**BEFORE THE PUBLIC UTILITIES COMMISSION**
**OF THE STATE OF COLORADO**

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|---|---|---|
| **IN THE MATTER OF THE APPLICATION OF** | **)** | |
| **PUBLIC SERVICE COMPANY OF COLORADO** | **)** | |
| **FOR APPROVAL OF A NUMBER OF** | **)** | |
| **STRATEGIC ISSUES RELATING TO** | **)** | |
| **ITS DSM PLAN, INCLUDING MODIFIED** | **)** | |
| **ELECTRIC ENERGY SAVINGS AND DEMAND** | **)** | |
| **REDUCTION GOALS, AND REVISED** | **)** | |
| **INCENTIVES FOR THE PERIOD 2015** | **)** | |
| **THROUGH TO 2020; FOR APPROVAL OF A** | **)** | |
| **DISTRIBUTION VOLTAGE OPTIMIZATION** | **)** | |
| **PROGRAM TOGETHER WITH COST** | **)** | |
| **RECOVERY AND INCENTIVES, AN LED** | **)** | **DOCKET NO. 13A-0686EG** |
| **STREET LIGHTING PRODUCT AND** | **)** | |
| **APPROVAL TO INCLUDE BEHAVIORAL** | **)** | |
| **CHANGE PRODUCTS IN THE COMPANY'S** | **)** | |
| **DSM PORTFOLIO AND OF THE** | **)** | |
| **METHODOLOGY TO BE USED TO MEASURE** | **)** | |
| **SAVINGS FROM SUCH PRODUCTS; AND** | **)** | |
| **FOR COMMISSION GUIDANCE REGARDING** | **)** | |
| **THE FACTORS TO BE CONSIDERED AND** | **)** | |
| **APPROPRIATE LEVEL OF THE COMPANY'S** | **)** | |
| **GAS DSM PROGRAM IN THE FUTURE.** | **)** | |

# REBUTTAL TESTIMONY OF DEBRA L. SUNDIN

**ON**

**BEHALF OF**

**PUBLIC SERVICE COMPANY OF COLORADO**

**December 20, 2013**

**Corrected on April 11, 2014**

**BEFORE THE PUBLIC UTILITIES COMMISSION**
**OF THE STATE OF COLORADO**

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# REBUTTAL TESTIMONY OF DEBRA L. SUNDIN

## INDEX

**BEFORE THE PUBLIC UTILITIES COMMISSION**
**OF THE STATE OF COLORADO**

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|---|---|---|
| **IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR APPROVAL OF A NUMBER OF STRATEGIC ISSUES RELATING TO ITS DSM PLAN, INCLUDING MODIFIED ELECTRIC ENERGY SAVINGS AND DEMAND REDUCTION GOALS, AND REVISED INCENTIVES FOR THE PERIOD 2015 THROUGH TO 2020; FOR APPROVAL OF A DISTRIBUTION VOLTAGE OPTIMIZATION PROGRAM TOGETHER WITH COST RECOVERY AND INCENTIVES, AN LED STREET LIGHTING PRODUCT AND APPROVAL TO INCLUDE BEHAVIORAL CHANGE PRODUCTS IN THE COMPANY'S DSM PORTFOLIO AND OF THE METHODOLOGY TO BE USED TO MEASURE SAVINGS FROM SUCH PRODUCTS; AND FOR COMMISSION GUIDANCE REGARDING THE FACTORS TO BE CONSIDERED AND APPROPRIATE LEVEL OF THE COMPANY'S GAS DSM PROGRAM IN THE FUTURE.** | **)** | **DOCKET NO. 13A-0686EG** |

**REBUTTAL TESTIMONY OF DEBRA L. SUNDINI.**

## INTRODUCTION

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Debra L. Sundin. My business address is 414 Nicollet Mall, Minneapolis, Minnesota 55401.

**Q. HAVE YOUR PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?**

A. Yes. On June 17, 2013, I submitted Direct Testimony and Exhibits in this proceeding on behalf of Public Service Company of Colorado ("Public Service" or the "Company').

## II. PURPOSE OF TESTIMONY

**Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

A. As an initial matter, I will discuss the Company's recent reassessment of the avoided costs that should be used in evaluating both the cost-effectiveness of the Company's Demand-Side Management ("DSM") initiatives and the expected net economic benefits going forward. I respond to the Intervenors' Answer Testimony addressing the issue of electric energy savings goals, and discuss the impact that the reduction in avoided costs has on the electric energy savings goals proposals made by the Company, the Southwest Energy Efficiency Project ("SWEEP"), the Office of Consumer Counsel ("OCC"), the Energy Efficiency Business Coalition ("EEBC"), Sierra Club, and Colorado Energy Consumers ("CEC"). I also present an electric energy savings goal scenario that we have developed as an alternative to our principal energy savings goals proposal if the Commission desires to further mitigate the rate impact of DSM. I explain the Company's continued support for certain non-traditional energy efficiency initiatives, including behavioral change programs, light-emitting diode ("LED") Street Lighting, and our

proposed Distribution Voltage Optimization ("DVO") initiative. After addressing these broader issues I address the specific issues raised by the parties regarding our demand response goals and the credits provided under our Interruptible Service Option Credit ("ISOC") program. I also discuss issues raised by the Intervenors with respect to non-energy benefits, Combined Heat and Power ("CHP"), and Solar Thermal technology. I respond to Intervenors clarifying the guidance we are seeking on natural gas DSM policy. Lastly, I address the issue of contractor support and the various administrative issues that have been raised by the Intervenors.

**Q. HOW IS YOUR TESTIMONY ORGANIZED?**

A. I will give a high-level overview of the changes we have made to update our avoided cost assumptions, as well as new estimates of the cost of delivering energy efficiency to our customers, in response to proposals made by OCC. Next, I will introduce the other Company witnesses sponsoring Rebuttal Testimony. I will then summarize the Intervenors' positions on various issues and the Company's responses. Lastly, I will respond in more detail to the Answer Testimony of Intervenors addressing the following specific issues:

- Electric Energy Efficiency Goals
- Distribution Voltage Optimization ("DVO")
- Behavioral Products
- LED Street Lighting
- Non-Energy Benefits
- Combined Heat and Power

- Solar Thermal Technologies
- Gas DSM Policy
- Demand Response Goals
- Contractor Support and Administrative Issues

## III. SUMMARY OF COMPANY'S REBUTTAL CASE

**Q. PLEASE SUMMARIZE THE COMPANY'S POSITION AFTER REVIEWING THE ANSWER TESTIMONY OF OTHER PARTIES.**

A. We continue to support the energy savings and demand reduction goals presented in our Direct Testimony and Exhibits. However, because of the increasing rate impacts of our electric DSM activities as avoided costs have declined, we have also developed an alternative scenario for the Commission's consideration that reduces spending on residential DSM to lessen the rate impact of the Company's overall DSM portfolio while still maintaining energy savings goals near the level proposed in our initial application. Many of our residential DSM programs have a greater rate impact than programs targeted to commercial and industrial customers because of the lower coincidence between energy saved and the time that we experience our peak demand. The lower coincidence factor results in lower system benefits from these programs to offset the cost of achieving these residential energy savings.

As a result of our reassessment of avoided costs and the resulting reduction in the level of net economic benefits that the Company expects to achieve through our DSM efforts, Mr. Scott Brockett has recalibrated the

incentive structure presented in his Direct Testimony to ensure that the Company will at least recover its lost revenues and receive a modest performance incentive. He also shows how the incentive structure would need to be modified if the Commission were to approve any one of the energy savings goals at the levels proposed by the Intervenors.

We reaffirm our position that behavioral products should be included within our energy efficiency portfolio and included within our proposed energy savings goals, and recommend approval of our proposed methodology for calculating energy and demand savings.

Public Service also continues to support its proposed DVO energy and demand savings goals, but offers possible alternatives for the Commission to consider as a result of the impact from the reassessment of avoided costs. In addition, we continue to support our proposed cost recovery methodology and Mr. Brockett will present an updated incentive mechanism and modifications to the Company's Demand Side Management Cost Adjustment ("DSMCA") tariff as a result of the updated avoided costs.

**Q. BEFORE PROCEEDING WITH YOUR REBUTTAL TO PARTIES ON SPECIFIC TOPICS, WHAT BROAD CHANGES HAS THE COMPANY IMPLEMENTED WITH RESPECT TO THE ORIGINALLY FILED APPLICATION IN RESPONSE TO ANSWER TESTIMONY FILED BY THE INTERVENORS?**

A. In response to the specific recommendation of OCC that the Company reassess avoided costs in light of new information available since KEMA

performed its Updated Colorado DSM Market Potential Assessment (Exhibit No. JAP-1; hereafter referred to as the "2013 Potential Study"), and for the additional reasons I explain below, we have worked with our Resource Planning group to reassess our avoided costs for our electric energy efficiency portfolio.

Also in response to Intervenor input, we have reexamined the costs that KEMA assumed we would incur to achieve various levels of energy savings in 2015 through 2020, and have reduced those costs by nearly 40 percent commensurate with the costs we have incurred to deliver energy efficiency programs to date.

## IV. INTRODUCTION OF WITNESSES

**Q. WHO ARE THE OTHER COMPANY WITNESSES FILING REBUTTAL TESTIMONY?**

A. Mr. Jim Hill, Director of Resource Planning, will provide the updated avoided costs and discuss how the new values were developed.

Mr. Jeremy Petersen, Principal Consultant for DSM & Renewable Energy Technologies, presents the Company's analysis of the effect of the reduction in avoided costs on economic potential and cost-effectiveness and the resulting net economic benefits expected to be achieved, as well as rate impacts, using as assumptions the energy savings goals advocated by the Company as well as the Intervenors. He will also respond to Intervenor Answer Testimony regarding the 2013 Potential Study, suggested new and emerging technologies for energy efficiency, 2013 Demand Response Market

Potential Study (Exhibit No. JAP-6; hereafter referred to as the Demand Response Potential Study) and proposed goals and suggested new technologies for demand response.

Mr. Scott Brockett, Director of Regulatory Administration and Compliance, will present the results of modifications we are proposing to the originally filed incentive mechanism to take into account the reduction of net economic benefits due to reduced avoided costs. He will also respond to Intervenors' objections to our proposal to change the incentive mechanism and disincentive offset beginning in 2015 and to objections to our proposed performance incentive for DVO, and cost recovery treatment for DVO.

Ms. Kelly Bloch, Manager of System Planning & Strategy, will respond to Intervenors' comments regarding the technical merit of DVO including discussing the customer versus company benefits of the technology and DVO proposal changes suggested by the parties.

## V. REASSESSMENT OF AVOIDED COSTS

**Q. WHY HAS THE COMPANY REASSESSED ITS AVOIDED COST ASSUMPTIONS SINCE IT FILED ITS DIRECT TESTIMONY AND EXHIBITS IN JUNE 2013?**

A. While the Company's avoided cost assumptions were not specifically examined in either of the last two strategic issues proceedings, further declines in the cost of new generation capacity, as well as significant reductions in the cost of natural gas occurring since KEMA performed the 2013 Potential Study, caused the OCC to question the reasonableness of

using the Company's avoided cost assumptions from the Company's 2012/2013 Biennial DSM Plan to complete the 2013 Potential Study. Significant changes in the costs being avoided by DSM will affect (1) the cost-effectiveness of the DSM programs offered by the Company, (2) the level of net economic benefits realized, and (3) the ultimate rate impact of our DSM activities on our customers. Therefore, we felt it was important to reassess those cost assumptions as OCC suggested in its Answer Testimony and to measure the impact of this change based on the electric energy savings goals we are recommending as well as the goals being recommended by the Intervenors in this proceeding. The OCC raised similar concerns in Docket No. 13A-0773EG regarding the avoided costs assumptions we used in designing our 2014 DSM Plan[1]. In the course of settlement negotiations entered into in Docket No. 13A-0773EG, the Company agreed that the avoided cost issue as it affects our DSM programs going forward from 2015 should be addressed in this proceeding.

Finally, based on our completed evaluation of the bids received in response to our 2013 All-Source Solicitation,[2] we believe that a reassessment of the costs being avoided through DSM is warranted. The 2011 ERP identified a need for peaking capacity resources during the Resource Acquisition Period (RAP; 2015-2018) with capacity shortages in 2017 and

[1] Because the energy savings goals and associated incentive mechanism in effect for 2014 were established based on a different set of avoided cost assumptions than what the Commission will consider as appropriate for 2015 through 2020, the Company believes that the avoided costs used in the 2014 DSM Plan should remain unchanged. In developing the 2014 DSM Plan, the Company continued to assume that the generation unit avoided based on the shape of the load being avoided by the majority of DSM measures was a CC with only a minority of DSM measures avoiding a CT.

