



Colorado DSM Roundtable


August 6, 2014

1:00 – 4:00 pm

03G01, 1800 Larimer St.
Denver, CO



Agenda

- **1:00 – 1:05 p.m.** **Welcome and Introductions**
 - **1:05 – 1:10 p.m.** **DSM Regulatory Updates**
 - **1:10 – 2:45 p.m.** **DSM Programs: Q2-2014**
 - Business
 - Residential and Low-Income
 - *2:45 – 3:00 p.m.* *-- Networking Break --*
 - **3:00 – 3:20 p.m.** **Pilot Updates: Q2-2014**
 - **3:20 – 4:00 p.m.** **Product Development: Q2-2014**
 - Stakeholder Idea Submissions
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DSM Regulatory Updates Q2-2014

**Sarah Ruen Blanchard
DSM/RE Regulatory**

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DSM Regulatory Updates

- DSM Strategic Issues Decision Issued (13A-0686EG)
 - ◆ Flat 400 GWh annual goal 2015-2020
 - ◆ DR Goals (cumulative): 528 MW – 2015; 537 MW – 2016
 - ◆ EE Spending Cap (\$98M incl. 7.5% flex)
 - ◆ Gas DSM minimum spend of \$12M annually in 2015/16
 - ◆ Changes to Company's Incentive Mechanism
 - ◆ Energy Feedback Pilot approved for transition to Behavioral DSM product (Residential only)
- Parties filed ARRRs on July 21

DSM Regulatory Updates

60-Day Notices

- **ENERGY STAR New Homes** (no comments received)
 - ◆ **Posted:** June 26, 2014
 - ◆ **Implemented:** July 28, 2014

- **High Efficiency Air Conditioning**
 - ◆ **Posted:** July 30, 2014
 - ◆ **Comments Due:** August 28, 2014

- **Multifamily Building Pilot**
 - ◆ **Posted:** August 1, 2014
 - ◆ **Comments Due:** August 31, 2014

- **Smart Thermostat Pilot**
 - ◆ **Posted:** August 1, 2014
 - ◆ **Comments Due:** August 31, 2014

Evaluations & Studies

- **2013 Home Performance with ENERGY STAR Comprehensive Evaluation posted:** <http://www.xcelenergy.com/staticfiles/xcel/Marketing/Files/CO-2013-Home-Performance-ES-Evaluation.pdf>
- **2013 Colorado Residential DSM Attitude, Awareness and Usage (AAU) Study**
 - ◆ 92% customer satisfaction, up slightly from previous years
 - ◆ 63% of customers still prefer energy savings communications via bill, but preference for use of social media is growing (10%), double from last year
 - ◆ 42% of customer bulbs are CFLs; 35% using old incandescents; 13% using LEDs
 - ◆ Recommendations:
 - Create a singular brand identity for DSM programs, rather than brand identity for each
 - Continue to leverage contractors / installers
 - Messaging on cost-savings more impactful than environmental messaging

2015/2016 DSM Plan Development

- **Timeline for development:** June – Oct 2014
- **Review market drivers and identify opportunities for influence**
- **Core Content:**
 - ◆ Budgets
 - ◆ Write-Ups
 - ◆ Technical Assumptions (TRM)
 - ◆ Forecasted Achievements / Detailed TAs
 - ◆ Cost-Benefit Analysis
- **Iterative process**
- **Large project and review teams**

Regulatory Look-Ahead

Upcoming DSM Filings / Meetings

- **October 30, 2014:**

2015/2016 DSM Plan

- **Nov 5, 2014:**

Q3-2014 DSM Roundtable Meeting



Colorado DSM Achievements Q2-2014

**Bill Conrad
Manager, Energy Efficiency Marketing**



Q2-2014 DSM Achievements Summary

■ Electric DSM Achievements:

- ◆ 176 GWh (Net Gen) 46%
- ◆ 27,425 kW (Net Gen) 32%
- ◆ 31% of budget
- ◆ 487,949 Participants

■ Natural Gas DSM Achievements:

- ◆ 243,487(Net Dth)
- ◆ 39% of target
- ◆ 43% of budget
- ◆ 96,724 Participants

Q2-2014 DSM Achievements

Program Highlights

Electric Programs

- **Computer Efficiency**
 - ◆ 5.7 GWh (108% YE Target)
- **Data Center Efficiency**
 - ◆ 8.5 GWh (115% YE Target)
- **Process Efficiency**
 - ◆ 17 GWh (78% YE Target)
- **Home Lighting**
 - ◆ 69 GWh (90% YE Target)

