



2016 Third Quarter Colorado DSM Roundtable Update

November 9, 2016

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 ("M&V") modifications.

Product Implementation Status

Please refer to the attached table for the preliminary third quarter 2016 (cumulative Jan. 1 – Sept. 30, 2016) product energy and demand savings achieved, product expenditures, and CO₂ and SO₂ emissions avoided. In total, Demand-Side Management (DSM) electric products have achieved savings of approximately 316 GWh and gas savings of 373,746 Dth in the 2016 calendar year. This represents roughly 78% of the 2016 electric DSM plan's energy savings target of 407.3 GWh and 61% of the gas target of 615,040 Dth.

The following section provides product status activities for the second quarter of 2016 in the Business, Residential, Low-Income, and Demand Response Programs, as well as Indirect Products & Services and other related activities.

Business Program

- **Commercial Refrigeration Efficiency** – The Commercial Refrigeration product achieved 45% of its GWh savings target by the end of the third quarter. The product also launched a segmented digital campaign focusing on customers within the education sector. This campaign resulted in over 40 scheduled assessments for various schools building a robust pipeline for the remainder of 2016 and beyond. In the fourth quarter, the company will focus on encouraging customers to complete the implementation of pre-approved projects and continue marketing efforts focused on the education of both trade partners and customers.
- **Compressed Air Efficiency** – The product achieved slightly over 2 GWh of electric energy savings through the third quarter of 2016. Marketing efforts focused on advertising compressed air studies and implementing projects based on the study recommendations. Increasing the marketing for customers to participate in studies is to build up a stronger pipeline for custom projects.
- **Computer Efficiency** – The Computer Efficiency product has achieved 64% of the filed product target by the end of third quarter. The Company continues to promote the benefits of Virtual Desktop Infrastructure, Personal Computer Power Management to customers.
- **Cooling** – The product achieved 5.9 GWh of energy savings through the third quarter. Midstream products are continuing to see strong growth, particularly with water source heat pumps and air cooled chillers. The midstream product is also offering an additional incentive for selling to high load facilities and lowered the minimum qualifying EER requirement for greater than 20 ton RTU's through the end of the year.
- **Custom Efficiency** – The product did not achieve any additional electric energy savings or natural gas savings through the third quarter. Several large Electric and Gas projects are currently in the implementation state.

- **Data Center Efficiency** – The product ended the third quarter at 65% of the year-end electric savings target with the completion of several projects. The Company is forecasting that the product will come in slightly under its year-end target. In the fourth quarter, the Company will focus on encouraging customers to complete the implementation of pre-approved projects, while conducting an advisory board meeting.
- **Energy Management Systems (EMS)** – Through the second quarter, the product achieved nearly 7.5 GWh of electric savings. The product surpassed the gas savings target by achieving just over 4,000 Dth. Additional software providers for the Energy Information Systems product were qualified through a second RFQ.
- **Heating Efficiency** – The product is ahead of pace and has achieved a total of 14,331 Dth in the first three quarters of the year, reaching 83% of its year-end natural gas savings target. The Company is seeing higher participation, than in years past, due to increased outreach and year-long bonus incentives. The Company is helping prepare customers and trade allies in advance of the heating season through technical trainings. Customers are encouraged to ensure systems are ready through conducting boiler tune ups, or if needed, replace or upgrade equipment. The bi-annual Heating Advisory Board meeting was held this quarter and program staff continues to collaborate with the Colorado Office of Public Safety/State Boiler Inspectors group. The Company is forecasting that the product will come in over its year-end target and plans to only employ low-cost marketing efforts through the rest of the year.
- **LED Street Lights** – The LED Street Lights product has 10,500 LED retrofits completed of an estimated 15,000 within 2016. The overall community feedback has been positive with 99 communities signed up to participate. There are 28 communities that are still waiting to make a decision and four communities have opted out of participating,
- **Lighting Efficiency** – The product closed third quarter achieving 77% of its year-end forecast. The LED Instant Rebate offering has gained the momentum to confidently drop rebates without distributors pulling from participating, therefore, the Company ended the LED Instant Rebate bonus on July 31. This product has proven to be successful achieving twice its forecast by third quarter. August 1, the LED to T12 fluorescent limited time rebate promotion launched along with an advertising campaign, customer, and trade email communication. The promotion is gaining traction as rebate applications have already been committed and savings booked.
- **Lighting – Small Business** – The product achieved 95% of its year-end electric savings target through the third quarter. Marketing efforts in the third quarter focused on advertising and promotion of the limited-time T12 to LED rebate offering. The offering was made available to customers August 1, 2016 and will last through December 31, 2018. The product has achieved over .5 GWh from the offering in the third quarter alone. Marketing efforts will focus on continued education of customers and trade through the remainder of the year,
- **Motor & Drive Efficiency** – The product closed 66 projects within the quarter, resulting in a year-to-date savings of 90% of its year-end target. Schools remained a strong customer segment, with a broad variety of customers also participating. The Company will continue its focus on offices and small business for the remainder of the year, and we are forecasting that the product will surpass its full-year target within its budget.
- **New Construction** – The product achieved over 24 GWh of energy savings and over 35,000,494 Dth through the third quarter. The Company anticipates achieving its electric target, however will fall short of the natural gas savings targets for this product in 2016. Continued success of this product is due to pipeline building in previous years, a stronger economy, and opening the Energy Design Assistance offering to additional qualified energy consultants. The Company continues to work on building a solid pipeline of projects for future years.

