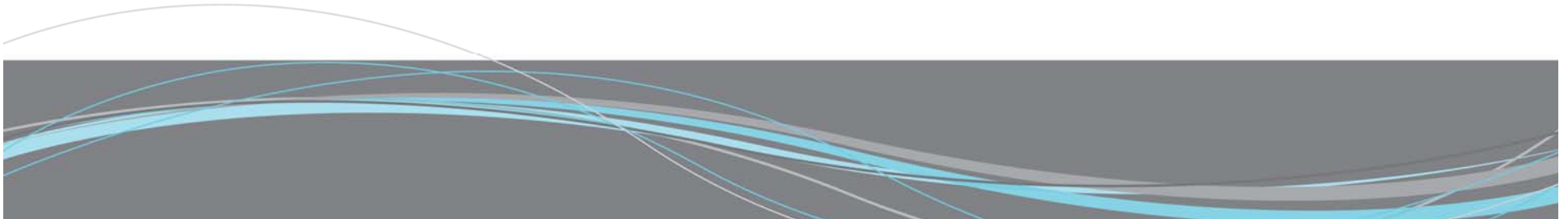




Xcel Energy Colorado DSM Roundtable Discussion

February 13, 2013
1:00pm to 4:00pm
1800 Larimer, Room 03G01



Welcome and Introductions

Contact Info: Neil Cowan

Senior Analyst, DSM Regulatory Strategy & Planning

Office Phone: 303-294-2115

E-mail: neil.cowan@xcelenergy.com

Agenda

- 1:00 – 1:05 **Welcome, Introductions**
- 1:05 – 1:15 **Regulatory Update**
- 1:15 – 2:15 **DSM Program Highlights**
- 2:15 – 2:30 **Break**
- 2:30 – 3:30 **Product Development**
- Settlement Related Development (Current RFP Status, EE Financing, Waste to Energy)
 - Pilot Updates
 - Ongoing Development (Upcoming 2012 60 Day Notices, New Ideas)
- 3:30 – 4:00 **Wrap-up/Open Discussion**

Regulatory Update

Presented by:

Neil Cowan

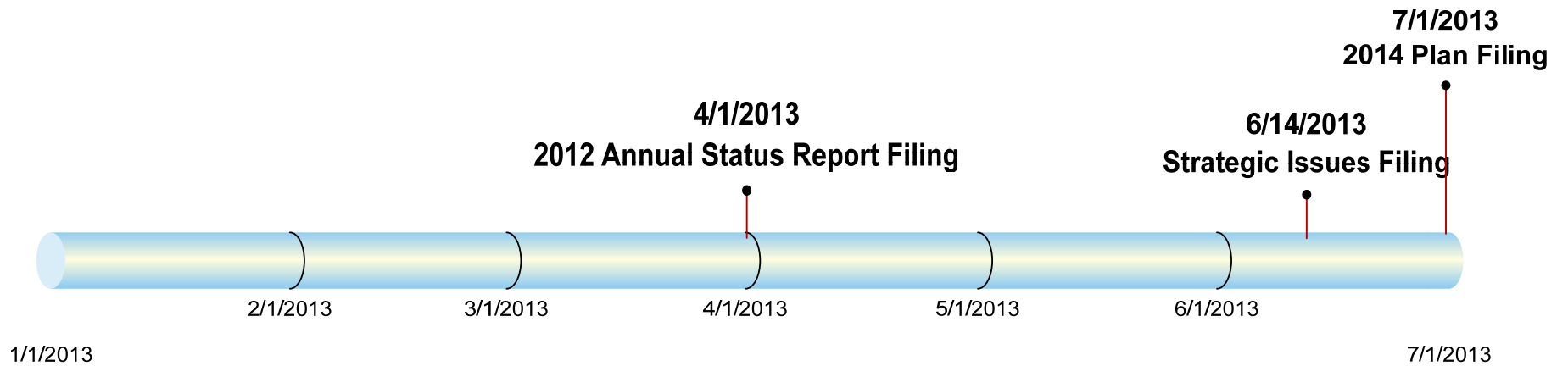
Compliance information is available
at Xcel Energy's DSM Website:

http://www.xcelenergy.com/About_Us/Rates_&_Regulations/Regulatory_Filings/CO_DSM

Recent Filings – Q4 2012



Future Filings – 2013



60-Day Notices

First Quarter 2012

- In Home Smart Device Pilot – March 1

Second Quarter 2012

- ENERGY STAR New Homes – June 27

Third Quarter 2012

- ES New Home
- Low-Income SF Weatherization
- 2011 Low-Income SF Weatherization (Eval.)
- 2011 Bus. Heating Efficiency (Eval.)
- 2011 Self-Direct (Eval.)
- 2011 Showerhead (Eval.)

60-Day Notices (cont...)

Fourth Quarter

- **2012 A/C Tune-up (RFP Response)**
- **Process Efficiency**
- **EE Financing Application**
- **Computer Efficiency**
- **Lighting Efficiency**
- **Low-Income Kits**

DSM Program Highlights

**Presented By:
Shawn White
David Hueser
Jennifer Elling**

DSM Evaluations & Portfolio Achievements Update

**Presented By:
Shawn White**

DSM Process & Impact Evaluations 2012

■ ***Residential High Efficiency Air Conditioning***

- Update NTG from .89 to .68.
- Consider removing SEER 14.5-14.9 equipment incentives
- Explore the costs and benefits associated with a tiered early retirement incentive approach

■ ***Low Income Energy Savings Kits***

- Did not evaluate NTG due to nature of program
- Consider additional ways to market the program through LEAP, local assistance agencies, and the Low Income Weatherization Program

DSM Process & Impact Evaluations 2012

■ *Business Process Efficiency*

- Program performed well and most recommendations centered on continuing with existing processes.
- No change to the current stipulated net-to-gross ratio of 0.90
- Implemented recommendation to expand program to include commercial customers in addition to industrial customers.

