



## 2011 Fourth Quarter Colorado DSM Roundtable Update February 15, 2012

To comply with the 2011 DSM Plan Stipulation and Settlement Agreement, Docket No. 10A-471EG, Decision No. R10-1336, Public Service Company of Colorado ("Public Service" or the "Company") provides the following update regarding product status, including energy and demand savings, achieved product expenditures, implementation changes, and measurement and verification modifications.

### **Product Implementation Status**

Please refer to the attached table for the preliminary fourth quarter 2011 (through December 31, 2011) product energy and demand savings achieved, and product expenditures and CO<sub>2</sub> and SO<sub>2</sub> emissions avoided. In total, DSM electric products have achieved savings of 301.5 GWh and gas savings of 478,133 Dth by December 31, 2011. This represents 118 percent of the 2011 electric DSM plan's energy savings target of 255.9 GWh and 130 percent of the gas goal of 368,227 Dth. The Commission adopted the 2011 goals for our DSM products in Decision No. C10-1336 issued in Docket No. 10A-471EG.

The following section provides product status activities for the fourth quarter 2011 in the Business, Residential, Low-Income, and Planning & Research Products, as well as other related activities.

### **Business Program**

- **Compressed Air Efficiency** – Despite a relatively strong 4<sup>th</sup> quarter, the Compressed Air product completed a disappointing year with 3.1 GWh of net savings. The result was 67% of goal, and total expenditures were 67% of budget. Participation was similar to the prior year. However, average savings per participant was lower, which is consistent with our 2011 introduction of additional prescriptive measures.

In 2012, we will continue to offer the 50% customer bonus for custom projects, and we continue to directly call customers we identified as high potential candidates. Among Colorado trade partners, only two remain active in the Denver area. Others have exited the market or are focusing on oil & gas opportunities outside the company's service territory.

- **Cooling Efficiency** - The Cooling Efficiency Product completed 74 projects in the fourth quarter that achieved Approximately 1.0 GWh and 452 kW. Year-to-date 213 projects were completed. This represents a 29% increase in projects as compared to 2010. The average savings per project was lower than 2010. The channel manager met with over 50 new trade partners that had not previously participated in the product. A high efficiency cooling expo is planned for first quarter 2012 to provide an opportunity for manufacturers and distributors to meet directly with Xcel Energy customers.
- **Custom Efficiency** – The Custom Efficiency Product committed 24 electric projects and 10 electric and gas combination projects in the fourth quarter which achieved 4.78 net GWh and 721 net kW of savings. There were 2 committed gas projects and 10 gas and electric combination projects during this period resulting in 4,880 net DThs of savings.
- **Data Center Efficiency** – In the fourth quarter of 2011, the Data Center Efficiency Product issued study funding preapproval letters for 3 new studies, issued engineering approval for 1 additional completed study and continues to review additional completed studies and new applications submitted for engineering review. Approved studies year-to-date are worth approximately 11 GWh if identified projects are implemented. Since launching and marketing program adjustments, there have been three new project applications in addition to the study participation. Marketing activities this quarter included outreach to sales teams and customers to discuss program changes, as well as planning promotional campaigns, future



trade and customer events. The product continues to focus heavily on trade communication and outreach as they are well connected to this customer segment.

- **Energy Management Systems (EMS)** – The EMS Product achieved 8.24 GWh of savings, which is 112 percent of its 2011 goal. We offered, and will continue to offer, rebate levels that are 50 percent higher than the base rebate levels of other custom products. Nevertheless, we held expenses within budget. For qualifying, pre-approved projects, our efforts to encourage implementation have been successful. In several cases, previously preapproved projects that had been abandoned were revived and implemented after our follow-up visits and bonus letters. The number of projects analyzed increased by 15 percent, to 69. However, participation fell short of goals. Twenty one projects were rejected because of conservative modeling assumptions. We encouraged continued improvement of on-peak controls strategies, and the product's net-generator kW demand savings was nearly three times of the prior year.

