Excellence In Leadership

Whole House Approach to Energy Efficiency

General Manager Regular Item #070430
September 10, 2007

Agenda

- Introduction – Eric Walters
- Research – Debbie Daugherty
- Contractor Partners – Debbie Daugherty
- Customers – Jason Sparks
- Program Details – Joe Wolf
- Marketing Plan – Josie Binion
- Budget – Diane Wilson

Team Objectives

- Determine if there is a way to achieve greater energy efficiency in a more cost effective manner than the a la carte approach currently being used in the residential sector
- Research and develop a “whole house” rebate approach to achieve greater energy efficiency in a cost effective manner

Deliverables

- Research
- Budget
- Administrative Guideline/Documentation
- Marketing

Research

Research

- GRU
- Anaheim Public Utilities
- NYSERDA
- NYSEG
- Central Hudson Gas & Electric
- Consolidated Edison
- National Grid New York
- Orange & Rockland Utilities
- Tampa Electric
- Austin Energy
- Baltimore Gas & Electric
- Pacific Gas & Electric
- Southern California Edison
- Southern California Gas
- National Grid Massachusetts
- National Grid Nantucket
- National Grid Rhode Island
- Sawnee EMC
- Santee Cooper
- City Public Service of San Antonio
- Alliant Energy
- Public Service of New Hampshire
- Connecticut Light & Power
- United Illuminating
- Yankee Gas
- Mid American Energy
- Bay State Gas
- Gas Networks
- KeySpan
- NSTAR
- Western Massachusetts Electric
- Efficiency Vermont
- Conserve Nova Scotia
- Fortis BC
- Southern Maryland Electric Cooperative
- Tacoma Power
- Avista Utilities
- Jackson EMC
- Energy Trust of Oregon
- Oregon Department of Energy
- Pacific Power
- Portland General Electric

Findings

- Whole house approach has been shown to reduce energy consumption by up to 30%
- Bundling improvements provides greater energy savings than a la carte approach
- Packaging makes it easier for the customer
- Packaging makes it more cost effective and profitable for the contractor

Primary Stakeholders

- EIL focused research on the barriers and benefits associated with two major stakeholders when designing the Whole House Approach to Energy Efficiency.
  - Contractors
  - Homeowners

Contractors

Barriers for Contractors

- Lack of training
- Too busy, especially in the summer months
- Not their core business
- Lengthy licensing process
- Cost of training/licensing
- Perception of low profit margin
- Don’t like workshops
- Don’t like giving free estimates

Benefits to Contractors

- New business to get their foot in the door
- Free training
- Free marketing by local utility
- Utility backing reinforces reputation
- Better relationship with GRU
- Better relationship with customers
- Qualified lead pool
- New market

Austin Contractors

- Smiling and Dialing ☺
  - Called HVAC Contractors from the list on the Austin Energy website
  - What do you like about the Whole House Program?
  - What don't you like about the Whole House Program?
  - What advice would you have for us to make it a great program here in Gainesville?
- Used their feedback to create a discussion guide for Gainesville focus group.

Contractor Focus Group

- 5 HVAC Contractors
  - Bertie Heating & Air
  - Bounds Heating & Air
  - Comfort Temp
  - Crystal Air
  - Northwood Heating & Air
- Dan Clark moderated discussions on the following:
  - Training
  - Energy Efficiency Survey
  - Financing or Rebate
  - Follow up Inspection
  - Marketing

Contractor Focus Group Findings

- Continuing Education Units Not Important
- Simplicity
- Lump Sum Rebates
- Designated Contact
- Off-Season Promotions

Contractor Training

- Educate and certify GRU staff and HVAC contractors on Whole House Approach to Energy Efficiency
  - Hold training session at GRU
- GRU conservation analysts will conduct post inspections

Contractor Requirements

- GRU sponsored contractor training
- Contractors may charge for survey
  - Contractors complete 10 free surveys per year
- Existing Contractor documentation requirements continue

Customers

Eligible Customers

- GRU Residential Electric Customers
  - Owner occupied single-family residences
  - Includes mobile homes and condos
  - Rental Properties

Barriers for Homeowners

- Survey cost
- Improvements cost
- Payback period too long
- Trust of utility/contractors/etc.
- Permit for new item may require rest of house to come up to code
- Letting people in home
- Too complicated
- Hard to quantify savings
- Opportunity Cost – competing priorities
- Underdeveloped market – not enough raters/contractors
- Too busy/Apathy/Awareness