DSM Process & Impact Evaluations 2013

- *Three programs under evaluation*
 - Residential Home Performance
 - Business Segment Efficiency
 - Business Compressed Air

- *Evaluations kicked off in Q1, completed by year end*

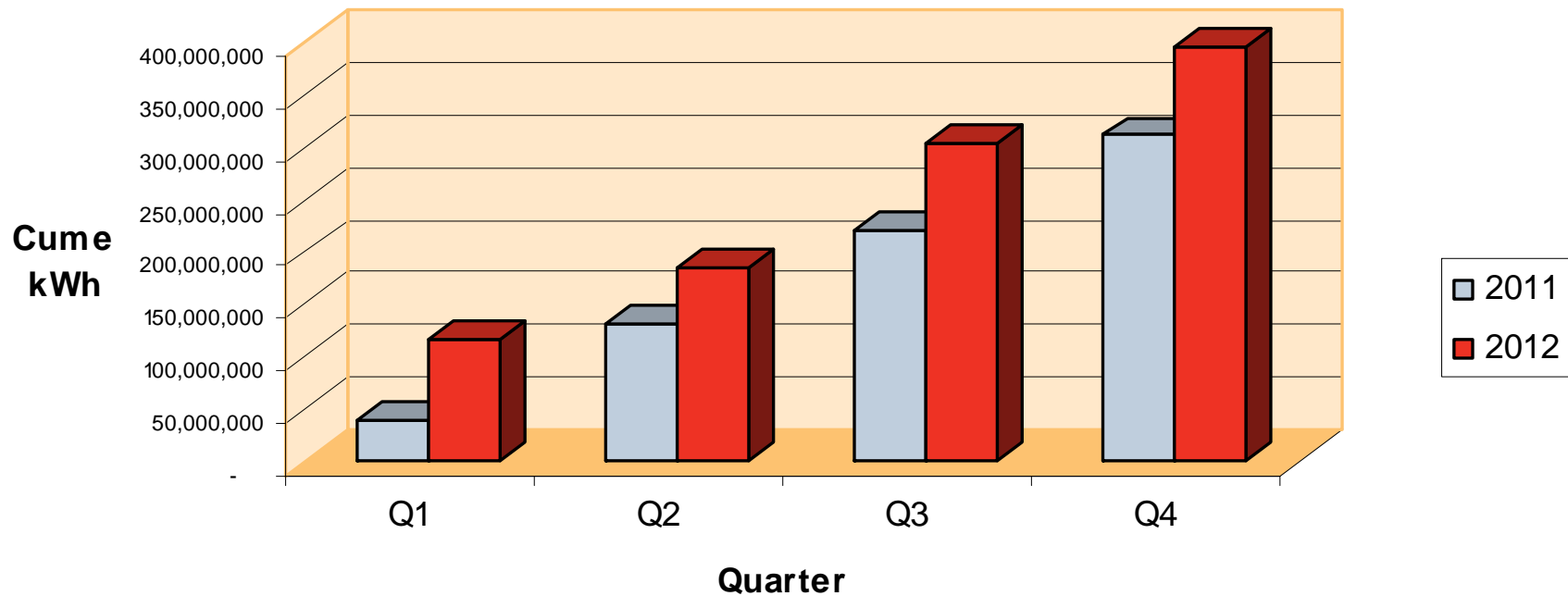
Preliminary Fourth Quarter 2012 DSM Achievements, Total DSM Portfolio

- 2012 Electric Targets: 79.3 MW; 329.3 GWh; \$78.1M
- Electric Achievements: 90.1 MW; 396.6 GWh; \$79.4M

- Gas Goals: 435,504 Dth; \$13.2M
- Gas Achievements: 435,028 Dth; \$12.5M

2012 Electric Energy Savings (kWh) exceeded 2011 by 27%

Colorado DSM Portfolio 2011/2012 Cumulative Electric Achievement, Quarterly Comparison



DSM Program Overview, Business Energy Efficiency Program Highlights

Jennifer Elling

Business Programs: Noteworthy Updates

- **Cooling Efficiency** – 60-Day Notice filed 1/25/2013 to add new Direct-Evaporative Pre-cooling for Air-Cooled Condensers. Measure focuses on retrofits for existing RTUs. Rebate = \$100/ton of cooling for the installation.
- **Standard Offer** – Efforts to improve program in 2012 saw limited activity and project little potential for 2013. Closely reviewing our options for 2013.
- **Energy Design Assistance** – Launching new “open EDA” track mid-2013 to qualified modeling companies in addition to the contracted consultants. New track is expected to increase participation.