2018. Nearly all bids offering gas-fired generation were for simple cycle combustion turbine ("CT") units that serve a peaking and wind integration role on the Public Service system. Accordingly, as we move in to 2015, we believe it is no longer appropriate to assume that the generation unit being avoided by a majority of our DSM measures is a Combined Cycle ("CC"), as was assumed for our DSM Plans beginning in 2011 through 2014.

**Q. HAS THE COMPANY UPDATED ANY OF ITS OTHER ASSUMPTIONS IN RESPONSE TO ANSWER TESTIMONY FILED BY THE INTERVENORS?**

A. Yes. As I indicated above, a number of the Intervenors challenged the costs within the 2013 Potential Study that were assumed to be incurred to achieve electric energy savings—asserting that they were too high. In particular, SWEEP observed that the assumed cost of achieving proposed energy savings as estimated in the 2013 Potential Study were considerably higher per GWh/yr than what the Company has actually incurred through 2013 and expects to incur in 2014. In response to this criticism, we carefully reviewed our initial cost assumptions with personnel in the Company responsible for implementing our DSM plans and in light of our DSM costs incurred over the last few years. As a result of this review we have reduced our assumed costs of achieving future energy savings by approximately 40 percent to a level that is commensurate with the level of costs we have incurred to date to achieve the Commission's approved energy savings goals.

[2] See the 2013 All Source Solicitation 120-Day Report, dated September 9, 2013, submitted in Docket No. 11A-869E.

**Q. WHAT IS THE RESULT OF YOUR REASSESSMENT OF THE COSTS AVOIDED DUE TO DSM?**

A. As Mr. Hill describes in his Rebuttal Testimony, in reassessing the costs avoided due to DSM, the Company's Strategist model confirmed that for the 2015-2020 time frame, the type of generation capacity likely to be avoided is a CT rather than a CC. For purposes of our 2011, 2012/2013, and 2014 DSM Plans the Company had assumed that a CC was the unit being avoided by the majority of DSM measures based on the shape of the load being avoided by those measures. KEMA had then used the CC costs from our 2012/2013 Biennial Plan as the basis for the updated avoided costs in the 2013 Potential Study prepared in anticipation of this proceeding. In addition to confirming the change in the type of generation avoided by our DSM activities, Mr. Hill also explains that the capacity costs of CTs has dropped nearly 45 percent from those assumed in the 2012/2013 DSM Plans due to a combination of reduced costs of CTs coupled with technological improvements that have increased the capacity of the generic RAP CT. Mr. Hill also explains the Company's proposal to utilize the Strategist planning model to estimate the avoided energy costs to be afforded DSM as being preferable to the method used by KEMA which is based on a CC. The estimated avoided energy costs from the Strategist model are also lower than the values used in the 2012/2013 Biennial DSM Plan.

**Q. PLEASE EXPLAIN THE COMPANY'S METHODOLOGY FOR DETERMINING AVOIDED CAPACITY COSTS ASSOCIATED WITH DSM.**

A. We are proposing to base our avoided capacity costs for DSM on the RAP CT beginning in 2015. Energy efficiency is a long-term resource that is built over time. As a result, the assumption applied to DSM is that the Company is always short of capacity and DSM is allotted full capacity credit in all years. Mr. Neil has suggested correctly that this assumption is not consistent with how generation resources are treated in the ERP. The alternative to the current methodology would be to treat it more like a generation source and provide incremental additional energy efficiency a partial capacity credit in years it is not meeting a short-term capacity need, and full credit in the years where a need exists. The Company is recommending that we continue to provide the DSM resource this small financial preference to support what we believe is the current state of energy policy, which is to encourage cost-effective DSM as an alternative to generation.

**Q. HOW WOULD THE COMPANY PROPOSE TO UPDATE ITS AVOIDED COSTS FOLLOWING THE COMMISSION'S DECISION IN THIS PROCEEDING?**

A. Consistent with the way we have operated our DSM program since 2009, we propose to use this methodology for determining our avoided costs for incremental DSM implemented in the years 2015 through 2020 for purposes of developing our energy savings and demand reduction goals. However, the capacity and energy cost component values would be updated in conjunction with our development of each of our biennial or annual DSM plans filed before the Commission. In other words, the methodology would remain the same

until the Commission examines the question of energy savings goals and avoided costs in the context of the next DSM strategic issues proceeding. Therefore, regardless of future changes in demand that may increase or decrease our need for incremental generation resources or change in the type of incremental generation we require going forward, we will continue to use the full capacity and energy cost associated with the RAP CT thereafter, until the Commission revisits the issue of avoided costs in the next strategic issues proceeding.

**Q. HOW DOES THIS CHANGE IN AVOIDED COSTS AFFECT THE ELECTRIC ENERGY SAVINGS GOALS PROPOSALS THAT HAVE BEEN ADVOCATED FOR IN THIS PROCEEDING?**

A. As Mr. Petersen explains in greater detail in his Rebuttal Testimony, the reduction in avoided costs resulting from our reassessment has only a modest impact on the achievable potential for traditional energy efficiency as determined in the 2013 Potential Study. There is only a slight reduction because most traditional energy efficiency measures remain cost-effective and therefore the Company believes that the goals we proposed for traditional energy efficiency are reasonably attainable, yet continue to be a stretch goal. However, with the reduction in avoided costs there is a growing imbalance between the level of system benefits realized from DSM and the impact on rates due to the loss in revenues from DSM. As such, the system benefits derived from DSM largely due to the avoidance of generation capacity costs no longer outweigh the impact of the program on our customers' electric

rates. This means that non-participants in our programs no longer realize a net benefit on account of our DSM activities, but instead would pay higher rates as a result of other customers' participation in DSM programs. This adverse rate impact would be even greater were the Commission to maintain the current level of energy savings goals as advocated by Staff, or if the Commission were to approve the goals as advocated by EEBC, SWEEP or Sierra Club, all of which are higher than the Company's proposed energy savings goals in this proceeding.

**Q. PLEASE EXPLAIN THE COMPANY'S NEW "MODERATE" GOALS SCENARIO.**

A. The Company believes that DSM is at a crossroads in Colorado. For the first time, since the Company began offering electric DSM in Colorado, the sum of the cost of achieving electric energy savings plus the impacts from lost revenues due to DSM outweigh the system benefits (avoided costs) achieved. This puts two important policy objectives, shared by the Company and the Commission, in conflict with one another—one being to encourage our customers to conserve energy and the other being the objective to maintain our electric rates at reasonable levels.

In consideration of this change in circumstances, the Company has developed an alternative "moderate" energy savings goals proposal that reduces rate impacts by $22 million from the Company's principal energy savings goals proposal. Under this moderate goals scenario we would propose to eliminate or reduce certain residential and indirect products all of

which result in relatively lower system benefits as compared to the costs to achieve than other products we include in our portfolio. The specific changes would include:

- Eliminating Residential products: Heating System Rebates, Refrigerator Recycling, School Education Kits, Water Heater Rebate;
- Reducing expenditures and goals for the Home Lighting & Recycling program; and
- Reducing expenditures on four Indirect products: Business Energy Analysis, Consumer Education – Business, Consumer Education – Residential, and Residential Home Energy Audit.

We developed this alternative scenario for two reasons. First, it provides the Commission with an option should it desire to mitigate the rate impact of our DSM program without decreasing our energy savings goals to the same degree as recommended by the OCC. Second, we believe that this scenario illustrates how the changes in avoided costs that we have experienced recently are affecting different aspects of our DSM portfolio.

The Company's approach to this "moderate" scenario differs from the OCC's approach in that we have given greater weight to the statutory requirement set forth at C.R.S. § 40-3.2-104(4), that we "give all classes of customers an opportunity to participate" in DSM than is possible if we were to limit ratepayer impacts to between $50 and $70 million per year as the OCC recommends. We aimed to ensure that residential customers would continue

to have options to participate in DSM, while also addressing the interest in reducing the rate impact of DSM.

## VI. ELECTRIC ENERGY EFFICIENCY GOALS

**Q. PLEASE SUMMARIZE THE ANSWER TESTIMONY OF THE PARTIES WHO ADDRESSED THE COMPANY'S PROPOSED ENERGY SAVINGS GOALS.**

A. The Intervenors who addressed the Company's proposed electric energy savings goals present a wide range of perspectives with the Company's recommended goals in the middle of the range and reflecting a balance of the competing interests in having the utility obtain ever increasing levels of energy efficiency on the one hand and of ensuring that ratepayer impacts are minimized on the other.

At the high end of the range, Mr. Howard Geller, on behalf of SWEEP, advocates that the Commission should set energy savings goals based on the Economic Potential identified in the 2013 Potential Study for traditional energy efficiency adjusted first to take into account naturally occurring energy efficiency and then to reflect the fact that the Company is partway through the period of time for which the potential was identified. Thus, he recommends setting goals assuming that the Company can achieve 51.6 percent of the net economic potential identified in the 2013 Potential Study, which equals 3,436 GWh from 2013 through 2020, or an average of 449 GWh per year beginning in 2015.[3]

[3] Answer Testimony of Howard Geller, p. 22, ll. 1-7.

Also, at the high end of the range, Ms. Rachel Ackermann, of the Colorado Public Utilities Commission Staff (hereafter referred to as “Staff”), has recommended that the Commission stay the course and make no changes to the electric energy savings goals approved in Docket No. 10A-554EG. Her concern is that there is insufficient experience on which to assess the reasonableness of the current level of goals, given the relatively short period of time that has passed since the current goals were first established.

Mr. James D. Bradford, on behalf of EEBC, recommends maintaining the current goals for 2015 and 2016, setting the goal for 2017 at the 2016 level and then increasing that goal by 10 percent in 2018, and maintaining the 2018 goal through 2019 and 2020.

Sierra Club’s witness, Mr. Tim Woolf (on page 55, line 10-11 of his Answer Testimony), suggests that the Commission reject the Company’s proposed energy efficiency goals and instead require a reduction in electric sales of 1.4 percent in 2015 escalating over time to 2.0 percent in 2020. Sierra Club’s proposed alternative goal represents inclusion of savings from unidentified emerging technologies, behavioral programs, and LED street lighting.

On the other side of the spectrum is the OCC, whose witness, Mr. Chris Neil, recommends approval of energy savings goals that are considerably below the goals that the Company is recommending in this proceeding, in order to temper the rate impacts of DSM that will result from

the reduction in avoided costs. Mr. Neil suggests, on page 31 of his Answer Testimony, that proposed energy savings goals should remain at levels that results in rate impacts in the range of $50 to $70 million per year, from 2015 through 2020.

The CEC, whose witness is Mr. Kevin Higgins, supports the Company's recommendation that energy savings goals be scaled back beginning in 2015 from what was approved in Docket No. 10A-554EG. However, CEC believes that our goals should be tempered somewhat more than what we have recommended by capping the sum total of program expenditures, performance incentives, and disincentive offsets at a level of 4.0 percent of overall retail rates.

**Q. HAVE YOU PREPARED A TABLE SHOWING HOW THE INTERVENORS PROPOSED GOALS COMPARE TO THE GOALS RECOMMENDED BY THE COMPANY FOR EACH YEAR FROM 2015 THROUGH 2020?**

A. Yes. Table DLS-1 below presents such a comparison.

## Table DLS-1: Comparison of Proposed Electric Energy Savings Goals

| (GWh) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Cumulative 2015-2020 |
|---|---|---|---|---|---|---|---|
| ***Sierra Club Goals*** | | | | | | | |
| EE | 427 | 467 | 506 | 544 | 582 | 621 | 3147 |
| DVO | 50 | 101 | 101 | 102 | 102 | 51 | 506 |
| **TOTAL** | **477** | **568** | **607** | **646** | **684** | **672** | **3653** |
| ***SWEEP Goals***[4] | | | | | | | |
| EE | 445 | 463 | 481 | 471 | 514 | 529 | 2903 |
| DVO | 50 | 101 | 101 | 102 | 102 | 51 | 506 |
| **TOTAL** | **495** | **564** | **582** | **573** | **616** | **580** | **3410** |
| ***CoPUC Staff Goals***[5] | | | | | | | |
| EE | 411 | 441 | 472 | 504 | 537 | 549 | 2914 |
| DVO | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **411** | **441** | **472** | **504** | **537** | **549** | **2914** |
| ***EEBC Goals***[6] | | | | | | | |
| EE | 411 | 441 | 441 | 485 | 485 | 485 | 2748 |
| DVO | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **411** | **441** | **441** | **485** | **485** | **485** | **2748** |
| ***PSCo Goals*** | | | | | | | |
| EE | 349 | 321 | 322 | 288 | 288 | 276 | 1842 |
| DVO | 50 | 101 | 101 | 102 | 102 | 51 | 506 |
| **TOTAL** | **399** | **422** | **423** | **389** | **389** | **327** | **2349** |
| ***CEC Goals***[7] | | | | | | | |
| EE | 400 | 315 | 305 | 282 | 245 | 260 | 1807 |
| DVO | 50 | 101 | 101 | 102 | 102 | 51 | 506 |
| **TOTAL** | **450** | **416** | **406** | **384** | **347** | **311** | **2313** |
| ***PSCo Moderate Goals*** | | | | | | | |
| EE | 317 | 292 | 288 | 252 | 268 | 254 | 1669 |
| DVO | 50 | 101 | 101 | 102 | 102 | 51 | 506 |
| **TOTAL** | **367** | **393** | **389** | **353** | **369** | **305** | **2176** |
| ***OCC Goals***[8] | | | | | | | |

[4] SWEEP's goals are based on applying the same method of achievable potential as has been utilized in Docket No. 10A-554EG (71 percentl of economic potential) to the 2013 Potential Study for Traditional Energy Efficiency. The goals shown here are not a direct match to the content in the table on page 23 of Mr. Geller's Answer Testimony because he did not include the savings resulting from LED Street Lighting, Behavioral products, and emerging technologies.