- **Process Efficiency** – Year-to-date, the product has completed 14 projects totaling 28% of its full year target. Most of the opportunities previously identified remain stalled, coinciding with production cuts at oil, steel, and mining customers. To address the disappointing results, we are increasing our efforts to have more direct contact with potential customers, and drive additional outreach by our study provider. We anticipate year-end savings of approximately half of the target, with expenses of approximately half of the full year budget.
- **Recommissioning** – The Recommissioning product achieved 17% of its electric energy savings target and 60% of its gas savings target at the end of the third quarter. Close dates for the majority of Recommissioning measure implementation opportunities are forecasted for the fourth quarter of this year or early next year. Marketing efforts for the fourth quarter include a 25% bonus rebate for recommissioning measure implementation by customers, a trade-partner measure implementation incentive of up to \$1,000 per project, as well as continuing to focus on education of both trade partners and customers. With a large number of recommissioning studies currently in progress, the product continues to build a robust project pipeline for the remainder of 2016 and beyond.
- **Self-Direct** – The product ended the third quarter at 104% of the year-end electric savings target with the completion of five projects. The product is forecasted to exceed its year-end target based on anticipated completion of additional projects currently in the pipeline.

Residential Program

- **Energy Efficiency Showerheads** – The campaign launched in third quarter with over 28,000 participants receiving energy efficient showerheads and faucet aerators. The campaign focused on mostly digital marketing tactics, reducing program costs and making it quicker and easier for customers to place orders for their free offer. Additionally, M&V activities were completed in third quarter using a new, online survey technique allowing customers to share better feedback about their experience with the program. Improved survey techniques increased installation rates for the showerhead product bringing in natural gas and electric saving well over the filed target for this product.
- **Energy Feedback Residential** – The product is starting to see measureable savings from the 100,000 new participants added in late March 2016. Savings for this group continue to trend upward with the steady delivery of home energy reports every three months. Due to a mild third quarter; only one alert was issued for the Summer Coach email campaign. The alerts are intended to raise awareness for the potential to use increased energy on very hot days. Our third-party program implementer is currently reviewing available data to determine what impact the single alert may have had. Plans are being made to implement a “Winter of 68” marketing module starting with home energy reports delivered in November. The campaign will offer customers tips and other suggestions to help avoid higher winter bills and will be included in the recently updated home energy report template that began hitting customer mailboxes in late August.
- **ENERGY STAR® New Homes (ESNH)** – Product participation continues on a fast track that began in early 2016. 1,375 homes qualified and earned a rebate in the third quarter, which brings the product year-to-date participation to 3,512 homes. We are forecasting year-end participation to exceed 5,000 homes for the first time in CO program history. Homes qualifying under 2015 IECC continue to increase also. We are forecasting the product will remain open for the full year and this information has been communicated to all participants.