Residential and Low-Income Program Highlights

David Hueser

Insulation Program Modifications



Program changes posted Jan. 2, effective Feb. 7, 2013

Goal: deeper savings per customer; quality over quantity

■ **Increased Quality Assurance**

- Air sealing **required** (unless NACH .45 or better)
- Pre- and Post-project blower door testing
- Combustion Appliance Zone (CAZ) safety check-off
- Building Performance Institute (BPI) Certification required for participating contractors



■ **Technical changes**

- Air sealing, weather stripping savings, air flow calculations, incremental costs



■ **2012 Contractor Training**

Heating System Rebates



2012 participation lower than in past years Stable program spending in 2013

■ Program participation

- Vast majority (95%) of furnace rebates paid at the highest efficiencies of 94% AFUE rating or higher.
- 800 contractors registered with the program

■ Technical assumptions

- DOE shelved May 1, 2013, furnace standards increase
- No changes to 2013 assumptions or rebates

■ Cost effectiveness

- Full-year 2011 Gas MTRC ratio on par with 2011 goal
- Over half of 2012 spend was rebates (56%)



Low Income Energy Savings Kits



Program changes posted Nov. 26, effective Dec. 27, 2012
Met natural gas savings goal at reduced spending level

■ **Technical Assumptions**

- Align showerhead kWh and Dth savings with standalone program
- Water heater fuel type split: 89% gas, 11% electric; slight decrease in electric spending/increase in gas spending accordingly
- Incremental cost for kit measures updated per 2012 and 2013 vendor pricing

■ **Driving Program costs down in 2012 and 2013**

- Cost for kit elements negotiated down
- Cost per Dth improved (decreased) by one third vs. 2011

DSM Product Development Update

Presented by:

Kevin Schwain, Andre Gouin and Pat Goggin

DSM Website provides program idea submission forms at:

http://www.xcelenergy.com/About_Us/Rates_&_Regulations/Regulatory_Filings/CO_DSM

Product Development Team

- **10 Resources able to flex across 3 Platforms**
 - Energy Efficiency
 - Renewable Energy
 - Demand Response
- Manager: Kevin Schwain, 612-330-5961
- Colorado Team Lead: Pat Goggin, 303-294-2370
- Pilot Lead: Andre Gouin, 303-294-2975



Settlement Development Update

Innovative Technology RFP Update

- Selected 3 to fill 2013 gap
 - Pool Pump Efficiency – final contract negotiations
1.9 GWh | residential segment
 - Cooling Efficiency – Evaporative Pre-cooling for Air-Cooled Condensers measure
2.5 GWh | business segment
 - Refrigeration Efficiency
Final technical assumptions under development
~9.1 GWh | business segment | subject to review

Energy Efficiency Financing

- Worked with Stakeholders to define product
- Filed Application and Received Order
- Phase One Launched –
 - Marketing Existing Energy Efficiency Loan Products
 - Boulder and Denver Counties and their lender Elevations Credit Union
 - Working with Eagle and Garfield Counties for similar product
- Phase Two-
 - Facilitate Creation of Energy Efficiency Loan Products
 - Target Under Served Areas within Xcel Service Territory
 - Working with Interested Lenders and Credit Enhancers
 - Reaching out to other Potential Lenders
- Maintaining Touch Points with Significant Participants

Waste to Energy Projects

Purpose:

- To implement a program applicable to Eligible Energy Resources installed on customer premises.

2012 Activities:

- PUC Staff initiated an investigation into combined heat and power (CHP) systems, likely to encompass Waste to Energy projects
- Company agreed to delay filing until April 1st 2013
- Workshop held on December 4th, 2012. Focus was standby tariff.
- Company intends to comply with the April 1st filing

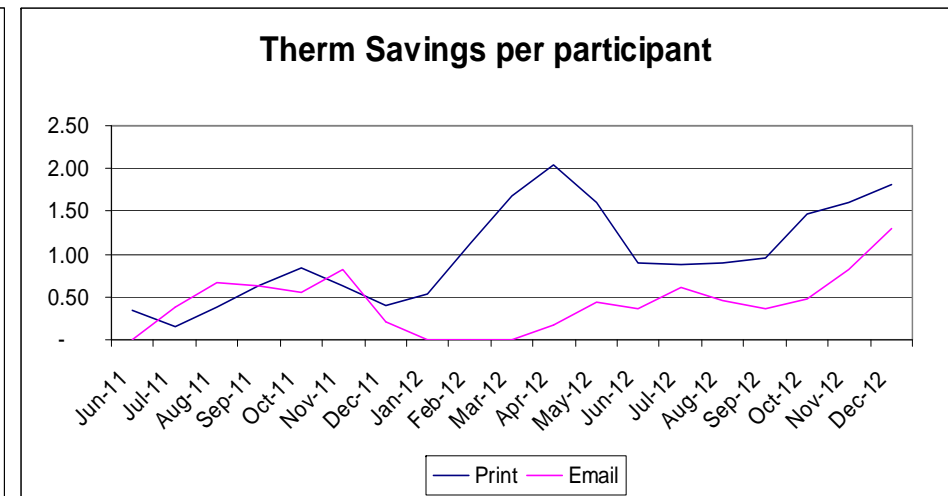
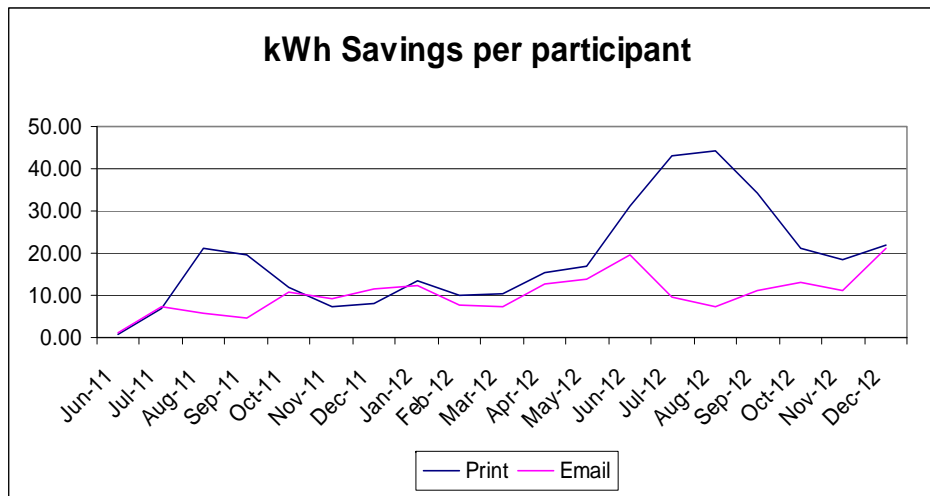
Commercial RTU Early Retirement

