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 2017 (cumulative Jan. 1 – Sept. 30, 2017) 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 324 GWh and gas savings of 338,393 Dth in the 2017 calendar year. This represents approximately 76% of the 2017 electric DSM plan's energy savings target of 421.6 GWh and 53% of the gas target of 636,078 Dth.

The following section provides product status activities for the third quarter of 2017 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 product is expected to slightly exceed its 2017 electric savings target. This is due in part to a large industrial project closing out at mid-year, attributing a significant amount of the year-to-date energy savings. The product is expected to achieve its gas target as well. Focus for the remainder of the year will be to close out some of the remaining pipeline for 2017, build 2018 pipeline and focus on marketing efforts for 2018.

- **Compressed Air Efficiency** – The product is expected to fall short of its 2017 savings target. This is due to projects being pushed back into the 2018 calendar year. Efforts for the remainder of the year will be focused on closing out the remaining projects, building 2018 pipeline and possible marketing efforts with the trade.

- **Computer Efficiency** – The product has exceeded its 2017 energy savings target. The product has seen strong participation numbers from the prescriptive offerings and forecasts for the upstream portion of the product is expected to remain steady.

- **Cooling** – The product is on track to meet the year-end target. Midstream products are continuing to see strong growth, The product is in the early stages of a comprehensive product evaluation and will focus on multiple delivery channels.

- **Custom Efficiency** – The product has not had any gas achievement year-to-date and does not expect to meet its year-end electric savings target. This is due, in part, to some large projects being delayed in to the future. The Company continues to increase outreach strategies with both Business Solutions Center and Account Managers to engage more customers directly to build the gas pipeline and has begun offering a customer incentive bonus to drive participation. The Company expects these efforts to result in added achievement and grow the pipeline for electric and gas projects.

- **Data Center Efficiency** – The product had a successful third quarter, with strong participation continuing for prescriptive plug fans with electronically commutated motors ("ECM"). The product
is not forecasted to achieve its year-end savings target. A marketing campaign, focused on the New Construction offering, launched during the third quarter. The campaign included both digital and print ads in data center specific publications. Campaign results are expected during the fourth quarter.

- **Energy Management Systems ("EMS")** – The EMS product is expected to underachieve its full year savings target. During the third quarter, new controls projects were analyzed for nine new customers, and one large school district enrolled in the Energy Information Systems ("EIS") component. Natural gas savings are expected to finish the year near the full-year savings target. The Company continues to invest in third-party Strategic Energy Manager activities and studies to support the development of the product.

- **Heating Efficiency** – The product is not on track to meet the filed year-end target. Several outreach tactics which were launched in third quarter target boost participation; and targeted efforts such as manufacturer and distributor events, email, digital marketing, trade partner outreach and education were increased to support the communication of an added bonus rebate incentive to customers. Marketing efforts to promote the highly cost-effective measures such as large boilers, tankless water heaters, pipe insulation, and steam traps will continue. Large customer outreach strategies targeting the largest natural gas users along with increased social media will drive more awareness of the bonus offering.

- **LED Street Lights** – The LED Street Lights product has retrofitted 6 GWh of HID to LED street lights and is on track to meet year-end achievement target.

- **Lighting Efficiency** – The product achieved its filed targets in the third quarter. The overall costs of LED fixtures have significantly dropped bringing prices and paybacks to an attractive simple investment. The product also right-sized LED linear replacement lamps and direct linear ambient fixture rebate levels through a 60-Day Notice. Along with the rebate level changes, the product now allows non-DLC and non-ENERGYSTAR® qualified products to receive a prescriptive rebate at 75% of the DLC or ENERGY STAR rebate level. These changes will take effect in the fourth quarter 2017.

- **Lighting – Small Business** – The product has exceeded its 2017 energy savings targets. The product continues to manage total product costs as LED technology costs continue to decline. The Company is also focusing on maximizing product net benefits in order to deliver value to all customers.

- **Motor & Drive Efficiency** – The product is expected to meet its 2017 energy savings target with a well-rounded 2017 pipeline. Efforts for the fourth quarter will revolve around closing out the projects in the existing pipeline and beginning to build the 2018 pipeline.