EMS Gas savings were 5,541 Net Dth, which is 246 percent of its goal. Most of the larger EMS applicants have not been retail gas customers. However, we continue to target retail customers of both gas and electricity.

- **Heating Efficiency** – Despite a strong pipeline, momentum continued to slow in the third quarter and into the fourth. We anticipated a similar up-swing in late 2011 to what we saw in 2010, however the 4<sup>th</sup> quarter did not produce significant participation to meet goal. The year finished up at 35,311 Dth for large commercial and small business customers for a slight decrease of 10 percent from year-end 2010. However, we have seen the small business segment at 46 percent and the commercial segment at 54 percent almost even out in dekatherm achievement. The Heating Advisory Board, which was introduced in April 2011, continues to be well received from all members with 2 meetings per year, and the next meeting will be in March of 2012. We anticipate that through continued meetings with our Board, we will maintain close relationships with the trade network and seek valuable input and feedback. Of significant note, several adjustments are being made to implement findings from an extensive product evaluation conducted in 2011, in order to keep the product most relevant to our customers and key stakeholders.
- **Lighting Efficiency** – The Product achieved 70.1 GWh in 2011, 146 percent of its year end target. 50 percent bonus rebates implemented in March of 2011 to remove inefficient fluorescent T12 fixtures from the business markets positively impacted achievements in 2011. Due to trade feedback and equipment availability issues, bonus rebates were extended into 2012. Prescriptive LED rebates introduced in mid-2010 are having a growing impact on business lighting efficiency achievement, especially with managed commercial customers.
- **Motor & Drive Efficiency** – The product achieved 24.5 GWh, or 119 percent of its 2011 goal. Adjusted for changes in Net-to-Gross factors, the achievement is 111 percent of the prior year. A single, large implementation bolstered 4<sup>th</sup> quarter results, but overall number of participants increased by 2 percent over 2010.

We have eliminated rebates for new capacity motors of the now-standard NEMA Premium efficiencies. For 2012, we've introduced prescriptive rebates for Electronically Commutated Motors and Constant Speed Motor Controllers. We will also continue to focus on Small Business opportunities, and we have designed a media campaign to increase awareness about motors and drives within HVAC systems.

- **New Construction** – The Business New Construction mission is to help Public Service business customers prioritize energy efficiency when constructing new buildings. By



providing whole building energy analysis for larger buildings and a checklist of opportunities for smaller buildings, we help customers achieve their energy and sustainability goals. The product is not expected to meet the electric goal in 2011 due to the recession and downturn in the commercial new construction market. We anticipate new building construction to improve some in the near future and therefore continue to work to increase the pipeline for future years, with a focus on education and marketing the products to architects, contractors, and other interested stakeholders.

- **Process Efficiency** – the anticipated rapid growth of the Product is proving very difficult to achieve in Colorado's industrial market, with electric energy savings only reaching 85% of goal. That being said, we still saw a 247% improvement in year-end results when comparing 2010 to 2011, and we hope to increase achievement substantially again in 2012. This continued growth will be supported by customer training and additional engineering resources being brought forth.

We had zero dekatherms committed in 2011 as part of the Process Efficiency program. With this being the third year with no achievement, the gas portion of the product will be removed from the filing in 2012. The lack of opportunity stems from the fact that the majority of large industrial customers in Colorado purchase gas through a third party and do not pay into the DSMCA, making them ineligible for rebates. Any customer participating in the Process Efficiency on the electric side will still be able to receive rebates through other rebate Products.