- Significant time/effort modeling complex options, no consistent methodology across industry
- Best results are marginally cost effective under optimistic assumptions
- Continue exploring but do not expect to offer specific Cooling Efficiency measure for early retirement
- Looking into other marketing offers to support early retirement this summer

Pilot & Study Update

Energy Feedback Pilot

- ❑ 50,000 Colorado participants; 40k print reports, 10k e-mail reports
- ❑ Savings in line with original projections (2% print, 1% email)
- ❑ Opt out rate < 1% annually
- ❑ Annual participant savings ~ \$28, Program cost ~ \$9.80/participant
- ❑ Program expanded to an additional 50,000 participants in January 2013



14.6 GWh cumulative savings

72,524 DTh cumulative savings

Home Energy Report (HER)



Home Energy Report

Report period: 11/07/12-01/10/13

We are pleased to provide this personalized report to help you save energy.

The purpose of this report is to:

- Provide information
- Help you track your progress
- Share energy efficiency tips

If you have questions about these reports or would like to no longer receive them, you can contact us at (800) 824-1688 or energyreport@xcelenergy.com.

This information and more is available at www.xcelenergy.com/co/energyreport



Last 2 Months Neighbor Comparison You used 35% MORE energy than your neighbors.



How you're doing
You used more than average
 Turn over for ways to save →

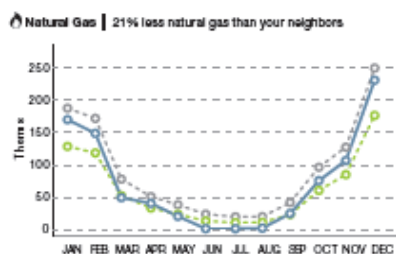
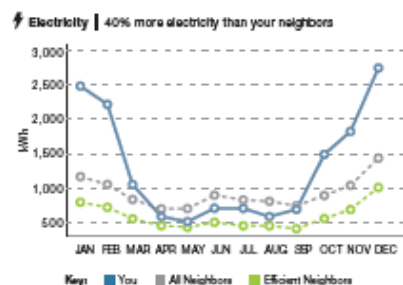
* This energy index combines electricity (kWh) and natural gas (therms) into a single measurement.

■ All Neighbors: Approximately 100 occupied, nearby homes that are similar in size to yours (avg 2,575 sq ft) and have both electricity and natural gas service
 ■ Efficient Neighbors: The most efficient 20 percent from the "All Neighbors" group

Are we comparing you correctly?
 Tell us more about your home:
www.xcelenergy.com/co/energyreport

Last 12 Months Neighbor Comparison

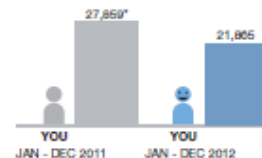
You used 15% MORE energy than your neighbors.
 This costs you about \$176 EXTRA per year.



Turn over for savings →

Personal Comparison

How you're doing compared to last year:



In 2012 you used **22% LESS** energy than in 2011.
 ★ You're on pace to use less in 2013.

Looking for ways to save even more this year? Visit www.xcelenergy.com/co/energyreport

* This energy index combines electricity (kWh) and natural gas (therms) into a single measurement.

Action Steps | Personalized tips chosen for your home

Quick Fix

Something you can do right now

- ❑ **Plan for a year of savings**
 Start off the new year by talking with your household members, friends, and neighbors about saving energy. By committing to do a few key things, you can realize significant energy savings.

For example, agree to turn off lights in unoccupied rooms and use only the light you need. Devise a plan to run only full loads in your dishwasher, clothes washer, and dryer.

Finally, depending on the season, raise or lower your thermostat when you are away from home.

SAVE UP TO
\$90 PER YEAR

Smart Purchase

Save a lot by spending a little

- ❑ **Program your thermostat to reduce heating costs**
 A programmable thermostat can automatically turn down your heating system when you're away, then return to your preferred temperature when you're home to enjoy it.

Decrease the temperature by at least 10°F when you're away or asleep. Set a comfortable temperature for when you're at home; as a guideline, the U.S. Department of Energy suggests 68°F or lower during the winter.

Consult your manual or call the manufacturer if you need assistance.

SAVE UP TO
\$50 PER YEAR

Smart Purchase

Save a lot by spending a little

- ❑ **Weatherstrip windows and doors**
 Windows and doors can be responsible for up to 25% of heat loss in winter for a typical home.

If you're comfortable doing the task yourself, you can weatherize your home in just a few hours. Seal windows for about \$1 each with rope caulk, or install more permanent weatherstripping for \$8-\$10 per window. Also, install sweeps at the bottom of exterior doors.