[5] Staff indicated a desire to maintain goals set in 10A-554EG (on page 17 of Ms. Ackermann's Answer Testimony).

[6] EEBC's goals are based on the proposal stated on page 28 of Mr. Bradford's testimony as well as the clarification provided in EEBC's response to PSCo1-6 (b).

[7] CEC's goals are based on their suggestion to cap the sum of total program expenditures, performance incentives, and disincentive offset at 4.0 percent of overall retail rates, declining to 3.0 percent by 2020 (page 4 of Mr. Higgin's Answer Testimony).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| EE | 130 | 144 | 121 | 120 | 124 | 121 | 760 |
| DVO | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **130** | **144** | **121** | **120** | **124** | **121** | **760** |

As shown in Table DLS-1 above, the energy savings goals that the Company is proposing in this proceeding are a "middle-ground" in terms of the range of goals suggested by other parties. The Company's cumulative 2015-2020 goals are very close to both the mathematical mean and median of the proposed values.

**Q. HAVE YOU ALSO PERFORMED AN ANALYSIS COMPARING THE DSM COSTS AND EXPECTED NET ECONOMIC BENEFITS AND RELATIVE RATE IMPACTS OVER THE RANGE OF GOALS PROPOSED BY THE INTERVENORS IN THIS PROCEEDING?**

A. Yes. Table DLS-2 below compares the costs of achieving energy savings, net economic benefits, and rate impacts if the Commission were to approve the Company's recommended electric energy savings goals with the net economic benefits and rate impacts expected from goals at the levels recommended by the various Intervenors. This table also presents the net economic benefits and rate impacts associated with the "moderate" scenario developed by the Company under which we would restructure our portfolio to lower the rate impacts while maintaining our energy savings goals at levels that are only somewhat below the levels recommended in this proceeding.

[8] OCC's goals are based on limiting the rate impact of DSM overall to a 2012 value, in the range of $50M to $70M in rate increases, (stated on page. 31 of Mr. Neil's Answer Testimony).

## Table DLS-2: Cost of Achievement, RIM Net Benefits for Proposed Goal Scenarios

| ($M) | 2015 Spend | 2015 RIM Net Bens | 2016 Spend | 2016 RIM Net Bens | 2017 Spend | 2017 RIM Net Bens | 2018 Spend | 2018 RIM Net Bens | 2019 Spend | 2019 RIM Net Bens | 2020 Spend | 2020 RIM Net Bens | Total 2015-2020 Spend | Total 2015-2020 RIM Net Benefits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *SWEEP Goals* | | | | | | | | | | | | | | |
| EE | $146 | -$341 | $157 | -$320 | $156 | -$360 | $148 | -$356 | $173 | -$392 | $178 | -$413 | **$957** | **-$2,182** |
| DVO | $9 | -$59 | $18 | -$115 | $18 | -$114 | $18 | -$114 | $18 | -$114 | $9 | -$57 | **$90** | **-$572** |
| TOTAL | **$155** | **-$400** | **$175** | **-$435** | **$174** | **-$474** | **165** | **-$470** | **$191** | **-$506** | **$187** | **-$470** | $1047 | **-$2,754** |
| *CoPUC Staff Goals* | | | | | | | | | | | | | | |
| EE | $135 | -$315 | $150 | -$304 | $153 | -$353 | $158 | -$381 | $181 | -$409 | $185 | -$428 | **$960** | **-$2,192** |
| DVO | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | **$0** | **$0** |
| TOTAL | **$135** | **-$315** | **$150** | **-$304** | **$153** | **-$353** | **$158** | **-$381** | **$181** | **-$409** | **$185** | **-$428** | **$960** | **-$2,192** |
| *Sierra Club Goals* | | | | | | | | | | | | | | |
| EE | $140 | -$327 | $159 | -$322 | $164 | -$379 | $170 | -$411 | $196 | -$444 | $209 | -$485 | **$1037** | **-$2,368** |
| DVO | $9 | -$59 | $18 | -$115 | $18 | -$114 | 18 | -$114 | 18 | -$114 | 9 | -$57 | **90** | **-$572** |
| TOTAL | **$149** | **-$386** | **$176** | **-$437** | **$182** | **-$493** | **$188** | **-$525** | **$214** | **-$557** | **$218** | **-$542** | **$1127** | **-$2,940** |
| *EEBC Goals* | | | | | | | | | | | | | | |
| EE Subtotal | $135 | -$315 | $150 | -$304 | $143 | -$330 | $152 | -$367 | $163 | -$370 | $163 | -$379 | **$905** | **-$2,065** |
| DVO | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | **$0** | **$0** |
| TOTAL | **$135** | **-315** | **$150** | **-304** | **$143** | **-$330** | **$152** | **-$367** | **$163** | **-$370** | **$163** | **-$379** | **$905** | **-$2,065** |
| *PSCo Goals* | | | | | | | | | | | | | | |
| EE | $73 | -$232 | $71 | -$191 | $68 | -$221 | $60 | -$202 | $64 | -$197 | $61 | -$193 | **$399** | **-$1,235** |
| DVO | $9 | -$59 | $18 | -$115 | $18 | -$114 | $18 | -$114 | $18 | -$114 | $9 | -$57 | **$90** | **-$572** |
| TOTAL | **$82** | **-$291** | **$89** | **-$306** | **$86** | **-$335** | **$78** | **-$315** | **$82** | **-$311** | **$71** | **-$250** | **$488** | **-$1,808** |
| *CEC Goals* | | | | | | | | | | | | | | |
| EE Subtotal | $83 | -$265 | $69 | -$187 | $64 | -$208 | $58 | -$197 | $54 | -$167 | $57 | -$181 | **$384** | **-$1,204** |
| DVO | $9 | -$59 | $18 | -$115 | $18 | -$114 | $18 | -$114 | $18 | -$114 | $9 | -$57 | **$90** | **-$572** |
| TOTAL | **$92** | **-$323** | **$87** | **-$302** | **$82** | **-$323** | **$76** | **$-310** | **$72** | **-$281** | **$66** | **-$238** | **$474** | **-$1,777** |
| *PSCo Moderate Goals* | | | | | | | | | | | | | | |
| EE | $66 | -$210 | $64 | -$173 | $60 | -$197 | $52 | -$175 | $59 | -$183 | $55 | -$176 | **$355** | **-$1,113** |
| DVO | $9 | -$59 | $18 | -$115 | $18 | -$114 | $18 | -$114 | $18 | -$114 | $9 | -$57 | **$90** | **- -$572** |
| TOTAL | **$75** | **-$269** | **$82** | **-$288** | **$78** | **-$311** | **$70** | **-$289** | **$77** | **-$296** | **$65** | **-$233** | **$445** | **-$1,686** |
| *OCC Goals* | | | | | | | | | | | | | | |
| EE | $22 | -$80 | $25 | -$80 | $20 | -$80 | $19 | -$80 | $20 | -$80 | $19 | -$80 | **$124** | **-$480** |
| DVO | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | $0 | N/A | **$0** | **$0** |
| TOTAL | **$22** | **-$80** | **$25** | **-$80** | **$20** | **-$80** | **$19** | **-$80** | **$20** | **-$80** | **$19** | **-$80** | **$124** | **-$480** |

Mr. Petersen has performed a detailed analysis of the likely impacts of the reduction of avoided costs under several scenarios: 1) three "high scenarios" proposed by SWEEP, Sierra Club, and EEBC, 2) a "stay the course" scenario advocated for by Staff to maintain the goals established in Docket No. 10A-554EG, 3) the Company's originally filed Application, 4) two "low scenarios" proposed by CEC and the OCC, and 5) a "moderate" scenario meant to reduce rate impacts based on adjusted avoided costs.

**Q. WHAT IS THE BASIS OF YOUR ESTIMATE OF THE COSTS TO ACHIEVE THE DIFFERING LEVELS OF ENERGY SAVINGS GOALS REFLECTED IN THE ABOVE TABLE?**

A. As I stated earlier, in response to feedback from parties such as SWEEP, CEC, OCC, and others that the estimated costs of achieving various levels of energy efficiency savings are too high, the Company has reevaluated these estimates based on our past performance. The costs identified above reflect a 40 percent reduction from the cost estimates used by KEMA that we relied upon in our Direct Testimony. The 40 percent reduction in estimated programs costs at the different levels of targeted energy efficiency savings is commensurate with the level of costs the Company has incurred historically as compared to the costs that had been estimated by the 2009 Potential Study. Thus, for example, our estimate of the costs we will incur to achieve our proposed level of energy efficiency savings in 2015 has been reduced from $121 million to $73 million. This compares to a cost of $146 million annually, developed on the same basis as the $73 million cost estimates for

the Company's original Application, which the Company believes would be required to achieve energy efficiency savings goals at the levels recommended by SWEEP for 2015.

**Q. WHAT ACCOUNTS FOR THE LARGE INCREASE IN EXPECTED PROGRAMS COSTS FROM ENERGY SAVINGS GOALS THE COMPANY HAS PROPOSED TO THE GOALS PROPOSED BY EEBC, STAFF, SWEEP AND SIERRA CLUB?**

A. The Company's proposed program cost estimates are based on paying our customers 75 percent of the incremental cost associated with installing a DSM measure. However once energy savings goals begin to approach the levels proposed by the referenced Intervenors, we believe that we would need to use the potential study scenario of paying 100 percent of incremental cost in order to achieve such levels. However, the Company also accounted for historical performance within its analysis to reduce the project cost of delivering DSM. Thus, the cost of achieving the goals proposed by the Intervenors are 33 percent higher in rebate spend per kWh of achievement than those estimated for the Company goals. The Company did reduce the program costs estimated by the 2013 Potential Study by 40 percent after a comparison of historical actual spend and achievement from 2010-2012, and the spend and achievement estimated by the 2009 Potential Study over the same 2010-2012 time period. This reduction was applied to all incentive scenarios in the estimation of program costs from 2015-2020 considered in this filing.

**Q. ARE THE BUDGET IMPLICATIONS AND RATEPAYER IMPACTS OF THE INTERVENORS' PROPOSED ALTERNATIVE GOAL SCENARIOS REASONABLE?**

A. No. While most of the Parties did not provide a proposed budget to correspond to their suggested DSM goals, the Company's estimates of the likely budget requirements to achieve the Intervenors' suggested goals are shown in Table DLS-2 above. It is telling that the Company's proposed budget represents a near average of the budget scenarios under the goals proposed by the Parties—with some larger variances in the farthest out-years (2019 and 2020). This analysis reinforces the Company's position that we have offered a balanced approach to our DSM portfolio within our original Application that is beneficial and fair for stakeholders, participants, and non-participants.

In addition to budget impacts, we also show in Table DLS-2 that the goals proposed by the Parties would have significantly higher ratepayer impacts as compared to the impacts of the Company's recommended goals.

**Q. WHAT CONCLUSION DO YOU DRAW FROM THE ANALYSIS PREPARED BY MR. PETERSEN?**

A The Company believes that the goals it has proposed associated with traditional energy efficiency appropriately reflect the achievable potential in Colorado for cost-effective DSM as identified by KEMA in the 2013 Potential Study, increased by 10 percent to capture unaccounted for opportunities out to 2020. As shown above, the Company's proposal also balances the

competing interests of the stakeholders in this proceeding by maintaining goals at the level of achievable potential, while holding ratepayer impacts at moderate levels. In contrast, with the declines in both market potential and avoided costs, electric energy efficiency savings goals at levels as high as those advocated by SWEEP, Sierra Club, Staff, and EEBC are not sustainable. For these reasons, we urge the Commission to approve our proposed goals for traditional energy efficiency as filed in our original Application.