- **Recommissioning** – The Recommissioning Program exceeded both the electric and gas energy savings goals. The total savings achieved in 2011 were 5.6 GWh which is 111 percent of target and 2,514 Dth which is 114 percent of target. One contributing factor to the success can be attributed to customers implementing projects at multiple sites.
- **Segment Efficiency** – The Segment Efficiency program conducted 8 assessments in 2011, realizing total savings of 1 GWh 55 percent of goal. No gas achievements were realized in 2011. Adjustment factors and achievements were corrected during the fourth quarter, and a system is in place to improve the program's reporting. Xcel Energy's account management team and the study provider continue to market to building owners and facility managers. However, the Segment Efficiency program continues to face a lack in participation and measure implementation.
- **Self-Directed Custom Efficiency** – The Self Directed Custom Efficiency Product had one committed project during the fourth quarter achieving 6.2 net GWh's and 156 net kW in savings.
- **Small Business Lighting** – The Product achieved 18.4 GWh, 398 percent of its 2011 target, on higher-than-expected prescriptive projects conversions. Franklin Energy Services, the consultant implementing the Small Business Lighting product had a strong participation rate for the 50 percent bonus rebates for fluorescent T12 fixture removal (see Lighting Efficiency information above) and has experienced an increase in requests by small- to mid-sized businesses to audit their lighting, assess energy savings and rebate potential. The promotion has been especially popular with small businesses able to respond quickly and fund a lighting retrofit from their operating budget. Regular lighting trade partner orientation and trainings continue to be well attended and well received.
- **Standard Offer** – A total of three project bundles were fully implemented and rebated in 2011 with the energy savings representing 187percent improvement over 2010 achievement. The pipeline was also strengthened with six studies being rebated as customers indicated their intent to move forward on measures identified through Technical Energy Audits. 2012 could



be a successful year for the Standard Offer product with a lot of potential, but with the goal increasing it will still be difficult to achieve.

Gas projects continue to be a low priority for many customers as indicated by the lack of achievement in 2011. However, some combination gas and electric projects are slated for completion in 2012.

### Residential Program

- **Energy Efficient Showerhead** – This seasonal product launched its 2011 campaign in early May. The company mailed out 325,000 offers for a free energy-efficient massage showerhead to targeted Colorado natural gas and electric customers. Based on the 2010 product performance, we expect a 16 percent response rate which will yield about 44,000 participants. The program finished the year with 40,146 participants and energy savings of 1,024,643 Gen kWh and 27,728 Dth.
- **ENERGY STAR New Homes** – The ENERGY STAR New Homes product finished the year very strong, with just over 3,400 homes successfully completing our requirements and receiving a rebate. As a result, the product achieved energy savings of 97,046 Dth and 1,961,711 kWh. This product has developed and maintained strong ties with the local rater community and it is this relationship that has impacted the success of this product.
- **ENERGY STAR Retailer Incentive Pilot** – The Energy Star Retailer product performed very well in 2011, achieving 165% of goal. Public Service launched the 2011 Product in May with retailers: Best Buy, Sears, K-Mart and Lowes. All retailers were required to complete a detailed summary of marketing and merchandising plans, display in-store signage during the promotion and implement training for sales representatives. All participating retailers completed these requirements. In addition, Xcel Energy promoted the product through a bill insert in June and has continually worked with retailers, visiting stores regularly to help provide support, train sales representatives and ensure that the signage is displayed. Year end sales reached 55,250 units. Due to an impending increase in the television baseline for 2012 causing cost effectiveness issues and a rapidly changing electronics market, Public Service did not include the product in the 2012/2013 DSM Filing.
- **Evaporative Cooling Rebates** – The Evaporative Cooling Rebate Product exceeded its 2011 filed goals with over 3481 participants, providing 2,032,114 kWh of savings which is 129 percent of the year end goal. Public Service has seen a significant increased participation within the retailer market and trade channels, and can attribute the success of 2011 with the trade and retailer incentives that were provided. Additionally, WECC (Wisconsin Energy Conservation Corporation), has enabled strong retailer ties on behalf of Xcel Energy, and will continue to partner with these retailers moving into 2012.
- **Heating System Rebates** – Even with the elimination of promotions and mass marketing in Q4, the Heating System Rebates had a successful 2011. More than 754 contractors are registered with the product and 5,815 customers took advantage of the rebate, providing 47,627 Dth of savings through December of 2011 which is 88 percent of the year end goal. More than 94 percent of heating rebates have been paid out for the highest efficiencies of 94 percent AFUE or higher.
- **High-Efficiency Air-Conditioning** – In 2011, Public Service has seen a significant number of participants in the High Efficiency Air-Conditioning program compared to last year. The program completed the year with 1,660 participants, 81% to achievement, and almost 200 contractors are participating. The quality install program is gaining traction in the marketplace.