Gas Programs

- **Business New Construction**
 - ◆ 54,300 Dth (66% YE Target)
- **Home Performance Energy Star**
 - ◆ 10,300 Dth (122% YE Target)
- **Heating Efficiency**
 - ◆ 23,400 Dth (61% YE Target)

Q2-2014 DSM Achievements

Business Customer/ Trade Events

- **Cooling Efficiency workshop**
 - ◆ 220 Customers / trade
 - ◆ Cooling industry experts
- **Colorado Real Estate Journal**
 - ◆ 300 attendees, business and trade
 - ◆ Targeting restaurants, hotels and retail
- **Denver 2030 District**
 - ◆ Downtown bldg conservation
- **CAHED Trade Show**
 - ◆ Healthcare industry tradeshow
- **NATE Certification Update**
 - ◆ 169 trade allies are now certified
 - ◆ 30% through our classes / testing this year
- **Residential High Efficient A/C**
 - ◆ 42 new trade allies in the program YTD (23% increase)

Business Program Highlights

Jen Elling
Team Lead, DSM Marketing



DSM Business Program Highlights

Building Tune-Up

- Launched new Building Tune-Up path (under Recommissioning product) to target smaller businesses 5,000 sq. ft.–75,000 sq. ft.
- Xcel Energy sends energy advisor to conduct a Building Tune-Up audit; audit value about \$4,500
 - ◆ participants pay a small fee per audit
 - ◆ customer receives report identifying potential energy savings of all measures
 - ◆ Energy advisor will identify and implement (when possible) low-cost/no-cost measures
 - ◆ Forecasting 0.5 GWh of electricity savings in 2014

DSM Business Program Highlights

Business Energy Analysis

- Xcel Energy's Business Energy Analysis continues its successful 2014, with 90 participants in Q2; the product had 86 total participants in 2013
- The product continues to build a robust project pipeline for the remainder of 2014, largely as the result of:
 - ◆ March/April email campaigns targeting over 14,000 customers
 - ◆ June/July bill onsert campaigns targeting over 69,000 customers
 - ◆ June/July direct mail campaigns targeting customers in the Western Slope region
- In 2014, the product has identified over 4 GWhs of potential ECOs

DSM Business Program Highlights

Lighting Mid-stream

- **RFP completed for implementation of mid-stream approach (Ecova)**
 - ◆ 60-Day Notice posting mid-August; Mid-October/Early November launch anticipated
 - ◆ 4 GWh additional achievement forecasted for 2014
- **Marketing efforts underway to announce new mid-stream process**
 - ◆ Distributors can sign up via a partnership agreement
 - ◆ Downstream applications will be honored with invoice date prior to mid-October
- **M&V includes verification Xcel Energy customer at point of sale, and field verification (audits)**

Residential & Low-Income Program Highlights

**David Hueser
Team Lead, DSM Marketing**

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2014 Colorado DSM Plan effective May 1, 2014 – Residential and Low Income Program Updates



Program measure updates for 2014 DSM Plan

Residential/Low Income Program	Measures In	Measures Out
Heating System Rebates	EC Motors, NATE Trade Partner Certification	92% and 94% AFUE Furnaces (95% new min)
High Efficiency Air Conditioning	Western Cooling Control Device (via 60-day notice)	
School Education Kits	1 LED Lamp, Showerhead, Aerators	
Energy Efficient Showerheads	Aerators added to Kits	
Water Heater Rebate		.62 and .65 Energy Factor (.67 new minimum)

Residential Programs

Home Lighting



34% of 2014 budget spend, 93% of savings achievement year to date, primarily driven by CFLs

- Manufacturers and retailers doing a good job educating customers about LED benefits; significant retail shelf space
- LED unit sales are 125,000 YTD, 47% of 2014 goal 265,000; compares to 86,600 LED unit sales in full-year 2013.
- LED proportion of total unit sales 7% YTD, estimated to be 15% by year-end; compares to 3% of total unit sales in 2013
- 2014 retail promotions paying off for specialty LED lamps, especially reflectors (e.g. Feit 13W)



Feit 13W BR30
Reflector Costco



Philips 11W
LED A-Lamp
Home Depot

Heating System Rebates



YTD participation and Gas DSM savings 12% lower than 2013 – planned for 2014 DSM Program year