- **Multifamily Buildings** – In the third quarter, the Multifamily Buildings product continued to see steady participation in stages one (assessment) and two (direct install). Stage three projects have proven more difficult to complete; however, the Company plans to run a heating bonus during the fourth quarter to encourage property owners to take action before the end of the year. The product is forecasting to under-achieve its savings targets for both gas and electric in 2017; however, the pipeline and customer interest remains steady.

- **New Construction** – The product is not forecasting to meet its year-end savings targets due to project delays during construction and an increasing number of customers taking gas transportation service. The Company is developing the Energy Efficient Buildings pipeline to close the forecasted energy savings achievement gap and shifting focus to close the product’s gas achievement gap.
• **Process Efficiency** – The product is not expected to achieve its year-end savings targets. Two additional follow-up studies were completed within the quarter. The Company continues to actively cross-sell both EIS and Process Efficiency as an offering of “strategic energy management” services.

• **Recommissioning** – The product will not achieve its year-end electric or natural gas savings targets, due to limited customer implementation of identified savings measures. Efforts for the fourth quarter including training of new trade partners, continued support of existing trade partners and additional follow up to customers with completed and approved studies. Additional areas of focus are under review for the Small Building Tune-Up offering.

• **Self-Direct** – The product had another successful quarter, but is forecasted to slightly under-achieve its year-end savings target. Existing projects continue to move through the pipeline and new projects have been identified for the 2018 pipeline.

**Residential Program**

• **Energy Efficiency Showerheads** – The product successfully launched in June of this year. The product now offers customers the option to purchase a handheld showerhead or spa style showerhead, in lieu of the standard, free showerhead model, through a customized e-commerce platform. The Company has also added the option to purchase equipment “a la carte” instead of being limited to fixed kits. Purchases of non-standard showerhead models have been greater than forecast indicating a high level of interest from customers. However, the Company is not forecasting to achieve its year-end savings targets.

• **Energy Feedback Residential** – Current forecasts is energy savings will come in below the year-end energy savings targets. In 2017, the Company began adding new participants on a monthly (rolling basis) rather than a once-a-year. The 2017 new participant group currently consists of approximately 31,000 home energy report (“HER”) recipients and will continue to grow throughout this year. The majority of these new participants have only received one or two HERs since being enrolled and electric energy savings for this group are being measured; however, no natural gas savings has yet been measured. Public Service continues to leverage the HER to promote other DSM products. A “heating bundle” promotional module including; heating equipment, insulation, and water heating, was created and will be deployed in targeted HERs starting in late October.

• **ENERGY STAR® New Homes (“ESNH”)** – The pace of new construction slowed some from what was encountered earlier in the year; however, the year-end forecast remains on track to exceed both the participation and savings targets. Approximately 43% of all rebated homes were built in a 2012 or 2015 IECC jurisdictions, which compares to 22% in January 2017. Much of this increase is due to the City of Denver’s adoption of the 2015 IECC in late 2016. The product completed four “Selling High Performance” home training sessions in the second quarter, which brings the current year-to-date total to 19.

• **Evaporative Cooling** – The product continued targeted marketing efforts – customer mailings, mass emails, social media – advertising and promotions, contractor and retail training in the third quarter. Contractors and retailers reported flat evaporative cooling unit sales compared to the same period in 2016 and the product does not forecast to achieve its energy savings targets. The Company increased vendor incentives, effective March 1, to drive more participation and so far that has led to a higher proportion of total product participation coming from trade partners and retailers. The Company also launched a short-term pilot, in partnership with Lowe’s, to test the ability to provide instant rebates to customers. Eighty-six participants took advantage of this opportunity, which is considered a good result based on the time of season. The Company will continue to evaluate the results and opportunities for expanding this channel in the future.
- **High Efficiency Air Conditioning** – The product is on track to meet its energy savings targets. Ductless Mini-Split Heat Pump rebate applications have increased, with 56 units rebated. The Quality Installation (“QI”) only measure, for minimally efficient new AC systems, has increased since the customer rebate was increased from $0 to $100 in May, with over 50 participants. 16 SEER/13 EER systems continue to be the new equipment tier most often rebated, with 51% of the total units. Three-fourths of AC rebates include trade-in savings from old, inefficient AC systems.