A professional can help you with this work if you prefer.

SAVE UP TO
\$75 PER YEAR



runs on OP@WER®

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Energy Feedback Pilot


Cross promotion of other EE programs

Recycling that pays off


A little space in your garage isn't the only perk of recycling your fridge or freezer.
Check out our free fridge recycling program-- **here's how it works:**



**We pick up and recycle
your old fridge or freezer***



**You'll receive a \$50 rebate
and two free CFL bulbs**



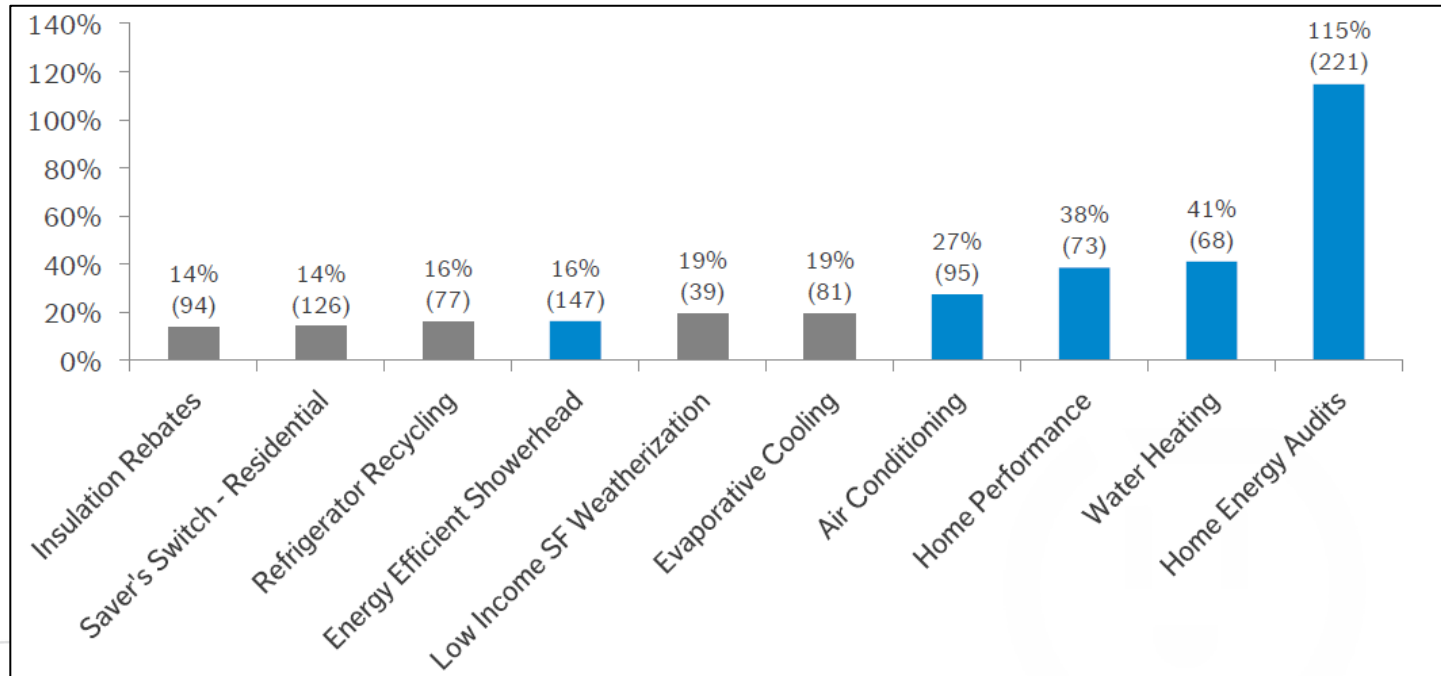
**Plus, you'll save up to
\$100 per year in energy costs**

Schedule your free pick-up today: Call us toll-free at **(866)552-8755**

*Participation in this program is subject to important rules and eligibility requirements. Visit ResponsibleByNature.com/Fridge to learn more.