■ Program participation

- ◆ 95% AFUE minimum furnace – effective 6/6/14, \$120 rebate
- ◆ NATE Gas Heating Certification technician requirement pared down registered trade partners from 800 to 170

■ Technical assumptions

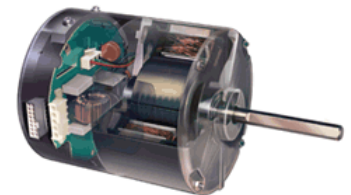
- ◆ Electric ECM motor addition - \$100 rebate
- ◆ 4% of kWh goal through June due to 5/1 plan start

■ Cost-effectiveness

- ◆ Improved with minimum AFUE adjustment
- ◆ New electric measure to drive electric net benefits



95% AFUE Furnace
Photo: Lennox



EC Motor
Photo: GE

DSM Residential Program Highlights

ENERGY STAR[®] New Homes



- ◆ **Through Q2, excellent participation level – 2,156 homes rebated, 66% of Gas Dth on 88% spend; 84% of kWh goal on 51% spend**
- ◆ **Gas costs are a concern**

- 60-Day Notice posted June 26; implemented July 28
 - ◆ Clarifies eligibility requirements for homes built in jurisdictions adopting IECC 2012 & higher
 - ◆ Incremental cost calculation updated to improve accuracy & cost effectiveness
- Forecasting product close at the end of September
 - ◆ Allocated an additional \$1.17 M in Gas DSM spend over filed \$2.55M gas spend to get to end of September
 - ◆ Allocated an additional \$212K in Electric DSM spend over filed \$632K



Photo: KB Homes, Denver, CO



Photo: Oakwood Homes (Plan), Aurora, CO

DSM Residential Program Highlights Home Performance with ENERGY STAR



Strong Q2: Gas DSM savings goal met for 2014

Comprehensive Program evaluation recommendations to be implemented

■ Improve electric savings and HVAC participation

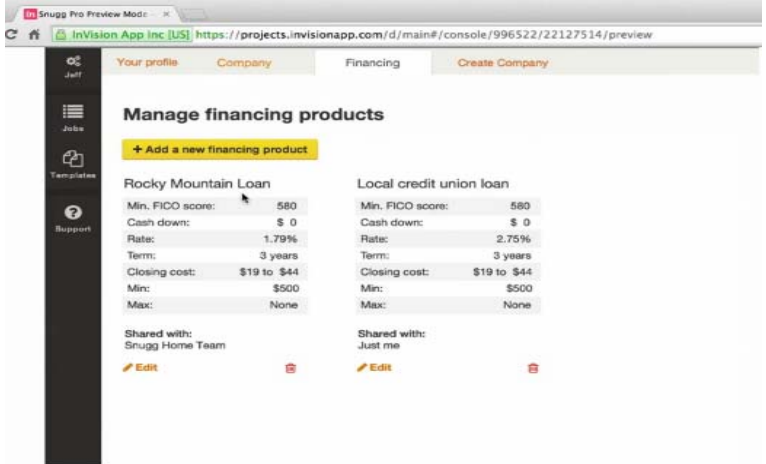
- ◆ HVAC trade partner incentive for Q3-Q4 participation
- ◆ Host networking meeting with HVAC and HP contractors

■ Help customers understand paybacks and how to budget for improvements

- ◆ Integrate financial opportunities with paybacks and monthly costs into the SnuggHome software tool
- ◆ Include HVAC load and other calculations – planned for August 2014

■ Increase conversion of partial participants

- ◆ Energy Consulting test with Populus on April 1, including support towards project completion
- ◆ 144 accounts, 22% conversion of those accounts moved forward with a project



Rocky Mountain Loan	Local credit union loan
Min. FICO score: 580	Min. FICO score: 580
Cash down: \$ 0	Cash down: \$ 0
Rate: 1.79%	Rate: 2.75%
Term: 3 years	Term: 3 years
Closing cost: \$19 to \$44	Closing cost: \$19 to \$44
Min: \$500	Min: \$500
Max: None	Max: None