- **Home Energy Squad** – The Home Energy Squad product continued to see a steady increase in participation as well as higher than average Dth and kWh savings per home. The storefront proved to be a successful tactic not only offering customers the choice to sign up, pay and schedule online but also alleviating some of the administrative burden on the implementer that can occur when large numbers of customers are trying to sign up at one time. This has led to a more consistent pipeline and achievement of a “100 visits in a month” product benchmark goal in September. Average Dth and kWh savings per home remain higher than forecasted but the product will not meet its 2017 targets.

- **Home Lighting & Recycling** – The Company is distributing updated in-store signage to increase awareness of our discounts. We also are distributing educational kits to the sales staff working in stores with our discounts. The kits will better equip the staff to help customers determine which LEDs are right for them based on color temperature, lumens, and usage.

- **Home Performance with ENERGY STAR® (“HPwES”)** – The Home Performance with ENERGY STAR product saw a slow third quarter dropping behind 2016 benchmarks in both participation and savings. The Company is looking to provide trade partner training in the fourth quarter on promoting Home Performance and utilizing the ENERGY STAR brand to help get more customer participation driven to the product.

- **Insulation & Air Sealing** – The insulation product saw a drop in participation during the third quarter. However, the average gas and electric savings per home remain higher than 2016 benchmarks and the Company still expects to overachieve its gas targets. At the end of the third quarter, the Company launched a heating bundle promoting insulation along with three other heating related products.

- **Refrigerator & Freezer Recycling** – The product does not forecast to achieve its year-end energy savings target. There was a significant uptick in customer participation in the third quarter in response to a marketing push, including a sweepstakes for Home Depot gift card prizes. Marketing efforts, with a focus on driving awareness and participation, will continue through the fourth quarter with another sweepstakes planned in coordination with the Colorado Avalanche.

- **Residential Heating** – The product is on target to meet its electric savings target. The gas savings are forecasted to be under the filed target, but contingency plans are in progress. In July, the high-efficiency furnace rebate was increased from $120 to $300. In the fourth quarter, a bundled heating campaign is scheduled, and a bonus rebate is also planned if participation is still behind expectations.

- **School Education Kits** – The product is forecasted to surpass its energy savings targets due to an increase in installation rates for participating customers. 31,617 kits have been shipped as of the end of September and the product is 100% enrolled for the year. The remaining kits will be shipped in the fourth quarter.

- **Water Heating** – The product achieved its gas savings target during the second quarter and is still expected to significantly exceed the target by the end of the year. The product is also expected to achieve year end electric savings targets. The product also forecasts to remain within its budget. Efforts to improve cost-effectiveness continue by exploring new delivery methods, and
Low-Income Program

- **Energy Savings Kits** – During the third quarter final direct mail and email campaigns were launched to qualifying customers on the Low-Income Energy Assistance Program list. In order to increase participation in the product, the Company also purchased a list of over 20,000 customers identified as receiving government assistance. The product forecasts to not meet participation or energy savings targets. The Company continues to work on new ways to promote the product to qualified customers, and increase installation rates of measures.

- **Multifamily Weatherization** – The product is forecasted to meet or exceed its electric and natural gas savings targets. Partnership 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 continues and has resulted in 41 completed projects and 66 projects in the pipeline.

- **Non-Profit** – The product is forecasted to meet or exceed its electric and natural gas savings goals. To-date, the partnership with EOC has resulted in 44 completed projects and 34 additional projects identified.

- **Single-Family Weatherization (“SFWx”)** – The product continues to move toward its targets during the third quarter through the Weatherization Assistance Program and the Colorado Affordable Residential Energy Program (“CARE”). At the beginning of the third quarter, the Company provided additional funding to the CARE program to support weatherization upgrades for more customers as well as the new CARE partnerships with Platte River Power Authority and Black Hills Electric.