**Q. DOES THE COMPANY VIEW THE RECENT REDUCTIONS IN AVOIDED COSTS AS BEING A PERMANENT CONDITION THAT WILL AFFECT ITS DELIVERY OF DSM AT LEAST THROUGH 2020?**

A. Not necessarily. The system benefits we realize from DSM will vary over time depending on a number of factors including the level of our resource need, changes in the economy, changes affecting the price of materials used to build generation assets, and the market for natural gas, among others. It has been our practice since 2009, when the current enhanced DSM Plan first took effect, to use the previously approved avoided cost methodology but to update the cost components each time we design a biennial or annual DSM Plan and to use such updated avoided costs for purposes of assessing the cost-effectiveness of our portfolio and for measuring net economic benefits at the conclusion of each plan year. With this proceeding, however, we have seen a change in the type of resource that our modeling shows as the avoided generation unit from DSM (from a CC to a CT) and relatively

dramatic reductions in the capacity cost per kW-month and marginal energy cost from what we have experienced in the past. If factors such as a booming economy were to impact our costs of capacity or if the price of natural gas increases, our avoided costs and the resulting system benefits from DSM could also change. The recent reductions in our avoided costs may be relatively short term, while the Company's investment in DSM resources should be considered with a long term view taking into consideration the importance of stability for the industry, consistent year to year spending for maintaining optimum program efficiency, and DSM's value as a resource. This is why we strongly urge the Commission to only consider changes to our avoided costs methodology for incremental resources and to continue to use the same methodology we have used in the past with respect to resources deployed at the time the prior methodology was in place.

*A. RESPONSE TO SWEEP, SIERRA CLUB, AND EEBC*

**Q. SWEEP IS CONCERNED ABOUT THE COMPANY'S RELIANCE ON THE ACHIEVABLE POTENTIAL IDENTIFIED BY KEMA AS THE BASIS FOR ITS RECOMMENDED GOALS RATHER THAN BASING ITS GOALS PROPOSAL ON A PERCENT OF ECONOMIC POTENTIAL AS IT DID IN DOCKET NO. 10A-554EG. WHAT JUSTIFIES THE SHIFT IN THE BASIS FOR THE COMPANY'S GOALS RECOMMENDATION?**

A. PSCo believes that the 2013 Potential Study, which considered the specific conditions in the Public Service service territory and relies on an escalation of future costs based on expected changes in potential, coupled with the

Company's use of Strategist modeling, provides the best measure available for indicating the costs necessary to achieve future goals in our service territory. Furthermore, to account for the historical over-performance discussed by SWEEP, the Company escalated the achievable potential indicated by the 2013 Potential Study by 10 percent, to develop the goals proposed for 2015-2020 (Petersen Direct p. 74 lines 11-20). In addition, the Company allotted additional achievement potential that is anticipated to result from unidentified emerging technologies in 2019 and 2020.

**Q. SWEEP AND OTHERS SUCH AS STAFF, EEBC, AND SIERRA CLUB ARGUE THAT THE COMPANY'S PROPOSED REDUCTION IN ITS ENERGY SAVINGS GOALS FROM TRADITIONAL ENERGY EFFICIENCY IS UNWARRANTED IN VIEW OF THE COMPANY'S PAST PERFORMANCE EXCEEDING THE COMMISSION APPROVED GOALS AND MANAGEMENT OF COSTS THAT WERE BELOW BUDGETED LEVELS. WHAT IS YOUR RESPONSE?**

A. First, it is very important to understand that the early years of our program have presented opportunities to obtain energy efficiency savings that most would agree could be characterized as "low-hanging fruit." Early adopters are often those most interested in energy conservation for its own sake and are willing to make the decision to install an energy-efficiency measure based on a rebate that represents a lower percentage of incremental cost than will a later adopter. In addition, in the past there was far less impact from market transformation activities and changes in codes and standards on the overall

potential for DSM, meaning that the Company had the ability to take credit for a greater level of savings than it can today. Moreover, as I detailed in my Direct Testimony, the erosion in energy efficiency savings potential from lighting measures, among the strongest performers in our portfolio over the last few years, on account of the changes in codes and standards established within the Energy Security and Independence Act ("EISA") of 2007, that began to be phased in starting in 2012 and taking full effect starting January 1, 2014, has significantly affected the Company's opportunities for achieving energy efficiency savings in Colorado. The Company estimates that 85.86 percent of bulbs in the Home Lighting & Recycling program will be impacted in 2014 as a result of EISA legislation.

*B. RESPONSE TO STAFF*

**Q. DO YOU AGREE WITH STAFF THAT THERE IS INSUFFICIENT EVIDENCE SHOWING THAT THE COMPANY WILL STRUGGLE TO REACH THE GOALS APPROVED IN DOCKET NO. 10A-554EG AND JUSTIFYING ANY REDUCTION IN THOSE GOALS?**

A. No. While I agree that up to this point the Company has been successful in meeting and exceeding the Commission established energy efficiency savings goals, my Direct Testimony demonstrates the challenges the Company is facing today to deliver the same level of cost-effective energy efficiency savings as it has in the past. Specifically, I showed that the expected energy efficiency savings from residential lighting which has been a huge contributor to our ability to exceed our Commission approved goals in

the past are no longer available to us on account of codes and standards changes that are beyond our control.

**Q. STAFF ALSO STATED ITS CONCERN THAT IF GOALS ARE SET TOO LOW THERE MAY BE A DISCONNECT BETWEEN THE APPROVED GOAL AND THE INTENDED PURPOSE OF THE PERFORMANCE INCENTIVE MECHANISM WHICH STAFF CHARACTERIZES AS "TO INCENT THE COMPANY TO AGGRESSIVELY PURSUE ALL COST-EFFECTIVE DSM, WHILE TEMPERING THE INCENTIVE PACKAGE SO THAT IT DOES NOT RAISE RATES MORE THAN NECESSARY IF THE GOALS ARE TOO LOW." WHAT IS YOUR REACTION TO STAFF'S CONCERN?**

A. Both Mr. Brockett and I agree with Staff that the incentive mechanism needs to be appropriately calibrated to the Commission approved goals so as to provide an adequate incentive for the Company to meet and exceed the approved goal. Here, however, as Mr. Brockett details in his testimony, the reduction in avoided costs and the resulting decrease in the level of net economic benefits that can be realized has greatly diminished the Company's opportunity for incentives even at the lower goal levels the Company is recommending in this proceeding. As shown in Mr. Petersen's analysis, with the Company's reassessment of its avoided costs, the expected level of net economic benefits to be achieved in 2015 has been cut by approximately 50 percent to $156 million (down from $302.5 million as estimated when we filed

our original application).[9] Given that significant change, without recalibration of the incentive mechanism as Mr. Brockett proposes in his Rebuttal Testimony, the Company is at risk of facing a significant disincentive to meet the goals proposed by the Company in this proceeding. Moreover, C.R.S. § 40-3.2-104(5) requires the Commission "to allow an opportunity for a utility's investments in DSM to be more profitable than any other utility investment that is not subject to special incentives." Staff's recommendation was made prior to the Company's adjustments to its avoided costs and does not take into account the effect on the Company's performance incentive.

*C. RESPONSE TO OCC*

**Q. OCC HAS DEVELOPED A PROPOSED PLAN FOR REDUCING THE COMPANY'S DSM PROGRAM THAT IT BELIEVES WILL ALSO REDUCE THE RATE IMPACT OF THE PROGRAM. IS THE APPROACH TAKEN BY MR. NEIL A REASONABLE APPROACH TO REDUCING RATEPAYER IMPACTS?**

A. No it is not. The OCC's proposed approach to reducing ratepayer impacts is based on reducing the overall DSM budget by cutting or cutting-back expenditures on programs with relatively low MTRC ratios, of less than 1.40 (page 34, line 5 of Mr. Neil's Answer Testimony). However, the MTRC ratio is

[9] The net benefits indicated are those resulting under the current incentive mechanism which utilizes the Modified TRC without Adder.

not a direct measure of ratepayer impact. Thus, while Mr. Neil's proposed budget cuts (for 2014, shown in Table 6 on page 33 of Mr. Neil's Answer Testimony) results in a 21.6 percent budget reduction (page 34, line 15 of Mr. Neil's Answer Testimony); he has not recognized that our program cost is only a small factor in reducing rate impact. Because the avoided costs of DSM have declined, reducing energy efficiency savings goals is the most direct way to reduce rate impacts.

**Q. HAS THE COMPANY EVALUATED WHAT THE DSM PORTFOLIO WOULD NEED TO LOOK LIKE IN ORDER TO MODERATE RATE IMPACTS AS MR. NEIL RECOMMENDED?**

A. In order to adopt the OCC's suggestion to dramatically reduce the level of rate impacts from DSM, the Company would need to significantly restructure our DSM portfolios to offer much less residential DSM—the part of the portfolio where cost-effectiveness is weakest and resulting system benefits tend to be lowest—and focus more on the commercial and industrial sector DSM—the part of the portfolio where there is a much higher coincidence between DSM and our system peak. Mr. Neil himself acknowledges that "it would be best to perform a full analysis of each program so that the specific mix of energy and capacity can be determined using new avoided costs."[10] Indeed he is correct that analysis must be performed to determine that "best mix" of products to both achieve the Commission-ordered goal and simultaneously reduce rate-payer impacts. The Company has conducted this analysis by reviewing our products' RIM score as a primary indicator of rate

impact and net benefits as a secondary indicator. In order to yield a significant reduction in rate impacts, the Company would need to wholly or partially cut DSM products offered within the residential program. The reason for this is that reducing rate impacts means targeting the most energy-intense products with low coincidence factors and poor RIM values, which are largely residential products.

**Q. WHAT ARE THE CONSEQUENCES OF THIS APPROACH?**

A. The primary consequence of cutting back DSM products for the purpose of reducing rate impacts is that the residential program will tend to exclude those products that while energy intensive do not save energy at times coincident with our system peak. This results in the commercial and industrial customers being a larger focus of the Company's energy efficiency portfolio. Under the Company's proposed "moderate" scenario, we were able to maintain the most critical and high performing residential products to ensure that all customer classes still have the opportunity to participate in DSM.

## VII. DISTRIBUTION VOLTAGE OPTIMIZATION

**Q. WHICH PARTIES SUPPORT THE COMPANY'S PROPOSAL TO INCLUDE DVO AS A DSM MEASURE?**

A. SWEEP, Sierra Club, WRA, and CEC support DVO as a DSM measure.

SWEEP (within the Answer Testimony of Howard Geller, page 30-31) supported adding DVO to the Company's DSM portfolio during 2015-2020, noting that DVO is "sound technically" and "highly equitable."

[10] Mr. Neil's Answer Testimony for OCC, page 34, lines 2-3.

Sierra Club (within the Answer Testimony of Mr. Woolf, page 32) describes the benefits of DVO as an energy efficiency program for customer's bills and reducing rate impacts from DSM. He further notes that DVO is "cost-effective and in the public interest."[11]

WRA (within the Answer Testimony of Mr. Wilson), advocates that DVO should be embraced as DSM given that the technology has been proven and that "all customer classes will save money on their electric bill…[and] reduced energy and demand requirements can save customers money by delaying the need for additional generation."[12]

CEC (within the Answer Testimony of Mr. Higgins, page 16) acknowledges that DVO warrants an exception and should support the company's energy efficiency savings goal.

**Q. DO SOME OF THE PARTIES HAVE CONCERNS REGARDING DVO AS A DSM MEASURE?**

A. Yes. Staff, City of Boulder, and CEO have concerns regarding the inclusion of DVO as a DSM measure; however, none of these Intervenors has questioned the technical merit of DVO in delivering energy efficiency savings benefits. These Intervenors suggested that the Company should pursue DVO outside of DSM.

The concern expressed by Staff (within Ms. Ackermann's Answer Testimony, pages 23-24) with regard to DVO is that customers are not given an option as to whether or not to participate.

[11] Answer Testimony of Mr. Woolf, Sierra Club, pg. 55.
[12] Answer Testimony of Mr. Wilson, WRA, pg. 6.

The City of Boulder (within the Answer Testimony of Ms. Crandall, page 13) expressed concern that DSM funds allocated to DVO may take away from investments in other DSM products and that the significant investment in DVO would require the Company to obtain a CPCN. Ms. Bloch responds to the City's suggestion that the Company be required to file a CPCN.

While CEO acknowledged (within the Answer Testimony of Mr. Worley, (pages 2-3) that DVO was innovative and should be pursued, it also stated that DVO "stretches the idea of DSM."

**Q. CEO AND STAFF HAVE ARGUED FOR THE EXCLUSION OF DVO FROM THE COMPANY'S DSM PORTFOLIO BECAUSE DVO IS AN INVESTMENT MADE ON THE UTILITY-SIDE OF THE METER. PLEASE EXPLAIN HOW DVO IS DIFFERENT?**

A. While it is true that DVO is a project where the investment is made on the utility-side of the meter, as stated above and shown through studies by DOE and others, the majority of the savings from DVO occur on the customer-side of the meter.

