required by customer;
- Efficiency improvements are paid for through a surcharge on the utility bill;
- The surcharge is tied to the location, not to the individual customer;
- Eliminates the "split incentives"

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Comparison of Approaches

Hawaiian Electric and Midwest Energy

	HECO	Midwest Energy
Targeted Equipment	Solar Water Heaters	Space and Water Efficiency Measures
Marketing Approach	Contractor Driven	Customer Driven
No Customer Down Payment	√	√
On-the-Bill Financing of Efficiency Improvements	√	√
Utility Tariff Service	√	√
Installation Tied to Location	√	√
Implemented thru Approved Contractors	√	√
Required Post Inspection/Verification	√	√
Term of Loan (Maximum)	12 years	15 years
Additional Features	$1,000 rebate	Comprehensive Energy Audit
	Equipment Warranty	Economic Analysis
	Free Maintenance	Contractor Management

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HECO's Program Characteristics

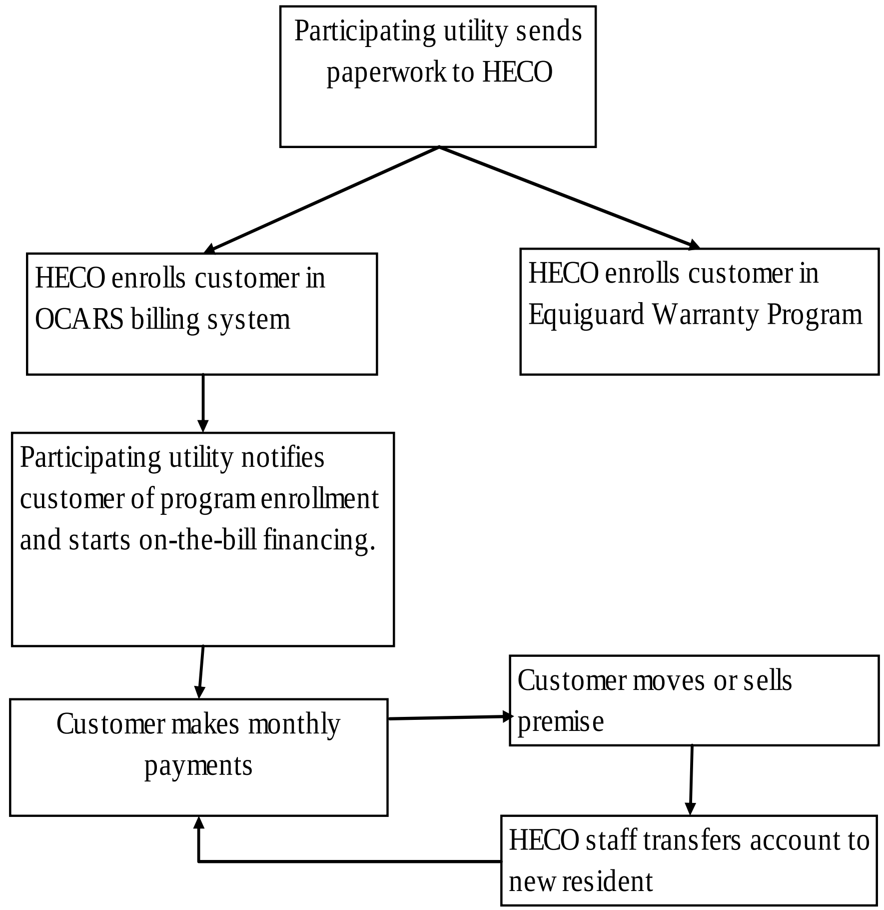
Three-year pilot program *(June 30, 2007 – June 30, 2010)* designed to overcome the barrier of up-front costs in a residential solar water heating market.

- Implemented across HECO's subsidiaries
- Marketed through the company's existing base of approved residential water heater contractors.
  - Participating customers incur no up-front cost but ***finance the cost*** of a solar water heater on monthly bill.
  - Energy savings from this installation more than offset monthly fee.
  - Participants also receive a $1,000 rebate for participating in HECO's Residential Water Heating Program, free maintenance and insurance on the solar water heater, and 12 year warranty.

HECO's Program Characteristics

- Created to satisfy the requirements of Act 240 (SB2957), which mandated that the utilities shall establish a "pay-as-you-save" type program.
- Focus expanded beyond the original rental target market to all eligible existing residential home owners.
- HECO had to develop internally all of the necessary forms, documents, and program information as well a legal requirements.
- Developing this application process was also challenging
  - Required new types of accounting and billing systems that matched the monthly SSP payments with the "regular" monthly utility bills.
  - Required the utility also develop systems and responses to handle all aspects of loan financing and defaults.