Screenshot: Snugg Home Home Energy Audit Reports- Financing section

DSM Pilot Updates

Ryan Matley
Team Lead, Product Development

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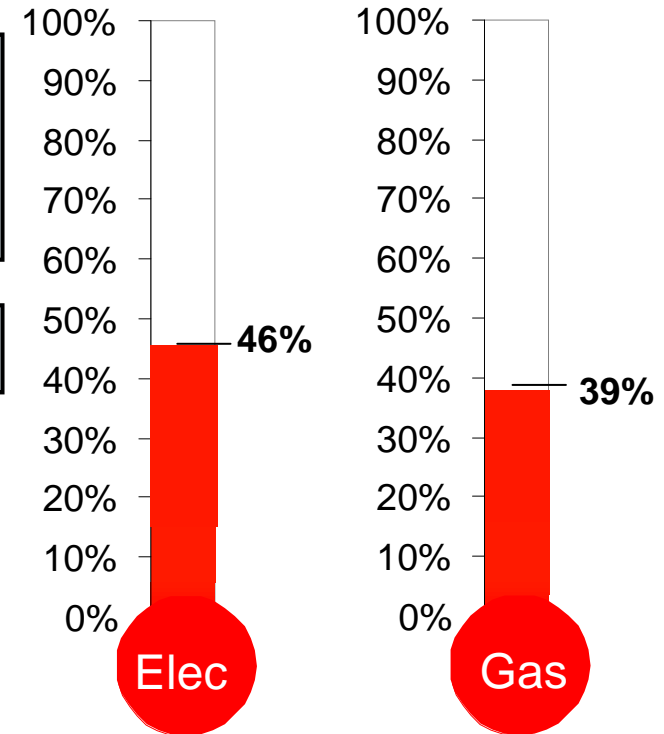
DSM Pilot Updates

Energy Feedback Pilot (Residential)

As of 6/30/14: 13.4 Net Gen GWh, 54,668 Dth

- Opower forecasting 24.8 GWh and 66,078 Dth by year end
- Working to transition from pilot to program in 2015

GOALS: 29.0 GWh, 141,333 Dth, \$995,883

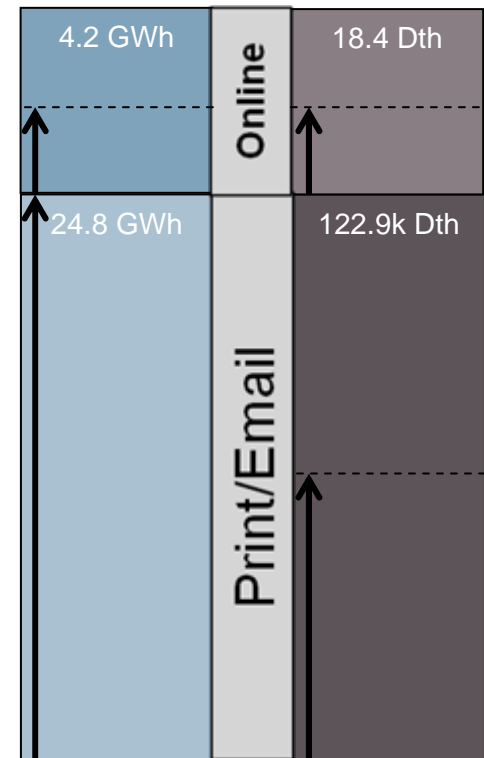


DSM Pilot Updates

Energy Feedback Pilot (Residential)

Projected Savings Shortfall & Mitigation

	Filed	Forecast	Mitigation
HERs	24.8 Net Gen GWh 122,945 Dth	24.8 Net Gen GWh 66,078 Dth	Refill of 10,500; fall door hangers
Online	4.2 Net Gen GWh 18,388 Dth	1.8 Net Gen GWh 7,662 Dth	September Onsert;





DSM Pilot Updates


Online Energy Feedback Measure

Campaign to reach over 745k Customers!

[View Email With Images](#)







Better Understand Your Energy Use

Learn how much energy your home actually uses-- and how to maximize your efficiency.

Our heating, cooling, lighting and major appliances can be some of your biggest energy costs. So shouldn't it make sense to have a full view of these costs?

Now you can.

Introducing **My Energy**, a free collection of energy management tools available within [My Account](#).

- See how heating, cooling, lighting and major appliances compare to each other
- Compare your household's energy use with other customers of a similar household
- Learn about free steps to take, smart purchases you can make and great household investments for long-term savings

Not missing out--you're just a click away. [Log in to My Account](#) and click on the green **My Energy** button.