**Q. DOES THE COMPANY HAVE THE SAME INTERPRETATION OF C.R.S. §§ 40-3.2-104(4) AS STAFF, REGARDING DVO NOT MEETING STATUTORY REQUIREMENTS FOR DSM?**

A. No. As stated on page 24 of Ms. Ackermann's Answer Testimony, Staff has interpreted statutory requirement that "[t]he commission shall ensure that utilities develop and implement DSM programs that give all classes of

customers an opportunity to participate" as limiting what can be considered DSM to be only programs where there is in fact an *option* to participate or not. The Company disagrees with this interpretation and believes DVO comports with this requirement because it ensures that all customer classes realize direct benefits in the form of energy savings which is what the Company believes the legislature intended.

**Q. SIERRA CLUB'S POSITION IS THAT ENERGY EFFICIENCY SAVINGS FROM THE IMPLEMENTATION OF DVO SHOULD NOT BE INCLUDED IN THE ASSESSMENT OF WHETHER THE COMPANY HAS MET ITS ENERGY EFFICIENCY SAVINGS GOAL. ARE ENERGY SAVINGS FROM THE DVO ANY DIFFERENT FROM ENERGY SAVINGS FROM OTHER DSM MEASURES?**

A. No. As has been stated above savings from DVO occur on the customer side of the meter just like traditional DSM programs.

**Q. STAFF AND THE CEC HAVE CHARACTERIZED OUR PROPOSED DVO IMPLEMENTATION TO BE LIKE UPDATES THAT ARE MADE TO OUR DISTRIBUTION SYSTEM IN THE ORDINARY COURSE OF BUSINESS TO ARGUE AGAINST INCLUSION OF DVO IN THE DSM PROGRAM AND ARGUE FOR COST RECOVERY THROUGH BASE RATES. DO YOU AGREE?**

A. No. While capacitors are added to the distribution system regularly to correct power factor, that is not the purpose of the DVO program. DVO is about installing capacitors and other devices that allow the company to optimize

system voltage year round for the purpose of reducing customer energy consumption. While most of the equipment used is similar to equipment we would install in the ordinary course of maintaining our electric distribution system, in the case of DVO we are not using the new equipment principally to maintain the reliability of our distribution system, but rather to lower energy consumption on the customer's side of the meter.

**Q. IS THERE ANY ADDITIONAL INFORMATION THAT THE COMMISSION SHOULD CONSIDER WHEN EVALUATING DVO AS A DSM MEASURE BEYOND THE REASONING PROVIDED WITHIN THE COMPANY'S DIRECT TESTIMONY?**

A. Yes. In November 2012, the National Association of Regulatory Utility Commissioners ("NARUC") issued "EL-2 / ERE-3 Resolution Supporting the Rapid Deployment of Voltage Optimization Technologies."[13] This resolution clearly supports the treatment of deployment of voltage optimization technologies as an energy efficiency resource that utilities can utilize to accelerate achievement of energy efficiency savings goals. Furthermore, the resolution states that, "improvements are immediately reflected on consumers' electric meters and reduce their electric bills," and that the "technology investment is cost-effective from a ratepayer perspective." Not only does NARUC support treatment of DVO as DSM within this resolution, but also encourages state commissions to enable utility cost recovery in order

13 NARUC, "EL-2/ERE-3Resolution Supporting the Rapid Deployment of Voltage Optimization Technologies," November 2012. Available: http://naruc.org/Resolutions/Resolution percentl20Supporting percentl20the percentl20Rapid percentl20Deployment percentl20of percentl20Voltage percentl20Optimization percentl20Technologies.pdf.

to overcome disincentives to DVO investment that may be delaying the technology's deployment.

**Q. HOW DO THE BENEFITS OF DVO MITIGATE THE OVERALL RATE IMPACT OF THE PROGRAM?**

A. DVO results in energy savings benefits that directly yield bill reductions for all customers served by the facilities for which voltage has been optimized. Accordingly when our voltage optimization work is completed, the rate impact of DVO will be mitigated by the resulting customer bill savings.

**Q. WHAT OPTION DOES THE COMMISSION HAVE IF IT IS CONCERNED ABOUT THE RISING RATE IMPACT OF DVO GIVEN THE RECENT REDUCTION IN AVOIDED COSTS?**

A. While we continue to believe that our DVO proposal is an important means of enabling us to continue to strive to meet higher energy efficiency savings goals than if we were to continue to rely exclusively on traditional energy efficiency, there are two options for mitigating the rate impact of DVO during this time when the customer benefits associated with DVO are at relatively low levels due to lower gas prices. First, we could spread our investment in DVO out over a period of seven years, instead of five years as initially proposed. Alternatively, the Commission could delay approval of DVO investment until such time gas prices increase resulting in greater customer bill savings from DVO making the already cost-effective measure even more effective in terms of energy savings.

Additional discussion of the technical merits of DVO can be found in the Rebuttal Testimony of Kelly Bloch.

**Q. WHAT LEVEL OF ENERGY SAVINGS GOALS SHOULD BE APPROVED IF THE COMMISSION DOES NOT APPROVE THE DVO PROGRAM?**

A. If we are not authorized to go forward with DVO as a DSM program in this proceeding, we proposed that our energy savings goals be limited to those we have identified associated with our traditional and behavioral energy efficiency initiatives.

## VIII. BEHAVIORAL PRODUCTS

**Q. DO THE PARTIES SUPPORT THE COMPANY'S PROPOSED BEHAVIORAL PROGRAM?**

A. SWEEP, Sierra Club, EEBC, and Opower support the Company's proposed behavioral program. The OCC (Mr. Neil, pg. 46) provided partial support for the program—being amenable to delivery for the residential segment, but not the business segment, because of a stronger MTRC for the residential programs. Staff did not take a position, citing a lack of evidence for a best methodology for savings M&V.

**Q. DID ANY OF THE PARTIES OPPOSE THE COMPANY'S BEHAVIORAL PROGRAM?**

A. CEC (page 23, lines 1-17) was the only Intervenor to oppose the proposed program, citing concerns regarding savings calculations and the Company's incentive.

**Q. HAS THE COMPANY PROPOSED A ROBUST METHODOLOGY FOR BEHAVIORAL SAVINGS CALCULATIONS?**

A. Yes. The Company proposes to claim energy savings using a comparison of a participation group against a control group—only those savings that are proven through this method are claimed. Only verified energy savings are credited, ex-post measurement. The Company has proposed a conservative energy savings persistence of only one year, and claiming only 1/3 of the total savings. In addition, Opower's methodology has been independently evaluated more than two dozen times;[14] and leverages the State and Local Energy Efficiency Action Network's ("SEE Action's") study on "Evaluation, Measurement, and Verification of Residential Behavior-Based Energy Efficiency Programs" for evaluation planning.

In 2013, the Company has commissioned an independent M&V evaluation of all three years of results from our Minnesota Energy Feedback program. The (near-final) results fully support all of the savings claims made by the Company for this program; and where slight variations were found, they resulted in higher savings than what was initially claimed. The evaluation results are expected to be finalized by Dec. 31, 2013. Also, in New Mexico, the Company's evaluator performs an annual savings verification of all of the Company's DSM programs, including Energy Feedback. Because all of the Company's Energy Feedback pilots/programs

[14] Opower White Paper No. 09, "Unlocking the Potential of Behavioral Energy Efficiency Economic Potential of Residential Behavioral Energy Efficiency in the U.S.," page 5. Available: http://www2.opower.com/potential.

use this identical, rigorous methodology, and because these results mirror the findings of other M&V studies performed across the country, the Company does not consider it prudent to perform additional M&V validation in Colorado at this time.

Furthermore, Opower's Home Energy Report services are being used by more than 80 other electric and natural gas utilities in the U.S. in 30 states.[15] For example, in November 2013, at SWEEP's Annual Workshop,[16] the following utilities noted their expansion of use of these reports to claim energy savings:

- Arizona Public Service ("APS") delivering Home Energy Reports to 77,900 homes;
- Public Service of New Mexico ("PNM") delivering Home Energy Reports to 50,000 homes; and
- Tucson Electric Power ("TEP") delivering Home Energy Reports to 40,000 homes.

**Q. WHAT OTHER SUGGESTIONS HAVE THE PARTIES MADE WITH REGARD TO THE COMPANY'S PROPOSED BEHAVIORAL PROGRAM?**

A. EEBC, Opower, and SWEEP suggested further opportunities to expand the Company's proposed behavioral DSM program. EEBC (Mr. Kloster-Prew's Answer Testimony, page 17, lines 1-8) advocates that the Company expand

[15] Ms. Genasci's Answer Testimony, page 2, line 9.
[16] Presentations delivered at SWEEP's 10th Annual Southwest Regional Energy Efficiency Workshop. Available: http://swenergy.org/events/annual/2013/index.html.

behavioral DSM products across different platforms[17] and work with different vendors. Opower (Answer Testimony of Ms. Genasci, page 11) believes that the 2013 Potential Study may have undervalued the energy savings potential of behavioral programs by overstating the impact of changing efficiency standards (for lighting and HVAC). SWEEP (Mr. Geller's Answer Testimony, page 35, lines 6-7) suggests that additional households could receive the Home Energy Reports. SWEEP (Mr. Geller's Answer Testimony, page 36, lines 3-6) also suggests that the Company implement other types of behavior-oriented programs for its commercial and industrial customers such as Strategic Energy Management ("SEM") programs.

**Q. DOES THE COMPANY OFFER BEHAVIOR-ORIENTED PROGRAMS TO C&I CUSTOMERS?**

A. Yes. The Company offers a Process Efficiency product that includes the majority of incentive components identified by E-Source as SEM [Source: http://www.esource.com/members/DSM-F-3/Focus-Report/SEM]. E-Source notes in their study, *Strategic Energy Management Programs: Tapping Large Customers for Deep and Continuous Energy Savings*, completed in September 2013, that the SEM approach is not yet widespread and that program administrators don't need to offer every single incentive to have a full-fledged SEM program. E-Source identified only 13 other SEM programs in North America in total.

[17] The Company has not addressed EEBC's suggestion regarding expansion of behavioral programs because they did not indicate what was meant by "expanded platforms."

**Q. HOW HAS THE COMPANY IDENTIFIED VENDORS FOR THE BEHAVIORAL PILOTS AND PROGRAMS?**

A. All of the Company's behavioral offerings are developed and managed internally. The Company contracts with third-parties to administer or operate the products where it makes business sense to do so. In 2009, the Company conducted a market scan of energy feedback behavioral providers that could offer a robust measurement and verification ("M&V") approach, and at that time, it was determined that there was only one viable vendor. In April 2013, the Company issued a competitive RFP for the Business Energy Feedback pilot to evaluate vendors that would be available to address this new market segment. The Company felt confident that if a new vendor was selected it would not negatively impact the customer experience for this market segment since they had not previously received energy feedback reports. Ultimately, the Company chose the services of the vendor providing Residential Energy Feedback pilot services to also serve the small/medium business market. As other opportunities arise with behavioral programs, the Company will review the capabilities of both the current vendor and other vendors, and may contract with one or multiple vendors for behavioral products through solicitations, where it makes business sense to do so. To be successful in engaging customers in ongoing energy feedback driven by behavior change, the Company's current Behavioral pilots require a consistent customer experience across a variety of online, social and print channels over time. In addition, set-up for software and reports, necessary customer data transfers,

and privacy guarantees are required to offer these services and each requires considerable time and resources. Therefore, it should be expected that the Company would not change vendors frequently.

## IX. LED STREET LIGHTING

**Q. PLEASE SUMMARIZE WHAT PUBLIC SERVICE REQUESTED OF THE COMISSION REGARDING LED STREET LIGHTING.**

A. The Company requested Commission approval of an LED Street Lighting energy efficiency 'concept' for Company-owned lights with customers responsible for funding the majority of costs to upgrade and replace street lights, in addition to paying for the monthly energy consumption from the lights.

If the Commission approved the concept as eligible within DSM, the Company would file a detailed product plan in either a future DSM filing or 60-Day Notice. At the same time as filing these details, the Company will file any necessary tariff changes to its street lighting tariffs to reflect the effect of the Commission's decision.

**Q. WHICH PARTIES SUPPORTED THE COMPANY'S LED STREET LIGHTING REQUEST?**

A. SWEEP, CEC, and the OCC provided support of the LED Street Lighting concept proposed by the Company. The City of Boulder was also supportive but requested the Company consider changes to the LED Street Lighting concept.

SWEEP supports LED Street Lighting as a concept and encourages the Commission to direct the Company to provide full details including budget, energy savings, and other typical data in a future DSM filing. CEC states it supports this concept as long as the eventual customer offering is cost effective. The OCC stated that LED Street Lighting appears acceptable as a DSM program.