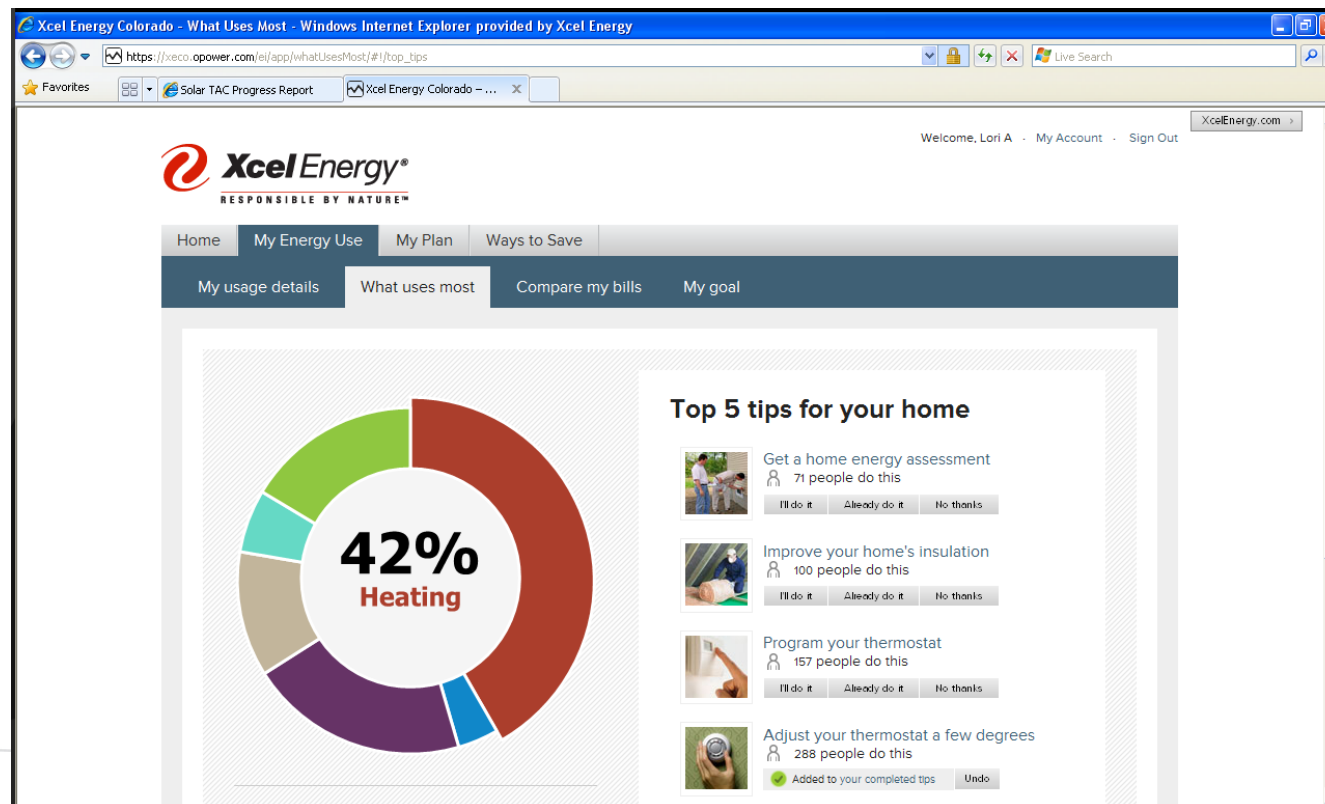
Energy Feedback Pilot

HER's drive higher participation in other EE Programs



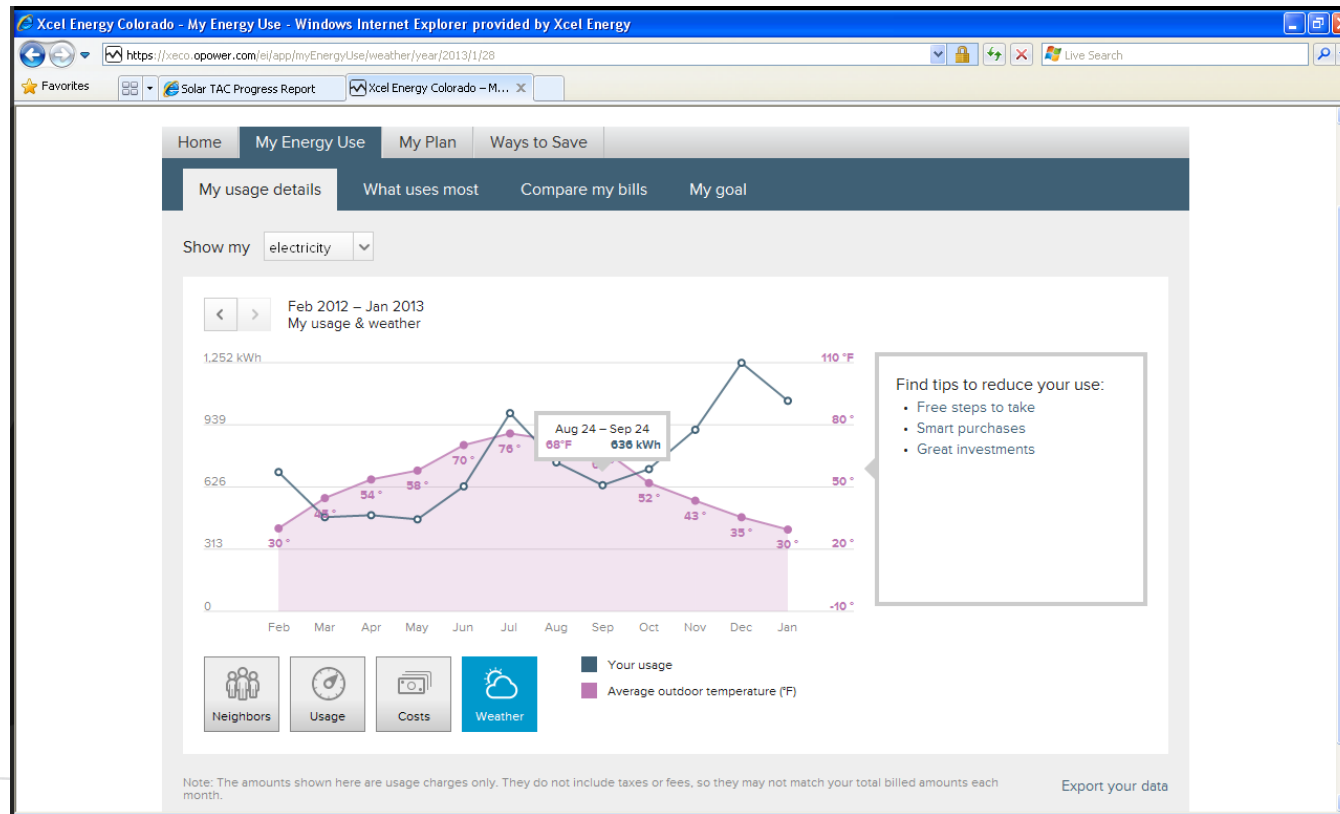
Energy Feedback Pilot – on line

On line application allows greater customization...