- **Home Lighting & Recycling** – The Home Lighting Product performed very well this year achieving 173 percent of goal while only spending 70 percent of the budget. The product continues to motivate customers to purchase and install energy efficient lights by offering discounts on compact fluorescent light bulbs (CFLs) and new in 2011, Light Emitting Diodes bulbs (LEDs). Public Service continues to advertise and promote the Product using: television, radio, online, point of purchase displays and local events. CFL sales were above expectations selling nearly two million units.

In August, Xcel Energy began offering a \$10 instant rebate on six models of Energy Star rated LED bulbs (A-line and flood) at three retailers. LEDs were promoted with a bill insert that drove customers to the [www.responsiblebynature.com](http://www.responsiblebynature.com) website. In September, the website received nearly 5,000 hits to the LED lighting page. This demonstrated the consumer interest in the product, the attractiveness of the rebate level and effectiveness of the marketing. By yearend, roughly 1,000 LED bulbs were sold in CO.

Public Service recycled nearly 20,000 CFLs in 2011, which is a 31 percent increase over last year.

- **Home Performance with ENERGY STAR** – In 2011, the HPwES program met its participation goal but fell short on achievement. This will be the last year of requiring customers to complete five improvements which customers found to be challenging. Many customers opted for smaller energy savings improvements such as dish and clothes washer rebates which contributed to the shortfall of achieved energy savings verses the program's forecast. Even though the customers are offered higher rebates to complete multiple improvements, they are not convinced. These program challenges will be addressed with the program changes filed for 2012.
- **Insulation Rebate** – The Insulation Rebate Product provides incentives to customers to upgrade their inefficient insulation. During 2011, the product achieved 661 percent of its electric goal, saving 1,282,221 kWh, and 411 percent of its gas goal, saving 98,970 Dth. The product was extremely popular among homeowners, and one of the most cost effective for a homeowner to complete. Communities and City programs also complimented Public Service rebates during 2011, which encouraged customers to complete insulation in homes. During 2012, Public Service will be meeting with a stakeholder working group, to develop the Colorado Insulation rebate program and enhance it with a quality assurance component.
- **Refrigerator Recycling** – The Refrigerator Recycling Product provides incentives to customers to recycle their secondary, working refrigerators. During 2011, the product achieved 218 percent of its electric energy savings goal, saving 2,221,845 kWh. This is notably the first time in the history of the program that participant and electric savings have surpassed the goals. A key driver was the increase in the incentive early 2011.

The success for this product was attributed to an aggressive marketing and advertising campaign, provided by our third party vendor ARCA, Inc., and by our advertising group. This included additional call-to-action tactics such as direct mail and bill inserts on schedule, and with supportive advertising campaigns which included print media and radio. Public Service intends to continue radio advertising and will have an aggressive approach in 2012.

Additionally in our 2012-2013 settlement agreements, an RFP was conducted for this program. Appliance Recycling Centers of America (ARCA) was chosen as the providers for the Refrigerator Recycling program in MN, CO and NM from 2012-2014.