**Q. DID ANY PARTIES HAVE CONCERN REGARDING THE REQUEST TO CONSIDER LED STREET LIGHTING AS DSM IN ORDER TO FILE A FUTURE PROGRAM? IF YES, PLEASE SUMMARIZE EACH PARTY'S COMMENTS.**

A. Yes. Staff opposed full inclusion of LED Street Lighting in this proceeding. The City of Boulder, while supportive of the request, suggested the Company consider an alternative design in a future LED Street Lighting DSM offering.

Staff identified three overall concerns with the LED Street Lighting concept proposed by the Company.

1. It was unclear whether the Company or customer would initiate participation in this product and whether the customer would have the choice to participate or not.
2. Because of the unique characteristics of this non-traditional product, it would not be appropriate for the Company to file a future program through the 60-Day Notice process. The Company should file an application with an advice letter so the product could be fully vetted by the Commission and parties.

3. Staff believes the Company did not provide sufficient data for the Commission to make a determination in this proceeding. Specifically, the Company did not provide proposed language to street light tariff sheets in the instant application.

The City of Boulder is supportive of the LED Street Lighting product concept but would like an opportunity to evaluate a fully-developed product in a future DSM Plan or during the 60-Day Notice process. The City suggested the Company consider an upfront discount on the LED lights and fixtures, since equipment will be purchased from the Company, instead of a post-installation rebate as is common with Company DSM products.

*A. RESPONSE TO STAFF*

**Q. REGARDING STAFF'S FIRST CONCERN, WILL CUSTOMERS HAVE THE OPPORTUNITY TO CHOOSE TO PARTICIPATE IN A FUTURE LED STREET LIGHTING DSM PRODUCT?**

A. Yes. Our intention is to develop a product offering that will give customers the choice to participate or not. In that respect, the new product will be very similar to all other DSM products that are available to customers and it is their choice to make the energy efficiency upgrade required to participate.

**Q. REGARDING STAFF'S SECOND CONCERN, WHAT IS THE COMPANY'S RESPONSE TO STAFF'S REQUEST TO ONLY FILE A FUTURE LED STREETING PRODUCT THROUGH AN APPLICATION AND NOT A 60-DAY NOTICE PROCESS?**

A. The Company is willing to file a future LED Street Lighting product through a future DSM application, such as the 2015/16 Biennial DSM Plan. The Company understands Staff's concern, which was also stated by the City of Boulder, that this is a unique, non-traditional offering that may be better suited to be included in a future DSM Plan application instead of a 60-Day Notice. Thus, the Company plans to accommodate this request.

**Q. REGARDING STAFF'S THIRD CONCERN OF INSUFFICIENT DATA, DOES THE COMPANY BELIEVE IT PROVIDED ENOUGH DATA FOR THE COMMISSION TO MAKE A DECISION RESPONDING TO PUBLIC SERVICE'S REQUEST?**

A. Yes, based on what the Company was specifically requesting in this application compared to additional information in a future filing or application.

**Q. PLEASE RESTATE THE COMPANY'S REQUEST OF THE COMMISSION REGARDING THE LED STREET LIGHTING CONCEPT IN THIS APPLICATION.**

A. The Company brought forward the LED Street Lighting concept ("concept") because the customer and Company relationship would be unique compared to all existing Public Service DSM products. With all other programs, customers own and maintain their equipment. With this concept, Public

Service owns the equipment but customers pay the majority of maintenance, which includes equipment upgrades, in addition to the monthly energy bills.

The Company is not seeking approval in this application to begin the LED Street Lighting concept immediately after the Commission issues its decision (if it approves LED Street Lighting). Instead, we are seeking Commission approval that this split customer and Company relationship for LED street lights can be allowed within our DSM portfolio.

**Q. BASED ON THIS RESTATEMENT, DO YOU BELIEVE THE COMPANY PROVIDED ENOUGH DATA FOR THE COMMISSION?**

A. Yes. The Company is seeking Commission approval of this split customer and Company relationship as eligible for DSM for the purpose a future LED Street Lighting product. If the Commission approves this concept as DSM, the Company will include full details as it does with all DSM products so parties can assess its merits as a cost effective offering. My Direct Testimony also stated the Company will file any changes to the street lighting tariff sheets in the same filing we propose a fully developed LED Street Lighting product so parties could assess all detailed changes at the same time.

**Q. DO YOU HAVE ANY FURTHER CLARIFICATIONS YOU WOULD LIKE TO MAKE IF THE COMMISSION DECIDES TO NOT APPROVE THE LED LIGHTING CONCEPT AS ELIGIBLE FOR A FUTURE DSM PRODUCT?**

A. Yes. The Company's proposed energy efficiency savings goal included 12 GWh annual energy savings for a future LED Street Lighting product each year beginning in 2015 through 2019. If the Commission does not approve

inclusion of our LED Street Lighting concept for a future DSM product, the final approved energy savings goals for 2015 through 2019 should factor in a reduction of 12 GWh per year due to this exclusion.

*B. RESPONSE TO CITY OF BOULDER*

**Q. WHAT WERE THE TWO REQUESTS PROPOSED BY THE CITY OF BOULDER IN ITS ANSWER TESTIMONY?**

A. The City of Boulder requested that a future LED Street Lighting DSM product be filed in a DSM Plan instead of a 60-Day Notice. The City also suggested the Company consider an upfront discount on LED lights and fixtures instead of a post-installation rebate as is common in most Public Service DSM products.

**Q. WHAT IS YOUR RESPONSE TO THE REQUEST TO NOT FILE A FUTURE LED STREET LIGHTING PRODUCT IN A 60 DAY NOTICE?**

A. As stated earlier in response to a similar request by Staff, the Company is willing to agree to filing a future LED Street Lighting product in a DSM Plan, and not in a 60-Day Notice. The Company expects to file a DSM LED Street Lighting product in its 2015-16 DSM Plan, if the Commission approves this product concept in the current application, and the successful outcome of the ongoing Company pilots.

**Q. WHAT IS YOUR RESPONSE TO THE SUGGESTION OF AN UPFRONT PRICE DISCOUNT INSTEAD OF A REBATE?**

A. The Company is willing to evaluate the upfront price discount as part of its product development process to create a permanent LED Street Lighting product to be included in a future DSM Plan. The Company anticipates results from the pilot will have a significant impact on the design of the new product.

## X. NON-ENERGY BENEFITS

**Q. HAVE ANY OF THE INTERVENORS PROPOSED AN ALTERNATIVE NON-ENERGY BENEFITS ADDER?**

A. Yes. COSEIA (page 14, lines 1-9) has indicated that the externalities included within the MTRC are not set to the appropriate magnitude.

Sierra Club (page 4, lines 1-2) also suggests that the Company's cost-effectiveness analysis significantly understates the value of non-energy benefits ("NEBs") and that an adder similar to that used in Massachusetts should be adopted. In Massachusetts, the NEBs adder includes "all costs of complying with foreseeable environmental regulations." Furthermore, Sierra Club (page 14, line 11) suggests that a NEBs adder of 60-80 percent would be more appropriate for low-income programs.

Trial Staff (within Mr. Camp's Answer Testimony, page 19, lines 16-23) suggests that the NEBs adder, for both gas and electric, be adjusted annually to counteract the effect of changing gas prices.

EEBC suggests that the NEBs adder should be increased to 20-25 percent for electric DSM and 25 percent for gas DSM.

EOC recommends that the NEBs adder, for both electric and gas DSM, be increased to 50 percent for low-income products only.

Lastly, the OCC recommends (within the Answer Testimony of Mr. Neil, page 57, lines 15-17) the NEBs adder be reduced to 5 percent (down from 10 percent) for non-low-income programs and 20 percent for low-income programs (down from 25 percent) starting in 2018, because of the Company's coal-fired generation retirements.

**Q. HOW DOES THE NEBS ADDER IN COLORADO COMPARE TO OTHER STATES?**

A. Only a small number of states, approximately 12, including Colorado, utilize a NEBs adder. Nearly half of those states use a flat 10 percent or 15 percent adder, similar to Colorado. Iowa, Oregon, Washington have the same 10 percent NEBs adder as Colorado, and New Hampshire and Vermont utilize the 15 percent adder. The states of Maine and Massachusetts—cited by Sierra Club—take a more unique "all quantifiable" approach that is unlike the other 10 states' methodologies. Several other states allow utilities to consider NEBs within their cost-effectiveness tests, but do not require it.

Additionally, the relevant Colorado statute, C.R.S 40-1-102 (5)(b)(III), provides that NEBs shall be considered in addition to the consideration of the valuation of avoided emissions.

**Q. HAVE PARTIES MADE ANY OTHER SUGGESTIONS REGARDING THE NON-ENERGY BENEFITS ADDER?**

A. Yes. Sierra Club (page 5, lines 16-18) has suggested that the Company conduct an independent analysis to develop better estimates of the non-energy benefits associate with DSM, both for low-income and non-low-income

programs. EEBC also believes that new research on NEBs, such as that discussed in “Recognizing the Full Value of Energy Efficiency” published by the Regulatory Assistance Project “(RAP”) in September 2013, should be evaluated to update the NEBs adder.

**Q. DOES THE COMPANY AGREE THAT THE NEBS ADDERS SHOULD BE CHANGED?**

A. No, the current NEBs values being used for electric and natural gas energy efficiency cost-effectiveness are consistent with other states’ valuations of NEBs.

**Q. DOES THE COMPANY BELIEVE THAT CONDUCTING A NEW NEBS STUDY WOULD PROVIDE VALIDATION OF A QUANTIFIABLE NEBS VALUE THAT IS MORE APPROPRIATE THAN THE CURRENT NEBS ADDER?**

A. Not necessarily. The Company is skeptical that any study of NEBs can be conducted in a manner that will yield an accurate and credible basis on which to base any change in the current NEBs adder. Given the results of the “State of the Industry on Non-Energy Benefits in Low Income Programs and Beyond” completed by Skumatz Economic Research Associates (“SERA”) in January 2010, the Company is cautious about the ability of a third-party study to deliver a credible result on this topic that is reasonably amenable to all involved parties.

**Q. WHAT DOES THE COMPANY REQUEST OF THE COMMISSION IN TERMS OF NEBS EVALUATION?**

A. In the event that the Commission does choose to order the Company to conduct a NEBs evaluation, the Company requests that the Commission also indicate which of the many NEBs identified by the Intervenors the Company should study. For example, several parties have identified these NEBs, among others, that could be of value: health impacts, water impacts, $SO_2$, $NO_x$, and job creation.

## XI. COMBINED HEAT AND POWER

**Q. SWEEP AND SIERRA CLUB HAVE RECOMMENDED THAT GAS-FIRED COMBINED HEAT-AND-POWER ("CHP") SYSTEMS SHOULD BE INCLUDED AS DSM. DOES THE COMPANY AGREE WITH THIS POSITION?**

A. No. CHP systems should not be integrated into the Company's DSM portfolio. As stated within the 2012/13 Biennial DSM Plan Settlement Agreement, it is the Company's view that, under current Colorado law, CHP is a generation asset and not a source of energy conservation as defined under C.R.S. 40-1-102(6).

**Q. IS CHP THE SAME AS RECYCLED ENERGY TECHNOLOGY?**

A. No. Not all CHP systems are examples of recycled energy technology. CHP is separated into two categories: (1) topping-cycle in which the energy input is first used to produce power and a portion of the rejected heat is captured for useful thermal energy; and (2) bottoming-cycle where the energy input is first

applied to a useful thermal energy application and the rejected heat is used for power production (Reference Code of Federal Regulations, Section 18, sub section 292.202, c and d). The Company does not consider topping-cycle technologies to be examples of recycled energy as they do not meet the definition of Recycled Energy as provided under Colorado Renewable Energy Standard ("RES") Rules 3652(q). Specifically, "Recycled Energy does not include energy, lost or otherwise, from a process whose primary purpose is the generation of electricity…" The Company would consider bottoming-cycle cogeneration technology as an eligible recycled energy resource because the energy input's primary purpose is not power generation.

**Q. IS THE COMPANY OFFERING ANY INCENTIVES FOR RECYCLED ENERGY?**

A. Yes, within the 2014 RES Plan (Docket No. 13A-0836E) the Company made provisions to offer incentives for Eligible Energy Resources beyond those offered for Solar PV. This includes a new program specifically for Recycled Energy. The program was included as part of the RES Plan because Recycled Energy technologies fit the criteria for Eligible Energy Resources as defined in C.R.S. §40-2-124(a).

**Q. DOES THE COMPANY OFFER ANY INCENTIVES FOR CAPTURING WASTE HEAT?**

A. Yes. PSCo retail gas customers that install equipment to capture waste heat to offset other natural gas consumption may be eligible for a rebate through the Company's Custom Efficiency program.