Benefits to Homeowners

- Lower utility bills
- Quality of life in home – better air quality
- Save the world ☺ I'm green
- Increased Resale Value

Target Market

- Higher energy users
- Customers with older homes
- Customers who need to replace A/C
- Environmentally conscious

Proposed Program

Anticipated Customer Savings

- Typical customers from other utilities save 30% energy on average using Whole House Approach to Energy Efficiency
- $1,560 maximum Whole House Rebate
- Payback period – higher users will have shorter payback period

How the Program Works

- Step 1: Customer calls participating contractor(s)
- Step 2: Contractor performs home energy analysis
- Step 3: Contractor presents package options
- Step 4: Customer selects package and type of incentive
- Step 5: Contractor completes work
- Step 6: GRU performs post inspection
- Step 7: Customer receives rebate or low interest loan

Program Philosophy

- GRU still offers a la carte rebates
- Offer rebate packages - 20% greater rebate
- Customer achieves a greater energy savings by looking at the whole home vs. individual systems
- Contractor business opportunity
- GRU benefits with greater realized DSM
- Proposed R-19 Minimum Housing Code Supports this Program

A la carte Rebates (2008 rates)

Central A/C Replacement (≥ 15 SEER)	$300
Duct Leak Repair	$375
Insulation	$375
Super Efficient A/C	$550
Reflective roof coatings (mobile homes)	$ 70
Room A/C replacement	$150

Sample Supplemental Components

- Programmable thermostat installation
- CFL replacement (CFLs provided by GRU)
- Weather-stripping
- Window shading devices
- Ceiling fans
- Water heater repair/replace

SUPER SEER IT!

- Super SEER any package and get a bonus rebate
  - Central A/C replacement must include a two-stage unit (≥15 SEER)
  - Package Rebate increases by $300

Program Matrix

Pkg	Core Components			Number of Supplemental Components Required	Package Rebate	Super SEER Bonus	Approx. Customer Cost After Rebate
	Central A/C	Duct Repair	Insulation				
1	$	$	$	1	$1260	+$300	$9000
2	$	$		1	$810	+$300	$8000
3	$		$	1	$810	+$300	$8000
4		$	$	1	$900	n/a	$1100
5 for 5	Any core component			4	$500	+$300	

Note: All packages require a contractor provided energy analysis

Home Performance Summary

- Five package options create greater energy savings and provide the customer higher rebates
- Whole House Approach to Energy Efficiency participants can take advantage of Low Interest Loan instead of rebates, but can’t use both

Marketing

Marketing Tactics

- Train HVAC contractors to be salespeople for the programs
- Media Advertising
- Customer Bulletin
- Direct mailing to target customers
- Lowe’s and Home Depot store signage
- Lender signage/literature
- GRU Vehicle signage
- GRU.com website
- Train field personnel / Internal employees

Promotions

- “SUPER SEER It!”
- Customer Testimonials
- Neighborhood Associations/District Competitions
- Fall & Winter Special Promotions

Energy Star

- Customer Awareness
  - Recognized, trusted symbol
- Third-party Credibility: EPA and DOE
- How to Develop a Local Program
  - Market Research
  - Develop Policies & Procedures
  - Partner with Energy Star

Budget

Budget Components

- Contractor Training
  - GRU Requirements and Procedures
  - Technical Training
  - Training materials
  - Handbooks
  - Administration of contractor portion of program

Budget Components Cont.

- Inspection
  - Follow-up inspections of contractor work
- Measurement & Verification (M&V)
  - 3rd party (15% required for Energy Star)
  - Internal M&V

Budget Components Cont.

- Rebate Budget

Rebate Type	Home Performance Program	A la Carte
Central A/C SEER 15-16	$ 30,000	$ 30,000
A/C Super	$ 99,550	$ 99,550
Duct Repair	$112,800	$112,800
Insulation	$ 28,438	$ 28,438
Totals	$270,788	$270,788

Budget Summary

Contractor Training	$ 55,000
Marketing	$ 51,000
Inspection (250)	$ 25,000
Measurement & Verification	$ 10,000
Rebates	$270,788
Total	$411,788

- Anticipated Energy Savings: 1,125,000 kWh
- Anticipated Demand Reduction: 525 kW

- Funding in FY 08 Conservation Budget

Recommendation

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- GRU adopt and implement the Whole House Approach to Energy Efficiency as Home Performance with Energy Star® program during FY 2008
- GRU fulfill the requirements necessary to use the Energy Star® logo for this program