- **School Education Kits** – The School Education Kits Product completed its seasonal sixth grade classroom outreach. The kits have been successful for the year, with 64 percent average install rate of the CFL light bulbs (two per kit), a 37 percent install rate for the 1.5 GPM aerator, and a 37 percent install rate for the 1.5 GPM showerhead. The 2011 product has achieved 91 percent of its electric goal, saving 2,003,922 kWh, and 78 percent of its gas goal, saving 11,515 Dth. Public Service wrapped the year up with updated 2012 kit changes that include a kid-friendly design, updated content to exclude gas measures for 2012, and included our CFL recycling information.
- **Water-Heating Rebate** – The Water Heater Rebate Program uses rebates to encourage residential customers to purchase energy efficient water heating equipment. Rebates are available for energy efficient storage and tankless water heaters. The program also allows for an Electric Heat Pump Water Heater. The program achieved 70 percent of the 2011 year end goal saving 5,146 Dth. Additionally the product has achieved 166 percent of the electric savings goal with 49,739 kWh. Public Service is significantly improving the outreach efforts with retailers from the learning and performance in 2011, to enhance in-store signage displays, trainings and customer education on non-standard equipment such as tankless and heat pump water heaters.
- **Saver's Switch®** – During 2011 Xcel Energy installed 18,626 new Saver's Switches on residential premises, achieving about 96 percent of the target for the year. Throughout the year we experienced approximately 25 percent of signup requests not materializing into a switch installation due to owners changing their mind or customers having ineligible equipment.
- **In-Home Smart Device Pilot** – In a separate order received by the company in September 2011, the CPUC instructed Xcel Energy to complete installation of all in home devices (IHD) by December 31, 2011. In order to meet this requirement, additional efforts were needed to increase available installation resources (licensed electricians) and work with the device provider and their manufacture to ensure all devices were delivered in time. The company noted this was a very aggressive goal and the available pool of participants was likely not large enough. Recruitment efforts began in late August and included 3 phases or tactics starting with email, then outbound calling and finishing up with direct mail. Our installers experienced some challenges in the field even though homes were carefully pre-qualified prior to scheduling an appointment. The biggest of these challenges involved the City of Boulder's requirement to bring any pre-existing bonding and/or grounding issue up to code. These grounding/bonding issues are unrelated to the installation of the IHD system, but under the permitting process, the City wanted to take the opportunity to inspect for this condition. If our installers determined the grounding/bonding would require updating, we walked away from the installation and did not pull an electrical permit with the City of Boulder. As of December 31<sup>st</sup>, 90 IHD systems were successfully installed in the Boulder area. We expect to install a few more systems in early January and then conclude all installations in the City of Boulder. Additionally, we are reviewing options available to us to re-purpose the un-installed IHD systems in areas outside of Boulder.

### **Low-Income Program**

- **Energy Savings Kits** – Public Service worked with Mile High Youth Corps to distribute kits to qualifying Colorado residential customers in 2011. 19,774 electric customers and 26,070 gas customers received a kit. Many of these customers are combo customers, therefore one combo household will count towards both electric and gas participation. Three large mailings of Business Reply Cards were mailed to qualifying customers using the most up to date LEAP participation list.



- **Multi-Family Weatherization** – In 2011, Public Service funded eight Multi-Family Weatherization gas and electric projects. Projects ranged from multi-unit apartment complexes receiving showerhead and CFL installations to larger projects that replaced insulation and water heaters in common areas. With these projects, Public Service achieved 141 percent of the electric goal and 118 percent of gas.
- **Non-Profit Energy Efficiency** – In 2011, Public Service funded 40 electric and gas non-profit projects. This is almost four times the number of projects funded in 2010. Additional projects were approved in the fourth quarter but will not be completed until 2012. With these projects, Public Service achieved 146 percent of the electric goal and 112 percent of gas.
- **Single-Family Weatherization** – The Single-Family Weatherization program closed out 2011 142 percent to gas achievement and 90 percent to electric. In partnership with the GEO and the various weatherization agencies across the state, the program's success can be largely attributed to ARRA funding, determination to spend the funds, and a successful Xcel Energy advertising campaign throughout the year.