Energy Feedback Pilot – on line

...and more in-depth analysis



Xcel In-Home Smart Device Pilot (Q4)

Pilot Status

- End of year customer survey provided valuable insights
- Preparing a preliminary evaluation report

Customer Survey Results

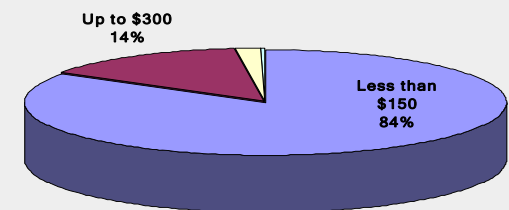
- High response rate (51%)
- 89% responded that they are satisfied with their 'In-Home' devices
- Customers generally found the energy usage information provided on the Home Base or web portal helpful (80%)

Next Steps

- Developed the 2013 Customer outreach plan
- Adjust pilot with input from the preliminary evaluation report

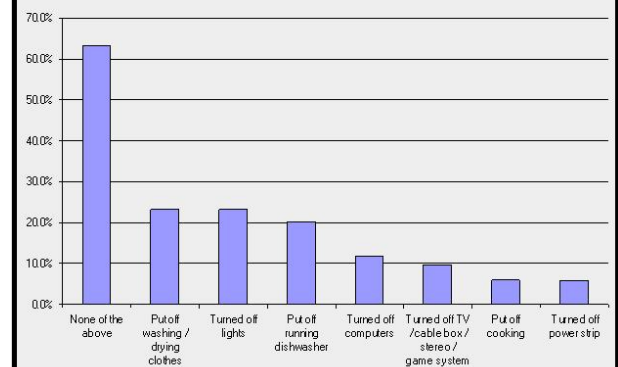
Survey results - additional

How much would you be willing to pay?

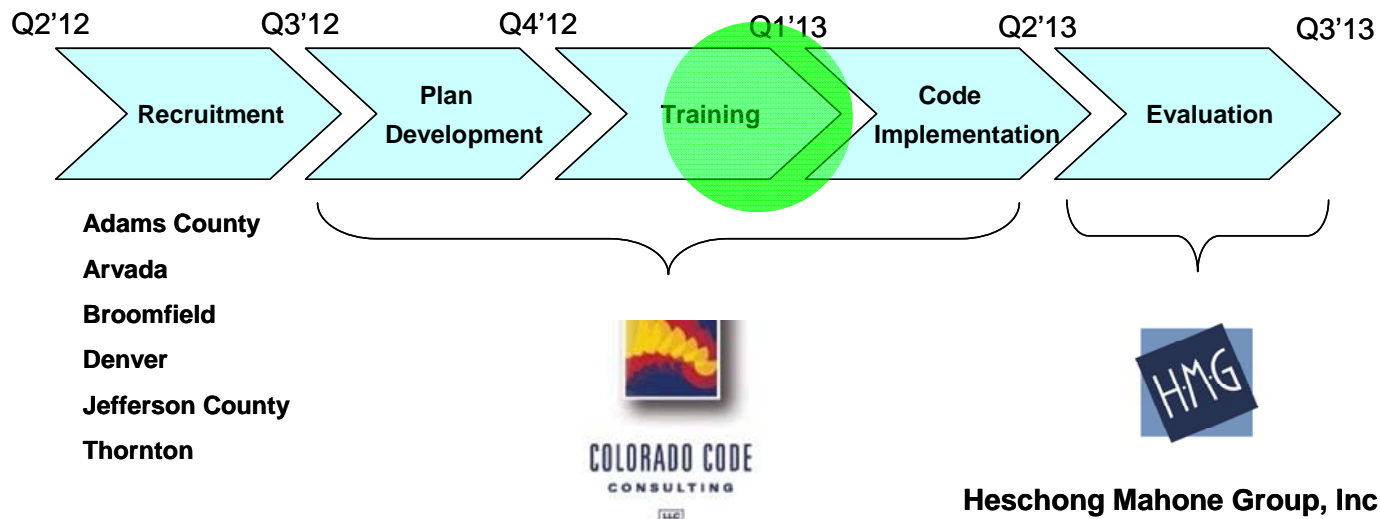


■ Less than \$150 ■ Up to \$300 ■ Up to \$500 ■ More than \$500

During Control Events, did you do any of the following:



Building Code Support Pilot



Status:

- Training delayed but progressing in several jurisdictions
- Impact potential, methodology evaluation completed June 2013
- Actual impact completed later in 2013

EV Demand Response Pilot

Determine demand response opportunity available through control of electric vehicle charging stations and better understand:

Purpose

- Customer's willingness to allow interruption of charging
- Available load coincidence with peak demand

Status

2012 activities focused on evaluation and testing of load control devices, scoping potential participant pool, re-evaluating how to reach pilot objectives.