- **ENERGY STAR® Retail Products Platform (ESRPP)** – A review of Retailer activities in support of ESRPP was conducted to assess Retailer progress on program implementation. Based on this review, it was determined that Retailers had made sufficient progress to warrant their eligibility for incentive payments for sales starting June 1, 2016. Key Retailer activities included featured dryer sales, of-shelf highlighting of ENERGY STAR® Room Air Conditioners, and enhanced training programs for store managers and sales staff. Xcel Energy's field representatives visited 100% of the stores in both Minnesota and Colorado, baselining current stocking practices, installing point-of-purchase materials and interviewing store personnel. The field representatives will begin in-store training sessions during fourth quarter. Incentive payments for June-September qualified product sales are in-process.
- **Evaporative Cooling** – The product's July, August and September rebates exceeded the same month in 2015 due to increased targeted marketing efforts, especially direct customer mailings. In the third quarter the product also added the capability to submit a rebate application online, launching from xcelenergy.com. Online rebate application functionality includes the ability to attach PDFs of equipment receipts and specification sheets, adding convenience, time and cost savings to the rebate process.
- **High Efficiency Air Conditioning** – Through the third quarter of 2016 the product has achieved 125% of its annual energy savings target and 34% higher participation than in 2015 for the same time period. The comparatively warmer summer has likely driven increased participation in the product. The new 17 SEER tier is performing well, with 512 units, compared to almost 1,500 16 SEER units.
- **Home Energy Squad** – The product had a strong third quarter achieving 462 visits and a full pipeline. There are several marketing tactics – new and traditional – lined up for the fourth so the Company expects to see a strong finish and a full pipeline through the end of the year.
- **Home Lighting & Recycling** – The Home Lighting & Recycling Product is performing well and the Company expects to exceed its annual target. Furthermore, participating retailers are ramping up for fall promotions. The Company has developed new advertising materials that were rolled out for the fall promotions including radio and digital advertisements, and in-store signage. Although CFLs were planned to be phased out of many stores this year, the Company has found that many retailers/manufacturers are still carrying the products.
- **Home Performance with ENERGY STAR® (HPwES)** – The HPwES product continues to trail in savings from its 2015 benchmarks. Several efforts have been made to generate participation and savings, however. The Company launched a heating bonus and an insulation bonus the end of the third quarter along with a co-marketed effort with a community program partner. This co-marketing effort offers an additional blanket bonus for customers who complete the program.
- **Insulation & Air Sealing** – The program has exceeded its annual filed target for both gas and electric savings. A \$200 bonus rebate was launched at the end of the third quarter and will run through November to encourage more participation in the product and further develop the market for the product.
- **Refrigerator & Freezer Recycling** – The product has achieved more than 2.8 GWh through the end of the third quarter by recycling 4,959 units. The achievement year-to-date is on pace with the same time period last year. The Company is running a fall promotional campaign to encourage participation before year end, including social media promotional videos with the Denver Broncos and Colorado Avalanche mascots.
- **Residential Heating** – The Electronically Commutated Motor (ECM) measure continues to outperform expectations. The gas furnace measure is on target to attain its gas energy savings

target, likely due to a large advertising campaign, coupled with the bonus furnace rebate, which raises the furnace rebate from \$120 to \$300 until November 30.

- **School Education Kits** – During third quarter the Company began to deliver the School Education Kits requested for the fall semester. As of the end of the third quarter, 28,833 kits have been delivered year-to-date which is 75% of the participation target. The program is fully enrolled for the year, with an additional 10,256 kits scheduled to be delivered in the fourth quarter for a total annual enrollment of 39,089 kits (101% of participation target). Remaining fall semester promotional efforts are focused on encouraging installation of the energy efficiency measures contained in the School Education Kits.
- **Water Heating** – In the third quarter of 2016, the electric kWh savings hit 78% of target, staying on track to achieve more electric savings in 2016 than 2015. By the end of Q3, the gas Dth savings achieved nearly doubled the year-end target of 1,766 Dth, achieving 3,500 Dth. Focusing on enhancing cost-effectiveness, the Company will only allow low to no-cost promotional communications in 2016 for this product.