## XII. SOLAR THERMAL TECHNOLOGIES

**Q. PLEASE SUMMARIZE WHAT THE COMPANY PROPOSED REGARDING SOLAR THERMAL TECHNOLOGIES IN DIRECT TESTIMONY.**

A. The Company did not propose any goals or policies specific to solar thermal technologies in direct testimony. Witnesses Sundin and Petersen referenced the technology as an example when discussing different cost-effectiveness tests for DSM and how those impact gas DSM policy. Specifically, the witnesses cited that solar thermal water heaters as an example of a technology that pass participant and/or utility cost tests but do not pass the modified total resource cost test in past analysis.

**Q. PLEASE SUMMARIZE THE ANSWER TESTIMONY OF THE PARTIES WHO DISCUSSED SOLAR THERMAL TECHNOLOGIES.**

A. CRES and COSEIA further commented on solar thermal technology in Answer testimony that I will address. Rebuttal related to cost-effectiveness will be addressed in other parts of my testimony or Mr. Petersen's rebuttal testimony.

CRES stated that Public Service should fully support the inclusion of solar thermal technologies within DSM. By not including it in DSM the Company is essentially "picking winners" and telling customers which technologies they may or may not use. Witness Kingston also stated thermal energy produced from solar thermal systems should be eligible for renewable energy credits.

In Answer Testimony COSEIA stated 50 years is a more appropriate time period than the current 5-7 year period for strategic consideration in the DSM Strategic Issues application.

*A.* *RESPONSE TO CRES*

**Q. DO YOU BELIEVE THE COMPANY IS "PICKING WINNERS" AS WITNESS KINGSTON STATED AND INTENTIONALLY EXCLUDING SOLAR THERMAL IN DSM? IF NOT, PLEASE EXPLAIN WHY.**

A. I do not believe the Company is "picking winners". Public Service has evaluated several solar thermal technologies through its DSM product development process in recent years. The Company analyzed water heating, heating for homes, and heating for pools as gas DSM and/or electric DSM products. None of those product ideas passed the MTRC, which is used to evaluate all of the measures included within the Company's DSM portfolio, per state statute.

**Q. REGARDING THE COMPANY'S RECENT ANALYSIS OF THE THREE SOLAR THERMAL TECHNOLOGIES, DID ANY OF THE TECHNOLOGIES PASS THE RIM COST-EFFECTIVENESS TEST?**

A. None of the residential technologies passed the RIM test. Solar thermal water heating received a .51 RIM score, solar thermal space heating received a .33 RIM, and solar thermal water heating, space heating and pool heating combined (as a single product offering) received a .41 RIM. The analysis used gas water heaters or gas furnace as the baseline or competing technology, since these technologies were evaluated as possible gas DSM

product offerings. The MTRC and RIM scores indicate solar thermal technologies are not cost effective as compared with similar natural gas technologies.

**Q. ALTHOUGH SOLAR THERMAL WATER HEATING TECHNOLOGIES WERE FOUND TO BE NON-COST-EFFECTIVE, COULD THE COMPANY HAVE ADDED THESE MEASURES TO THE DSM PORTFOLIO ANYWAY?**

A. Yes, the Company has the ability to bundle non-cost-effective measures with cost-effective measures, as long as the programs (Business, Residential, Low-Income, etc) remain cost-effective. The Company agreed to this policy within the 2012/2013 Biennial DSM Plan (Docket No. 11A-631EG), largely to protect individual gas measures that have broad applications, are very common in homes and businesses, and were, at one time, cost-effective or are likely to become cost-effective again in the future. Based on the low cost-effectiveness and high installation cost of solar thermal technologies, which can have a limiting affect on customer interest, and the low likelihood that these measures would become cost-effective in the near future, the Company has chosen not to add solar thermal measures to its DSM portfolio.

**Q. DO YOU BELIEVE SOLAR THERMAL TECHNOLOGIES SHOULD BE INCLUDED IN GAS OR ELECTRIC DSM AS A RESULT?**

A. No, unless these technologies are able to pass the MTRC cost-effectiveness test. If the Commission is concerned about the rate impact DSM can have on customers, solar thermal should not be included in DSM.

**Q. SHOULD THERMAL ENERGY PRODUCED FROM SOLAR THERMAL SYSTEMS BE ELIGIBLE FOR RENEWABLE ENERGY CREDITS, AS STATED BY WITNESS KINGSTON?**

A. The DSM Strategic Issues docket is focused on policies and goals for energy efficiency and demand response and the Company believes any discussion of renewable energy credits for solar thermal should be considered in a renewable energy standard plan in order to have the appropriate parties in the discussion.

*B. RESPONSE TO COSEIA*

**Q. DO YOU BELIEVE A 50 YEAR PERIOD IS MORE APPROPRIATE AND WOULD IMPROVE THE DSM STRATEGIC ISSUES APPLICATION THAN THE SIX YEAR PERIOD USED FOR THIS APPLICATION?**

A. No, I do not believe it would benefit the planning of DSM in Colorado.

**Q. DO YOU BELIEVE THE CURRENT SIX YEAR VIEW IS MOST APPROPRIATE AND SHOULD CONTINUE IN THE FUTURE?**

A. Yes. There are several factors that cannot be accurately predicted or even expected if goals and policies had to be set for a period as long as 50 years.

For example, emerging technologies as well as adoption rates of current technologies could not be accurately predicted over such a time period. These assumptions along with others are factored into a utility's DSM market potential study, which typically evaluates DSM potential over a 10-15 year period. While these studies look at a longer term than this DSM Strategic Issues application, potential studies are usually updated or a new

study is conducted on a more frequent basis to factor in market, technology, and customer changes such as emerging technologies, customer adoption rates, increasing energy standards, and new building codes. For example, in the recent past we have conducted or updated potential studies in Colorado in 2006, 2009 and 2013. Xcel Energy in its Minnesota service territory conducted or updated potential studies in 2008, 2011 and 2013.

Utility resource plans tend to have the longest time period I am aware of when considering resource needs in the future. The most recent Public Service resource plan filed October 2011 was for a time period of 2011 through 2018. Xcel Energy filed an Upper Midwest resource plan in 2011 for the 2011 through 2025 period.

I do not believe adjusting the time period for DSM Strategic Issues would lead to improved efficiencies, more accurate projections, or better policies.

## XIII. GAS DSM POLICY

**Q. PLEASE SUMMARIZE WHAT PUBLIC SERVICE REQUESTED OF THE COMMISSION REGARDING GAS DSM POLICY.**

A. The Company requested in Ms. Sundin's Direct Testimony Commission guidance on three Gas DSM items:

- The Company's proposed annual gas spending levels moving forward;
- The Commission's opinions on what the primary objectives of offering gas DSM programs should be today and in the future in Colorado (emissions reduction, for example); and

- The Commission's opinion on the appropriate cost-effectiveness test(s) for Gas DSM considering current conditions.

On these three topics, Ms. Sundin specifically stated the Company's position within her Direct Testimony on pages 86-104. Public Service suggested to the Commission that:

- Annual Gas DSM budgets should be approximately up to $12 million per year in the near future.
- The primary objectives of offering Gas DSM programs to customers include: managing historically volatile gas prices, providing energy choices for our customers, and educating customers on their gas use. Ms. Sundin also stated the Company recognizes that gas DSM reduces the use of fossil fuel, which in turn reduces carbon emissions.
- The modified Total Resource Cost test is still the most appropriate cost-effectiveness test for Gas DSM and should continue to be used to evaluate technologies.

**Q. PLEASE SUMMARIZE IF ANY PARTIES AGREED WITH THE COMPANY'S SUGGESTED GAS DSM BUDGET LEVELS, OBJECTIVES, AND COST-EFFECTIVENESS TESTS TO THE COMMISSION.**

A. Regarding gas DSM budgets – the OCC suggested budgets should be trimmed due to low natural gas prices and programs that cannot pass the cost-effectiveness test. Related to this, the OCC noted in Answer Testimony that the Company's 2014 DSM Plan had programs totaling approximately 1,500 business customers and 31,500 customers excluding the school kits

product. The OCC inferred the benefit of gas DSM is marginal with low gas prices due to the limited participation of approximately 2 percent of PSCo customers in 2014.

Regarding the primary objectives of gas DSM -- SWEEP, COSEIA, and EEBC agree that one of the primary objectives of gas DSM is to help customers manage the price volatility of natural gas prices. EEBC and COSEIA state it is important to have a robust portfolio of gas DSM programs to provide customers options for managing natural gas use. Finally, Staff recommends the Commission find the reduction of emissions as this as the primary goal of gas DSM as long as done cost effectively. CRES, COSEIA, and SWEEP also agree that emissions reductions are one of the primary objectives.

Regarding the cost-effectiveness test for gas DSM -- EOC voiced its supports of the MTRC because switching to the UCT could lead to increased spending on programs that are not cost effective to the participants and lead to higher rate impacts.

**Q. PLEASE SUMMARIZE IF ANY PARTIES DISAGREED WITH THE COMPANY'S GAS DSM POLICY SUGGESTIONS TO THE COMMISSION. PLEASE SUMMARIZE THEIR POSITIONS.**

A. Staff recommends the cost-effectiveness test for gas DSM should be changed from the MTRC to the Societal Test, which is a variant of the MTRC and still complies with § 40-1-102(5)(1), C.R.S.

COSEIA does not agree with the Company's suggested budgets and cost-effectiveness methodology. COSEIA suggests gas DSM budgets should return to 2011 levels ($17 million) or even a doubling of DSM spending since "it would go unnoticed and be in fact painless". COSEIA believes the utility cost test ("UCT") is the best test for gas DSM since it excludes capital costs paid by participating customers in the cost-effectiveness formula.

SWEEP recommends the Company should maximize Gas DSM to increase participation to funding levels near $17 million last reached in 2011 as long as it can be done cost effectively. SWEEP also encourages switching from the MTRC to the UCT as the primary cost-effectiveness test for gas DSM. SWEEP suggests the Commission inform the Colorado legislature it does not object to changing the cost-effectiveness test since a change in statute is required to make UCT the primary test. Witness Gellar also stated an annual gas DSM budget cap is not necessary if the test is changed to the UCT.

CRES requested the Commission establish a new upper limit to the required gas DSM spending of 4.0 percent, doubling the existing minimum spending requirement of 2.0 percent.

EEBC suggested gas DSM budgets should be $17 million per year.

*A. RESPONSE TO STAFF*

**Q. DOES THE COMPANY AGREE WITH STAFF'S PROPOSAL TO CHANGE THE COST-EFFECTIVENESS TEST APPLIED TO THE COMPANY'S GAS DSM PORTFOLIO FROM MODIFIED TOTAL RESOURCE COST TEST TO THE SOCIETAL TEST?**

A. Yes. The Company supports Staff's suggestion to shift from use of the MTRC to the Societal Test ("SCT") for natural gas DSM; as stated on page 3 of the Answer Testimony from Witness Camp. The Company agrees with this suggestion on its premise, that the SCT includes the effect of externalities and provides for measurement of net benefit or net costs to society—indicating whether or not it is reasonable to pursue a particular natural gas DSM measure.

This cost-test change for natural gas DSM is likely to lead to higher net benefits, especially for measures with a long life. Consequently, it may result in more a few more measures being considered cost-effective, and thereby increase the potential of the gas DSM portfolio. However, specific analysis of those impacts, though anticipated to be somewhat minor, can only be determined upon development of a new DSM Plan.

The Company would use the SCT rate for calculating customer costs, but continue to utilize the Weighted Average Cost of Capital ("WACC") rate for all utility system costs. As stated by Witness Camp, Xcel Energy has already adopted this approach to use of the SCT in its Minnesota service territory and has found it to be a working cost-test. Further discussion of the

discount rate (U.S. Dept of Treasury 20-year Constant Maturity Rate) to be applied in conjunction with the SCT can be found in Mr. Petersen's Rebuttal Testimony.

*B. RESPONSE TO COSEIA, CRES, EEBC AND SWEEP*

**Q. DOES THE COMPANY AGREE WITH PARTIES THAT GAS DSM BUDGETS SHOULD BE INCREASED TO $17 MILLION PER YEAR BECAUSE, AS COSEIA STATED, THE IMPACT TO CUSTOMERS IS NEGLIBLE?**

A. No. The Company does not support increasing gas DSM budgets and believes increasing gas DSM budgets annually will lead to a cumulative and noticeable impact to customers. As cited by the OCC, only 2 percent of Public Service customers participate annually in gas DSM based on a $12 million budget. While a $5 million annual increase may be considered small by some parties, increasing the budget by this amount annually will have a notable impact on customers, especially low income customers. The Company has demonstrated over the last two years that it can deliver a significant gas portfolio during a period of low gas costs within a $12 million budget.