Indirect Program

- **Business Education** – In the third quarter of 2017, the Business Education product achieved approximately 59% of the year-end participation target and generated 139 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 13 community-based events. In addition, the product 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** – Marketing efforts in 2017 continue to 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. Now that the City of Denver Benchmarking Ordinance deadline has passed for buildings above 50,000 square feet, promotions are being planned to encourage buildings 25,000-50,000 square feet to meet their deadline of June 1, 2018. Currently, the product is forecasting to be slightly under target; however, the Company expects to see strong participation numbers for the remainder of 2017 as a result of increased promotional efforts with the City of Denver Benchmarking Ordinance deadline in June.

- **Consumer Education** – In the third quarter of 2017, Consumer Education achieved approximately 103% of the year-end participation target and generated 2,972 customer leads and 358 signups. 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 84 community-based events. In addition, the product
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 has launched a territory-wide residential finance offering through a partnership with LendKey and is in the process of introducing the offering to the trade partner network. Several trade partners have signed up to offer the LendKey product to customers, but no loans have been made yet. Elevations Credit Union’s residential energy efficiency (unsecured) loan continues to be used by residential customers in Denver and Boulder counties. On the commercial side, the Company and Harcourt, Brown & Carey Energy Capital are promoting the financing product via newsletters and email updates. Monthly reports have shown increased interest in financing proposal requests with three projects currently pending approvals. The Company is planning workshops in the first quarter of 2018 specifically for commercial financing in conjunction with a training on “Influencing Efficiency Upgrades - Tips, Tools, and Techniques for Selling an Efficiency Project.”

- **Home Energy Audit** - The Home Energy Audit product saw lower participation during the third quarter than previous quarters but remains under budget to the same extent. Energy advising, a service the Company provides under the Audit product, saw a successful third quarter and is on track to meet the annual target of 350 enrollments. Advising also expects to see a pickup in enrollments during the fourth quarter due to the retirement of the Denver Energy Challenge. Advising helps drive customers to the audit product and other residential energy efficiency products.

- **Energy Benchmarking** - The Company supports municipalities within its service territory to reach their benchmarking goals. During the second quarter, 672 new participant buildings were added representing a 76% increase from the first quarter. The city of Boulder saw 56 new buildings benchmarked and the city of Denver saw 527 new buildings benchmarked during the second quarter.

- **DSM Planning & Administration** – The Company has been responding to discovery requests in its Strategic Issues proceeding.

- **Program Evaluations** – Research activities for the 2017 evaluations are complete and analysis and reporting is underway with final reports expected late in the fourth quarter of 2017 or early in the first quarter of 2018. The second phase of the Energy Efficiency Financing evaluation, focused on understanding the product’s role in the market, was completed in the final weeks of the third quarter.

- **Measurement & Verification** – The Company’s third-party verification contractor, Nexant, completed random field inspections for prescriptive products for the 2017 M&V year, with no significant variances. The resulting data will be utilized for the 2017 DSM Annual Status Report.

- **Market Research** – Business and residential segmentation has progressed substantially during the quarter, aiding in the identification of DSM opportunities. Residential segment updates are now obtained regularly from Informatica, who the Company also uses for address validation. Updated business segment data was purchased and received from Dun and Bradstreet for inclusion in Salesforce, a process expected to be completed in the near future.

- **Product Development** – Current development efforts include:
  - Partnering with the Department of Energy and Lawrence Berkeley 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. Results were positive with
over 90% savings over traditional zonal T8 system. The Company plans to offer through Business New Construction within the next few months.

- Offer a prescriptive rebate for advanced lighting controls for retrofits or new construction in medium-sized office buildings and warehouse/storage facilities with high-volume, predictable application. LED-networked and integrated wireless luminaries layer daylight harvesting, occupancy sensing, and high-end trimming control strategies with out-of-the-box functionality and no need for additional manufacturer support or a special server. A one-time one-button commissioning is used to set light fixtures.

- Advanced Energy Communities are district-scale development projects that have aggressive energy goals and include multiple energy systems (energy efficiency, demand response, advanced grid, renewable energy, storage, and electric vehicles.) The Company is looking into product designs that can help meet the needs of these projects.

- Advanced roof top unit controllers that operate a variable frequency drive using advanced economizer and demand-controlled ventilation.

- Offer a rebate to residential customers when they purchase an ENERGYSTAR® certified dehumidifier. ENERGYSTAR® models use 15-30 percent less energy than non-ENERGY STAR® models.