Low-Income Program

- **Energy Savings Kits** – During the third quarter, an email offer was sent out to over 15,000 income-qualified customers. Another email and direct mail offer will be sent to customers during the fourth quarter, which will conclude The Company's offerings for 2016.
- **Multifamily Weatherization** – The Company partners with Energy Outreach Colorado (EOC) to help fund equipment retrofits and process improvements for electric and natural gas energy efficiency measures in low-income, multi-family buildings. Energy savings were realized, and rebates paid, for seven facilities in the third quarter. EOC identified, and the Company analyzed, several more multi-family projects by the end of the quarter. The Company expects the product will exceed its electric and natural gas savings targets in 2016.
- **Non-Profit** – By the end of the third quarter, EOC identified gas and electric savings among 48 low-income non-profit facilities. Savings were realized and rebates were paid to seven facilities. The Company expects the product will exceed its electric and natural gas savings targets in 2016.
- **Single-Family Weatherization** – The program is forecasting to over-achieve its annual gas target and continues to work on bringing in electric savings. Multiple agencies continue to participate in the program. At the end of the third quarter, the Company launched a direct install blitz that will continue through year-end and also provided a grant to treat additional homes in need down in the San Luis Valley; the estimated number before year end is 20-30 homes. Both initiatives should help in bringing in additional electric savings before year-end.

Indirect Program

- **Business Education** – In the third quarter of 2016, the Business Education program achieved approximately 60% of the year-end participation target and generated 291 customer leads. Participation and outreach through key community and trade association events continue to create a meaningful conversation with customers. By the end of the third quarter, the Company provided outreach through thirteen community-based events. In addition, the program has been supported through energy efficiency messaging via the Energy Solutions newsletter, as well as a mass marketing print campaign. The combination of these initiatives continues to support DSM achievements.
- **Business Energy Analysis** – The Company offers three different types of audits: online energy assessments, on-site energy audits, and engineering assistance studies. The Company achieved 46% of its electricity participation target and 86% of its natural gas participation target at

the end of the third quarter. Marketing efforts for the fourth quarter may include social media, direct mail, and e-mail campaigns, as well as an on-site energy audit promotion if needed. Additional efforts continue to focus on education of both trade partners and customers. With a significant number of on-site energy audits currently in progress, the Company continues to build a robust project pipeline for the remainder of 2016 and beyond.

- **Consumer Education** – In the third quarter of 2016, Consumer Education achieved approximately 116% of the year-end participation target and generated 11,958 customer leads. Participation and outreach through key community events continues to create a meaningful opportunity to address energy efficiency with customers. By the end of third quarter, the Company provided outreach through 131 community-based events. In addition, the program has been supported through conservation messaging in residential newsletters and web-based channels. The combination of these initiatives continues to drive participation in DSM products.
- **Energy Efficiency Financing** – The Company is close to establishing a territory-wide residential finance offering. Elevations Credit Union's residential energy efficiency (unsecured) loan is being used by residential customers in Denver and Boulder counties, although the participation is significantly below the filed estimate. A \$100 trade incentive bonus has been in place since 2015 to encourage additional participation. The Commercial Financing Program has finalized the online process for commercial trade partners and customers to use in order to get financing proposals for their projects. In collaboration with Harcourt, Brown & Carey, the portal will be available on the Xcel Energy website later this month. Commercial customers and trade partners can enter information about their energy efficiency project resulting in 2-3 proposals for them to review to match the one that best fits their needs. Current lenders participating include:
 - Ascentium Capital
 - Colorado Enterprise Fund
 - Key Bank
 - Spark Fund
 - U.S. Bank
 - Colorado Commercial Property Assessed Clean Energy (CoPACE)
- **Home Energy Audit** – The Home Energy Audit product remains consistent and is on target to overachieve its annual filed gas participation target. On the electric side, participation has fallen slightly behind but is still ahead of 2015 participation benchmarks. Infrared audit participation continues to exceed in participation over the other two offerings.
- **DSM Planning & Administration** – During the third quarter of 2016, the Company worked with intervenors in the 2017/2018 DSM Plan to reach a negotiated settlement agreement and provided updates to interested parties on the upcoming DSM Potential Study.
- **Program Evaluations** – DSM program evaluation surveys are completed and analysis and reporting is well underway. Evaluations remain on track for completion by the end of the calendar year.
- **Measurement & Verification** – The Company's third-party verification contractor, Nexant, completed random field inspections for prescriptive products for the 2016 M&V year, with no significant variances. The resulting data will be utilized for the 2016 DSM Annual Status Report.