INTERNAL SSP PROGRAM PAPER WORK FLOW



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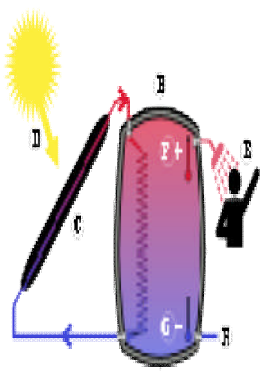
Key Program Metrics for HECO's SSP Program

	HECO	MECO	HELCO	PY1 Weighted SSP Program Average
Average Household Size	3.7	4.2	4.1	3.9
Average Approved System Cost	$4,667.65	$5,161.09	$6,204.66	$5,217.12
Average Loan Term (number of months)	136.2	98.3	103.6	122.2



Midwest Energy's Program

- Midwest Energy's How$mart℠ program ties energy efficiency investments to basic utility service.
- Midwest Energy is first utility in the world to ***voluntarily*** adopt the Pay-As-You-Save® concept
- Tailored to fit Midwest Energy's unique service area characteristics
- The company has allowed investment in efficiency measures that result in How$mart℠ charges equal to 90% of estimated savings rather than 75% under PAYS® or 80% in HECO's program.

Midwest Energy's Roles

- Conducting comprehensive energy audit
- Developing recommendations for improvements
- Performing Economic analysis
- Controlling contractors
- Ensuring Quality Control
- Acting as an Intermediary

How$mart

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Midwest Energy's Roles

How$mart℠

- Midwest Energy has a broader view by focusing on a range of home improvements, rather than just one measure *(i.e., solar water heaters).*
- Midwest Energy only allows efficiency measures that are permanently attached to the foundation meaning so all improvements are related to space or water conditioning.
- The biggest difference between How$mart℠ and PAYS® is that Midwest Energy found it untenable to suspend How$mart℠ charges to customers in the event that a How$mart℠ measure fails to work at any point during the period of time when How$mart℠ charges apply.

Midwest Energy's Program

- Customer-initiated program
  - Contractors and social service agencies often refer customers to program
  - Manage high bill complaints
- Audit results lead to the development of a preliminary Conservation Plan
  - includes recommended efficiency improvements, estimated costs of those improvements, and energy savings.
- Customers solicit participating contractors to provide bids for recommended improvements
- Conservation Plan is finalized with total costs of those improvements, estimated utility bill savings, and How$mart SM monthly charge
- Selected contractor performs the work
- Building owners and tenants must sign off on completed work.
- Midwest Energy pays contractor upon customer sign-off that work has been satisfactorily completed

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Contractor Recruitment Strategies

- Both HECO and Midwest Energy rely on their strong contractor relations
- HECO leveraged its network of existing water heating contractors, and through its support of the solar industry trade groups
  - All three HECO operating companies held contractor informational meetings
  - Contacted the local low income housing agencies, property management companies, etc.
- Midwest Energy has also developed strong relationships with contractors over time.
  - Offer local training opportunities, thereby increasing the competence of the contractor as well as reducing training costs.
  - Informational luncheons regarding the How$mart[SM] program in locations across the service area.

Results

2007-2008 Program Year Results		
	HECO	Midwest Energy
Number of residences reached	185	98
Value of home improvements	$417,048	$464,000
Estimated energy savings(kWh)	454,650	221,000
Mmbtu	NA	1900
Gallons of Propane	NA	575
Estimated Annual Energy Savings	NA	$58,000

Lessons Learned

- Keep the focus on the rental housing market
  - Design works best for low cost measures that have a short payback
  - Midwest Energy has been successful in tapping because of its focus on lower-cost shell and heating measures.
- Keep the application process simple
  - Midwest Energy was able to leverage its existing skills and capabilities into the How$mart℠ Program
  - HECO had to develop this entire program from the ground up.

Lessons Learned

- Voluntary is better than mandated
  - Offers more flexibility and increases the potential for long-term success
  - Midwest Energy viewed this as a a way to improve the overall housing stock in its service territory
- Contractor relationships are critical for program success
  - Demonstrated a strong sense of commitment to these contractors by offering them training and by treating them an essential partner in this process.

Conclusion

- Both utilities believe that the concept of on-the-bill financing program is effective.
- Programs are just beginning to live up to promise of tearing down market barriers to energy efficiency.
- Midwest Energy has received more than 100 inquiries from every region of the country while HECO's program continues to be a model for utility-financed efficiency improvements.
- These two utilities demonstrate that with innovative program design, patience, and ability to make program adjustments as needed, demand and interest in these types of programs will continue to grow.

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