Targets

4.2 GWh, 18,400 Dth

- Monthly email to customers (300,000 customers)
- September bill Onsert (745,000 customers)
- First savings measurement not until Q4

DSM Pilot Updates

Energy Feedback Pilot – Business

Business Energy Reports Delivered!

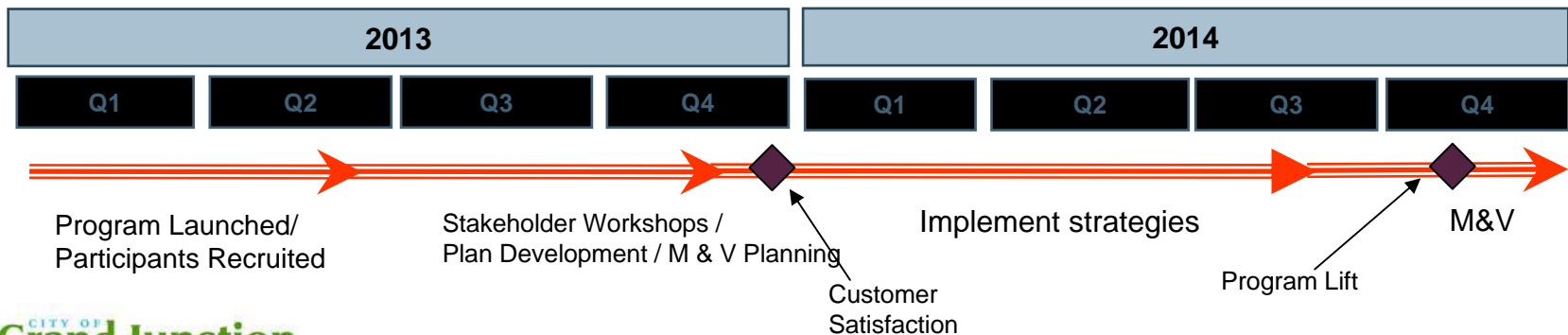
- 10,000 small business customers receive print reports
 - First CO report delivered in July
 - Electronic reports available on MyEnergy
 - Four of six reports scheduled for CO
 - However...DSM Strategic Issues Decision indicated energy savings for this pilot could not be claimed
 - July 21st ARRR filed seeking clarification

GOALS: 5.48 GWh, 23,408 Dth, \$336,520



DSM Pilot Updates

Community Energy Efficiency Planning



- All workshops complete
- Communities implementing projects
- Implementation support finished for Grand Junction, Lafayette, and Salida
- Starting M&V work

DSM Pilot Updates

EV Charging Station Pilot

PHASE I



- ✓ Completed 2014 load control device testing
- ✓ Increasing control period to 6 hours
- ✓ 1 customer opted-out for 2014

PHASE II



- ✓ Completed 2014 load control device testing
- ✓ Increasing control period to 6 hours
- ✓ One customer moved, so will not be included for 2014

PHASE III



- ✓ Partnering with GM OnStar
- ✓ Waiting for signature of Agreement from OnStar



Product Development Update

■ Presented by Lee Hamilton


Program ideas can be submitted on Xcel Energy's DSM website at:

<http://www.xcelenergy.com/About Us/Rates & Regulations/Regulatory Filings/CO DSM>






Q2 PD Summary

- **Focus on developing products / measures for 2015/16 DSM Plan**
 - **Products / measures are currently in Design and Development stage**
- 



Design Stage

- **Small/Medium Enterprise Direct Install** – Create an offering to engage small- and medium-sized business customers by offering direct install measures.
 - **Upstream Strategy and DOE RTU Challenge** – Evaluate an upstream approach to the HVAC market including incentives to offer units that meet the DOE RTU Challenge.
 - **Residential Custom Efficiency** – Provide a cost-effective path for evaluating emerging technologies similar to the approach used in the Custom Efficiency (Business) product.
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Development Stage

- **Midstream LEDs** – Current product model is downstream; evaluating for move to upstream (distributor level).
- **Multifamily Building Pilot** – The Company has been actively engaged in pilot development.
- **Smart Thermostats Pilot** – The Company has been actively engaged in pilot development.
- **Large Customer Data Program** – Create an offering for customers greater than 500kW to drive DSM impact with energy usage data analytics.
- **Western Cooling Control Device** – Retrofit control device for older A/C units to continue fan operation after condensing units shuts off, recovering wasted space conditioning energy.
- **Ground Source Heat Pumps (GSHP)** – Evaluate whether adding a high efficiency GSHP option that uses a standard efficiency GSHP baseline is a cost-effective measure.
- **Process Efficiency (PE) for Small and Medium Enterprises (SME)** – Develop a cost-effective approach for delivering the Process Efficiency program to smaller customers
- **LED Area Lighting** – New outdoor area lighting measures such as parking lot lights for the Lighting Efficiency (Business) product.