- Offer a rebate via upstream product leveraging current partners for variable refrigerant flow heat pump systems that can deliver up to 40 percent energy savings above minimum codes.

- Continue to evaluate the following Stage 2 prioritized opportunities: window treatments, ozone laundry, switched reluctance motors, and ENERGY STAR® radon mitigation fans.

- Small embedded data centers were not considered cost-effective and have been dropped from further consideration. Fault detection can be handled within our existing Energy Management Systems product so will be dropped from new product development efforts.

- Evaluated three roundtable idea submissions
  
  - GreenFan
    - Received July 17, 2017 by Framo Rimoni of GreenFan
      - Advanced fan time delay for residential furnaces and air conditioners; and
      - Similar to the Western Cooling Control Device but adds heating energy savings as well
    - Evaluation Results
      - As submitted, the measure appears cost-effective for electric and gas end-uses when integrated into our Home Energy Squad (“HES”) product as a direct install device;
      - 60,000+ units installed in CA; and
      - Integration into our HES product requires the device to be installed by non-HVAC certified technicians. According to the manufacturer the device is as easy to install as a thermostat.

  - Vertical Packaged Air Conditioners
    - Received July 19, 2017 by Alex MacCurdy of Energy Solutions
      - Vertical Packaged Air Conditioners (“VPAC”) are installed in chases in hotel guest rooms, which avoid bulging systems installed below the window. VPACs range in efficiency.
    - Evaluation Results as submitted:
      - Current analyses indicate the measure is cost-effective for both Tier 1 and Tier 2 technologies.

  - Guest Room Controls
    - Received July 19, 2017 by Alex MacCurdy of Energy Solutions.
      - Guest room controls turn off the lights and set back the thermostat in hotel guest rooms when the room key-card is removed. When guests
return, the key-card is placed in the slot and lighting and HVAC is restored.

- Evaluation Results as submitted:
  - Guest room controls, although cost-effective, were removed from the Company's New Mexico DSM programs due to very poor customer satisfaction.

- **Thermostat Optimization Pilot** – The pilot launched the MyHome app in July 2017. About 85 customers completed enrollment, downloaded the MyHome app from the technology partner, authorized the app to control their Ecobee smart thermostat, and began the pilot. The optimization technology managed customer thermostats in a manner to minimize air conditioning runtime and to provide demand response while not impacting customer comfort. Due to the limited nature of this effort, no savings are being claimed in 2017.

- **ENERGY STAR® Retail Products Platform Pilot** – All of the participating retailers presented at the partner meeting in October and continue to be very supportive of the pilot. Lowe's will be added as a retailer in 2018 along with adding dehumidifiers as a measure category.

**Demand Response Program**

- **Residential Demand Response** – In the third quarter, the company launched the new AC Rewards offering, a DR product utilizing communicating thermostats for reducing air conditioning load during times of peak demand. In the first quarter, approximately 600 customers joined the product. The Company also continued offering the Saver’s Switch product. Approximately 4,000 switches were deployed as of the end of the quarter. Recruiting has been challenging this summer with low customer response rates and a large number of customers being ineligible or changing their minds prior to installation.

- **Building Optimization DR Pilot** – The Company and the third-party implementer continued activities to install and update the software platform in the customers' buildings. This quarter, a limited number of demand response tests were conducted. Because of installation delays, the Company was only able to conduct tests at five of the buildings included in the pilot. The limited testing results led to identification of a number of opportunities to improve the load reduction and recovery strategies so that snap-back during and after the DR event could be minimized.

- **Critical Peak Pricing** – As of the end of third quarter, there were five participants enrolled in the Critical Peak Pricing pilot product with the potential of 1.9 MW of controllable load. In addition, there are two more customers requesting to join the pilot the fourth quarter of 2017. Their “intent to join” initiated the field services process, with the goal to have these customers fully “dispatchable” by the end of the fourth quarter.

- **Peak Partner Rewards** – Through the third quarter, the product had enrolled just over 12 MW of new load. Efforts in the third quarter focused on enrolling new customerst. Marketing efforts – including email and direct mail campaigns in third quarter - continue to focus on adding additional load for the remainder of 2017 and beyond.