Market Research – In the third quarter, the 2016 DSM Business Attitudes, Awareness, and Usage (AAU) Study was completed. This year's AAU study will include a new section of questions related to product development. The Company is also analyzing the results for the 2016 Home Use study in mid to late August. Ongoing planning efforts focus on finding ways to include more insights about customers in program design and delivery.

- **Product Development** – Current development efforts include:

- Partnering with the Department of Energy and Lawrence Berkely National Laboratory on a research project to study Integrated Building Management Systems. The project tests how networked lighting controls, daylight redirecting window film, deep daylight dimming, and HVAC controls can be managed together to save energy.
 - Partnering with the University of California – Davis and the Western Cooling Efficiency Center to study efficient process/commercial dehumidification for indoor farming using a high efficiency heat exchanger to condense excess moisture.
 - Net zero new construction explores what additional assistance beyond Energy Design Assistance is required for customers interested in using multiple DER technologies to minimize net energy consumption.
 - Advanced roof top unit controllers that operate a VFD using advanced economizer and demand controlled ventilation.
 - Refreshing our idea list and identifying promising new energy efficiency measures and programs
- **Business Energy Feedback Pilot** – Business Energy Reports continued to be delivered to approximately 10,000 small business customers. Energy savings measurements do not show significant savings. The pilot ends at the end of 2016 and the Company is actively exploring options for the future.
 - **Multifamily Buildings Pilot** – During the third quarter of 2016, the Company and it's the third-party implementer continued implementation. Since the launch of the pilot in September 2015 through the end of September 2016, 46 building assessments were completed with close to 1,800 units receiving direct installation of energy-efficient equipment. The projected annual savings is more than 400,000 kWh and 4,000 Dth from direct installs alone.
 - **Smart Thermostat Pilot – EE** – The Smart Thermostat Pilot enrolled almost 700 new participants in the third quarter. Total enrollments to-date for the pilot are approximately 5,850, exceeding the pilot's filed participation goal. The Company determined the pilot's budget could absorb participation above the filed target, but ultimately discontinued the \$50 EE rebate offer on September 12 in order to maintain budget integrity. The pilot will not enroll new customers through the remainder of 2016, however the Company continues to work through the application queue and will report additional rebate spend in the fourth quarter. The Company's online Storefront continues to be pilot participants' preferred method for enrollment, accounting for over 60% of participant enrollments.

Demand Response Program

- **Saver's Switch®** – Marketing activities are ongoing in Colorado. While the Company has received about 14,000 signups to date, installations are challenging as only about half the signups materialize into actual installations. To date the company has deployed about 6,000 switches on customer premises.
- **Smart Thermostat Pilot – DR** – The Company conducted 10 residential demand response test events from late June to mid-August. The events were intentionally varied to study the impacts of different control strategies, event times, and durations. The M&V contractor has begun collecting data loggers and will begin calculating achievement from those events. The Company will shift focus to supporting the pilot's M&V efforts.
- **Small Business Smart Thermostat Pilot** – The Small Business (SMB) pilot concluded enrollments with total installations of nearly 75% of the filed participation target. Due to a number of technical challenges, the Company encountered delays deploying the chosen vendor's software portal – the headend that manages installed thermostats and dispatches DR events.

The Company began conducting DR test events for the SMB pilot in September, achieving a total of 5 test events dispatched. The M&V contractor has begun collecting data loggers from SMB pilot participants and will begin calculating achievement from those events. The Company will shift focus to supporting the pilot's M&V efforts.

- **Building Optimization DR Pilot** – The Company and the third-party implementer continued activities to install the software and start base-lining (a.k.a. learning mode) the HVAC usage in the customers' buildings. As of third quarter 2016, the pilot is fully subscribed with 7 customers (16 buildings) signed up for a total of more than 9 MW peak demand and 2,299,953 square feet. Two buildings have been in optimization mode since the start of the year and successfully participated in demand response test events during July and August. Three other buildings are now in control mode. Two more buildings are nearing completion.