60 Day Notice

- **Multifamily Building Pilot**
- **Smart Thermostats Pilot**

Thanks To Our Stakeholder Groups

- A very **BIG** thank you to all who participated in our working/study groups

Multifamily Working Group	
Colorado Energy Office	Energy Outreach Colorado
SWEEP	EEBC
CO PUC Staff	City of Denver
City of Boulder	Boulder County
Adams County	Populus
Cornerstone Apartments	ACEEE

Smart Thermostat Study Group	
SWEEP	EEBC
Berkeley National Lab	Western Cooling Efficiency Center
CO PUC Staff	Nest
Honeywell	ecobee
EnergyHub	Landis+Gyr
Tendril	E Source
Wisconsin Energy Conservation Corporation	

Stakeholder DSM Idea Submissions


■ Presented by Lee Hamilton

Program ideas can be submitted on Xcel Energy's DSM website at:

[http://www.xcelenergy.com/About Us/Rates & Regulations/Regulatory Filings/CO DSM](http://www.xcelenergy.com/About_Us/Rates_&_Regulations/Regulatory_Filings/CO_DSM)



Stakeholder DSM Idea Submissions

1. Dehumidification for Grow Houses via MSP Technology
 2. Prescriptive rebates for induction lighting via EverLast Lighting
 3. LED Tube/Troffer retrofits via Watts Up LED
 4. Low-Flow Showerheads & Aerators for Low-Income Multi-Family Weatherization via EOC
- 

1. Dehumidification for Grow Houses

Received April 9, 2014

■ **Description:**

- ◆ Multiple Small Plate (MSP) Dehumidification will control humidity and reuse the water in marijuana grow facilities.

■ **Evaluation Result:**

- ◆ MSP Technology used in commercial dehumidification and industrial dehumidification systems & commercial energy recovery and industrial energy recovery systems. MSP Technology is specified by design engineers. The technology is patented and designed on a project specific basis.
- ◆ Estimated Energy Savings:
 - Not enough information provided to quantify
- ◆ ***Due to the proprietary nature of the technology and project specific designs this measure best fits in the existing Custom Efficiency product.***

2. Prescriptive Rebates for Induction Lighting

Received April 14, 2014

■ **Description:**

- ◆ Provide a prescriptive incentive for induction lighting used to replace HID fixtures.

■ **Evaluation Result:**

- ◆ We have not seen many of these lights via Custom. Concept was scored relative to other concepts under consideration; didn't score high enough to move into active development.
- ◆ Estimated Energy Savings:
 - 100 kW
 - 0.8 GWh
- ◆ ***As other product development is completed, concept may be revisited along (as would other lower priority ideas).***

3. LED Tube/Troffer retrofits

Received April 14, 2014

■ **Description:**

- ◆ Retrofit T8 and T12 fixtures to Seesmart 15W LED tube lights.

■ **Evaluation Result:**

- ◆ The concept is for a prescriptive rebate for a specific manufacturer's product. Prescriptive rebates need to be manufacturer agnostic and apply to a generic technology. There is still too wide a performance range for this technology to establish a prescriptive offering. For example, the Design Lights Consortium list of LED linear replacement lights has an efficacy range of 77.8 – 175 lumens/watt with an average efficacy of 105.9 lumens/watt.
- ◆ ***Continue to monitor the technology as applications are submitted in the Custom Efficiency program.***

4. Low-Flow Fixture for LI

Received May 19, 2014

■ **Description:**

- ◆ Evaluate prescriptive rebate opportunity to install 1.5 GPM showerheads, 1.5 GPM aerators in kitchen sinks, and 1.0 GPM aerators in bathroom sinks in low income single family homes or individually metered multifamily apartments.

■ **Evaluation Result:**

- ◆ These are existing measures in the Energy Savings Kit (Low-Income), and thus can be included in other Low-Income weatherization products.
- ◆ Estimated Energy Savings:
 - 3,800 Dth
- ◆ **Add showerheads and aerators to Low-Income weatherization products.**

Q&A