### Indirect Program

- **Customer Behavioral Change - Business** – Through the fourth quarter of 2011 this product achieved 140 percent of the product target with 2,772 participants. Public Service executed a campaign which included an Energy Solutions newsletter, event marketing, stakeholder relations, educational workshops, and distribution of Smart Energy Employee materials.
- **Customer Behavioral Change - Residential** – Through the fourth quarter of 2011 this product achieved 115 percent of the product target with 78,230 participants. Primary activities included execution of a mass media ad campaign used in print, radio, and Web; development of the "ResponsibleByNature.com" web presence; participation in community based marketing events statewide; educational workshops; and neighborhood sweeps.
- **Energy Analysis** – Energy Analysis achieved 150 percent of goal in 2011. The Energy Analysis team committed a total of 55 Online Assessments, 677 Onsite Assessments and 16 Engineering Assistance Studies. The program had a solid participation from both electric and gas customers in 2011 and is expected to continue on the same path in the near future. Process improvement initiatives were introduced to run the program more efficiently, resulting in a shorter project turn-around time for customers and lower operational costs.
- **Home Energy Audit** – The product closed out the year with 2,800 completed audits which only brought us to 64 percent of goal. Despite the low number of participants, the program partnered with four community programs such as EnergySmart-Boulder, Denver Energy Challenge, The Red Door Challenge-Grand Junction, and CLEER. These partnerships helped keep a steady flow of audits during the slower months. In efforts to increase audit lead generation the product modified the advertising message to be a direct message rather than just an awareness message.
- **DSM Market Research** – Two Residential Program Evaluations, Showerhead and Low Income Single Family Weatherization, and two Business Program Evaluations, Self Direct Custom Efficiency and Heating Efficiency, were completed. Final reports for all four 2011 Residential and Business evaluations will be made available as part of the 60 day filing. For 2012, two residential programs will be evaluated, Residential High Efficiency Air Conditioning and Low Income Energy Savings Kits. For business, Process Efficiency will be evaluated. The kick-off meetings for these evaluations are planned for February.



- **DSM Planning & Administration** – On August 1, 2011 Public Service filed its 2012/2013 DSM Biennial Plan with the Colorado Public Utility Commission Docket 11A-631EG. For the plan the ALJ's Recommended Decision was issued on December 9, 2011, which became the final Order of the Colorado PUC. We will be filing an updated version of the 2012-2013 Plan by February 28, 2012 reflecting changes by the Stipulation and Settlement Agreement.
- **DSM Product Development** – During the fourth quarter of 2011, the DSM Product Development team continued with development of new products for 2012 and/or the next Biennial Filing.

No new products were launched in the fourth quarter of 2011.

The following products were in the Stage 4 (Product Development) of the Product Development Process.

- ASD/VFD Study
- Turn-Key Services
- Prescriptive Refrigerated Case Efficiency
  - Anti-Sweat eater Controls
  - ~~Low Energy Glass Doors~~ (Not cost effective: payback greater than life)
  - Zero Energy Glass Doors
- Residential LED lighting
- LED Wall Pack fixtures
- Retrofit EC motors for existing furnaces

The following products being developed were in Stage 3 (Concept Evaluation) of the Product Development Process:

- Low loss filters for Air Compressors (Mist Eliminators)
- Lighting Fixture Reduction
- Commercial Food Service Equipment
- Residential Multi-family
- Prescriptive rebates for residential condensing boilers
- Outdoor resets for residential boilers
- Freezer Rebate

The following pilots continue to be developed:

- Commercial Efficiency Pilot
- Residential Energy Feedback Pilot

The following pilots were completed in 2011:

- Commercial Energy Behavior Pilot – This proposed pilot was determined to not be cost effective and will not be implemented.
- Enhanced Energy Assessment Pilot – Completed: It was evaluated and the resulting product will be developed as a “Building Tune-up” program and potentially launched under the Recommissioning program.
- The Res A/C Tune-up Pilot – Completed: It was evaluated and will not be implemented as a product offering.





- **Measurement & Verification** – Our third-party verification contractor, Nexant, has been conducting random field inspections for our prescriptive products. Results so far are good with no major deviations from reported savings.

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