2012

- ✓ Installed 3 Canon EV load control devices
- ✓ Hardware and communications costs prohibitive
- ✓ Limited device availability / functionality

2013 - 2014

-chargepoint+

consert
COMMUNICATE CONTROL CONSERVE

In development

On Star

entue

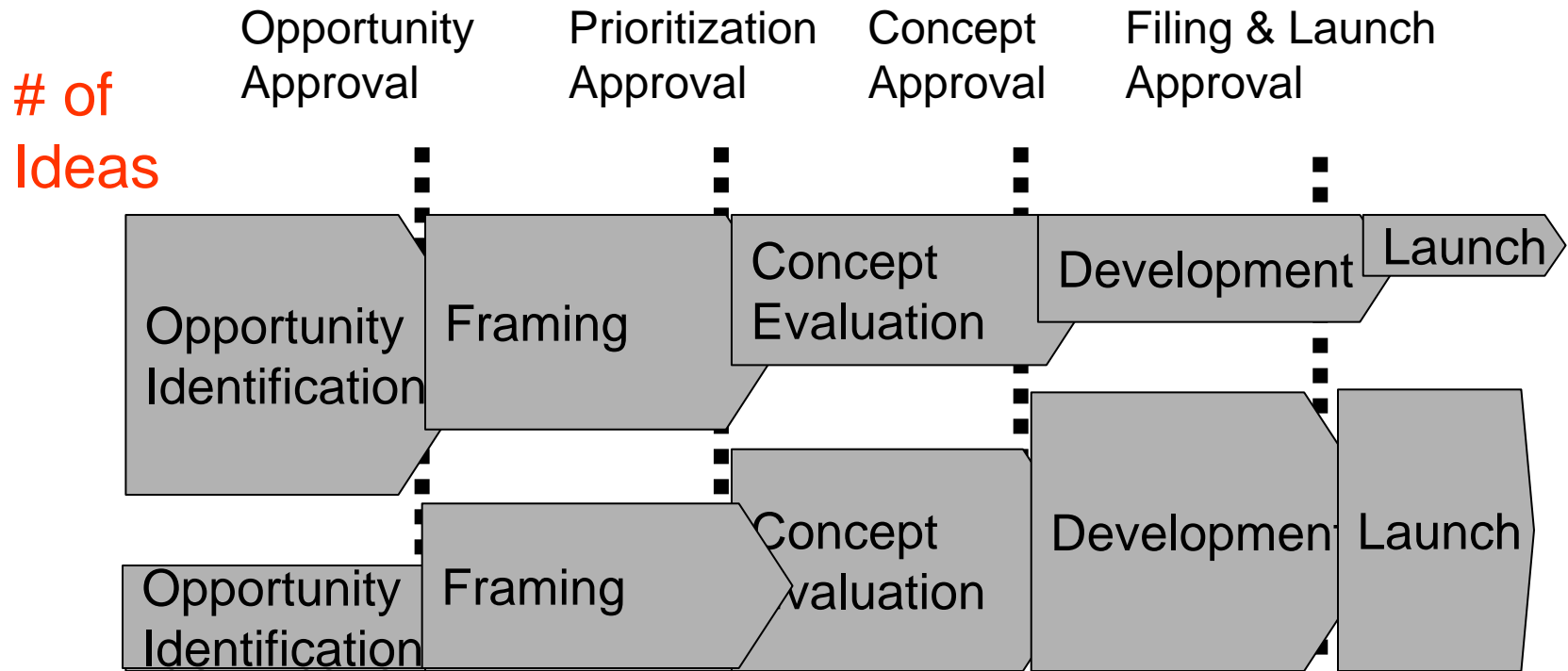
CARWINGS®

SYNC
powered by Microsoft

EV Owner Participation Surveys

Ongoing Development Update

Product Development Process



Level of Effort per Idea

Product Pipeline: Business

- Framing:
 - Motor system components
 - Green Motor Rewind
 - Compressed Air - Demand Reduction
 - Server Closet Virtualization
 - Compressed Air - Alternative Air Flow Supply
 - Pneumatic to Electric Conversion
 - Compressed Air - Artificial Demand
 - Compressed Air - Pressure Drops
 - VFDs and Controls for RTUs
 - Data Center Efficiency Audit

Product Pipeline: Business

- Concept Evaluation:
 - 2x2 and 2x4 LED fixtures
 - More LED fixtures
 - HID to CFL retrofit
 - CFL to LED retrofit
 - LED Parking Garage fixtures
 - Motor system components
 - Green Motor Rewind
 - ECM for HVAC
 - ECM refrigeration condenser fans
 - Building Tune-up
 - ENERGY STAR Servers

Product Pipeline: Residential

- Framing:
 - Cable TV Set Top Boxes
 - Appliance Standards
- Concept Evaluation
 - Residential Online Energy Feedback

DSM Roundtable Ideation Submissions – 4th Quarter

■ **Aeroseal**

- Discussed product with submitter
- Explained development process
- Previous efforts to develop Duct Sealing measures have failed Cost Benefit Analysis (mTRC approximately .50)
- Further discussions are being scheduled

New Ideas?

■ CO Roundtable Ideas

- Submit complete Roundtable Idea Form at least 90 days prior to a CO Roundtable Meeting in order for an analysis to be presented at that meeting.
- Incomplete Idea Forms will be returned to submitter for completion
- 90 Day window starts when form is complete

■ Roundtable Idea Form:

- <http://www.xcelenergy.com/staticfiles/xcel/Regulatory/Regulatory%20PDFs/CO-DSM/Opportunity-Identification-Form.xls>

Wrap-up / Open Discussion

Upcoming Roundtable Schedule:

May 15, 2013

August 21, 2013

November 13, 2013