**Q. COSEIA STATES THE UTILITY COST TEST (UCT) IS THE BEST COST-EFFECTIVENESS TEST FOR GAS DSM. DO YOU SUPPORT SWITCHING TO THE UCT?**

A. I do not support using the UCT for DSM in Colorado. As I stated in Direct Testimony, using 2011 solar thermal technologies as an example, switching

to the UCT will allow additional technologies in DSM, several that have not passed review in the past using the MTRC. The end result will be increased gas DSM budgets over time since more technologies will qualify and an increasing percentage of programs that deliver fewer net benefits yet increase rates for all customers due to higher spending.

**Q. WHAT DID THE EOC STATE IN ANSWER TESTIMONY REGARDING ITS CONCERN WITH THE UCT?**

A. The EOC expressed concern that switching to the UCT could lead to the Company offering rebates for traditionally non-cost-effective technologies. This concern is largely valid, given that the UCT only considers the program costs and disregards the cost of the technology being installed. While the switch to UCT may benefit the DSM programs the EOC administers, EOC does not support switching to the UCT because of the risk for a disproportionate impact to low income customers contributing to the DSMCA.

**Q. DOES THE COMPANY AGREE WITH EOC'S ASSESSMENT?**

A. Yes. The Company believes the UCT will increase risk for the gas DSM portfolio, including and beyond increased expenditure. EOC is correct that the UCT will potentially allow nearly all technologies that save energy to be included in DSM, as long as utility expenditures were less than the benefit from the saved energy. In turn, this would encourage increased DSM program cost, which would increase the rate impact on low-income customers.

**Q ARE OTHER UTILITIES OR STATES USING UCT AS THE COST-EFFECTIVENESS TEST FOR GAS DSM?**

A. Yes but only a few at this time. A 2011 report[18] from the American Gas Association ("AGA") indicated that approximately half of 120 natural gas DSM programs reviewed across the U.S. and Canada utilize the UCT (also known as the Program Administrator Cost ("PAC") test).

**Q. HOW ARE OTHER STATES AND UTILITIES RESPONDING TO THE REDUCED COST-EFFECTIVENESS OF NATURAL GAS DSM?**

A. While SWEEP suggests that other utilities, such as Questar, are increasing expenditures and achievements on gas DSM, the Company has found that many are also facing challenges with gas DSM cost-effectiveness that are similar to those indicated by the Company (see my Direct Testimony, pages 86-89). "The Idaho Public Utilities Commission authorized the suspension of [Avista's] natural gas programs effective October 1, 2012 due to the cost-ineffectiveness of natural gas energy efficiency programs under the TRC benefit-cost test. The Washington Utilities and Transportation Commission approved continuation of Avista's natural gas energy efficiency programs under the PAC benefit-cost test," as stated in Avista's 2012 Annual Report on DSM,[19] filed in June 2013. Avista's 2013 DSM Business Plan was an "all-electric plan." In 2012, Avista filed to suspend its natural gas DSM portfolio in

[18] "Natural Gas Efficiency Programs Report, 2011 Program Year," AGA, Available: http://www.aga.org/Kc/analyses-and-statistics/studies/efficiency_and_environment/Documents/AGA percentl20Natural percentl20Gas percentl20Efficiency percentl20Programs percentl20Report percentl20- percentl202011 percentl20Program percentl20Year.pdf.

[19] Avista Utilities, "2012 Annual Report, Demand-Side Management," page 5. Available: http://www.avistautilities.com/savings/dsm/dsmhistory/Documents/2012 percentl20Annual percentl20Report percentl20Demand percentl20Side percentl20Management-Final.pdf.

both its Washington and Idaho jurisdictions, stating that "the Company believed it was necessary to take action based upon the most up-to-date information regarding natural gas avoided cost."[20]

In April 2013, New Mexico's House Bill 267 was passed, changing the cost-effectiveness test from TRC to UTC for both electric and gas DSM programs. The new statute coupled this with cost recovery that caps DSM program funding at 3 percent of customer bills (excluding gross receipt taxes and franchise and right-of-way fees), or $75,000 per customer per calendar year, whichever is less.

In December 2013, the Iowa Public Utilities Board approved an 8 percent reduction in Interstate Power & Light's ("IPL", part of Alliant Energy) annual energy savings goal for the next five years. IPL cited "low natural gas prices" as a factor.[21] The SCT is used to determine cost-effectiveness for both gas and electric DSM programs.

**Q. DO YOU HAVE FURTHER COMMENTS REGARDING PARTIES SUGGESTING HIGHER BUDGETS AND USE OF THE UCT?**

A. Yes. SWEEP stated it supports maximizing gas DSM spending by doing as much DSM that is cost effectively possible. SWEEP also encouraged the Commission to communicate to the legislature that it is not against switching to the UCT. As I stated in response to COSEIA, I expect switching to the UCT will significantly widen the amount of technologies now able to be cost

[20] Avista Utilities, "Washington / Idaho 2013 Electric Demand-Side Management Business Plan," page 4. Available: http://www.avistautilities.com/savings/dsm/dsmhistory/Documents/2013 percentl20DSM percentl20Business percentl20Plan percentl20FINAL.pdf.

effective, which could lead to budgets of $17 million or even higher as SWEEP referenced Questar reaching nearly $25 million per year.

**Q. DO YOU NOW AGREE WITH SWEEP THAT IF THE TEST IS CHANGED TO UCT, THERE IS NO NEED TO ADD AN ANNUAL GAS DSM BUDGET CAP?**

A. No, I still believe a spending cap needs to be strongly considered if the Commission encourages a policy change to the UCT. The utilization of the UCT will allow expansion of the gas portfolio without balancing the rate impact or net benefits generated by the portfolio. A budget cap would encourage the Company and other parties to prioritize the most cost-effective and impactful measures and programs to be included in the portfolio.

**Q. IS INCREASING GAS DSM SPENDING AND CHANGING TO THE UCT THE BEST WAY TO REDUCE EMISSIONS?**

A. Not necessarily. While increasing gas DSM to get more energy savings will reduce natural gas emissions, it may not be the best use of dollars to lower overall fossil fuel emissions. If one of the key objectives of DSM is to reduce emissions, which Staff suggested as its top objective, it should be in the best interest of parties to find the lowest cost options to get significant emissions reductions. I encourage the Commission to consider the broader policy implications and opportunities when evaluating gas DSM spending targets and cost-effectiveness.

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21 Final Order, Docket NO. EEP-2012-0001, issued Dec.2, 2013. Available: https://efs.iowa.gov/cs/groups/external/documents/docket/mdaw/mja5/~edisp/209226.pdf

## XIV. DEMAND RESPONSE GOALS

**Q. WILL THE COMPANY BE ADJUSTING THEIR DEMAND RESPONSE GOALS FROM ITS PREVIOUS APPLICATION?**

A. No. As discussed within Mr. Petersen's Rebuttal Testimony, the Company's demand response goals were developed using estimated future resource needs identified within the 2011 Energy Resource Plan (Docket No. 11A-869E). When existing demand response, traditional energy efficiency and Savers Switch are taken into consideration in calculating the Company's future resource need, our analysis suggested little need for additional demand reduction through the 2019 timeframe; therefore, any additional load opportunity within our original Application was included after that time. The Company's intent was to shift the potential opportunity to further years and beginning adding resources as needed.

SWEEP and the OCC have recommended approval of the Company's demand response goals, which are based on the Company's resource need. However, neither of these intervenors agree to proposed demand response goals for all of the years requested within this docket, and they differ on their opinion of what types of programs should be included within the demand response portfolio. Mr. Petersen's testimony discusses the question of timing as well as details regarding suggested pilots for controllable load. Mr. Brockett's testimony will address demand response options based on dynamic pricing options.

**Q. OCC HAS RECOMMENDED THAT THE COMMISSION ADJUST THE CREDITS PAID TO ISOC CUSTOMERS TO BE CONSISTENT WITH AVOIDED COSTS IDENTIFIED IN THE DR POTENTIAL STUDY, WHAT IS YOUR RESPONSE?**

A. The monthly credit rates used to calculate credits paid to customers under our ISOC tariff were developed based on the detailed record presented in Docket No. 07S-521E. As tariffed rates, the monthly credit rates included in the ISOC tariff can only be modified as provided in the Public Utilities Law found at C.R.S. § 40-1-101 *et seq.* Moreover, even if the Commission could make changes to a tariffed rate in the context of an application proceeding such as this, the OCC has not presented sufficient evidence in this proceeding demonstrating that the monthly credit rates under the ISOC tariff are unreasonable. Accordingly, I urge the Commission to reject the OCC's recommendation to adjust the credits paid to our ISOC customers.

## XV. CONTRACTOR SUPPORT AND ADMINISTRATIVE ISSUES

**Q. DOES THE COMPANY USE REQUESTS FOR PROPOSALS ("RFP") AND COMPETITIVE SELECTION PROCESSES TO LEVERAGE THE EXPERTISE OF CONTRACTORS AND CONSULTANTS IN DSM?**

A. Yes. The Company is often the lowest cost provider for DSM programs. However, there are instances when the Company chooses to utilize a structured third-party contract arrangement (with either for-profit or non-profit organizations) when it is determined to be the lowest-cost, most-effective option.

For example, the Company has utilized a competitive bid process for the following DSM programs:

- 2009: Peak Savings (EnerNOC)
- 2011: Refrigerator Recycling; Energy Savings Kits; New Construction
- 2012: Commercial Refrigeration; DEPCACC; Energy Analysis (onsite audits); Home Performance with ENERGY STAR®; Residential Home Energy Audit
- 2013: School Education Kits; Segment Efficiency; Small Business Lighting; Pool Pumps; Home Lighting
- 2014: ENERGY STAR® New Homes

**Q. WHAT CHALLENGES HAS THE COMPANY FACED IN EVALUATING THIRD-PARTIES FOR POTENTIAL INVOLVEMENT IN DELIVERING DSM?**

A. The Company is often disappointed in proposals submitted under competitive bids—which, upon detailed evaluation, and perhaps even following a pilot phase lead to reduced savings at a higher delivery price than Company-implemented products.

For example, in 2012 the Company issued an RFP for Innovative Products to add to the DSM portfolio. Unfortunately the Company received few proposals that passed cost-effectiveness, provided detailed technical assumptions, and offered unique pathways for delivering energy savings. The few successful bidders were largely unable to provide accurate, impartial references for data assumptions to validate their proposed approaches.

**Q. DOES THE COMPANY OFFER OPPORTUNITIES FOR STAKEHOLDERS TO SUBMIT NEW IDEAS OUTSIDE OF FORMAL RFP PROCESSES?**

A. Yes. The Company has a standing open invitation through the DSM Roundtable for stakeholders to submit their ideas via an Opportunity Identification Form on Xcel Energy's Colorado DSM website, available here: http://www.xcelenergy.com/About_Us/Rates_&_Regulations/Regulatory_Filings/CO_DSM. This forum is meant to offer a means for stakeholders to engage the Company in evaluation of new, emerging products and measures that are not currently part of the Company's DSM portfolio. The forum is not meant to focus on DSM product delivery and implementation mechanisms, which are determined by the Company internally. When stakeholders properly utilize the detail within the form, the Company is able to quickly evaluate the ideas for potential inclusion within the DSM portfolio and present the results at the Quarterly Roundtable Meeting. Furthermore, submission content should be vendor-neutral, and include independently verified energy savings and cost data to support the Company's evaluation.

**Q. WHAT PLANS DOES THE COMPANY HAVE TO OFFER FUTURE OPPORTUNITIES FOR CONTRACTORS AND CONSULTANTS TO PARTICIPATE IN DSM PROGRAMS?**

A. The Company proposes to hold a competitive DSM RFP every three years to continue to encourage innovation and to offer a structured opportunity for stakeholders to present industry-valued approaches to DSM implementation for niche market segments beyond those already included within our portfolio.

In an effort to overcome some of the aforementioned hurdles that the Company has encountered with bidders in the past, an RFP pre-conference will be held via webinar in advance of the RFP deadline to inform potential bidders of the Company's rigorous technical assumption and evaluation requirements. The Company will request that the Commission approve a budget to support this RFP activity within the appropriate Plan docket, for development of the RFP content, planning and hosting the pre-conference webinar, conducting evaluation of the RFPs, and contract implementation.

The Company believes that competition amongst third-party providers can benefit our customers under certain circumstances. However, the Company would have serious concerns with a more frequent bidding process for a larger portion of the portfolio that could lead to inconsistency for customers and/or contractors, quality control issues, and/or lost savings opportunities as new implementers "ramp up."

**Q. DOES THE COMPANY HAVE PLANS TO WORK MORE CLOSELY WITH LOCAL GOVERNMENTS TO ADMINISTER, MARKET, AND/OR EVALUATE DSM PROGRAMS?**

A. The Company is evaluating opportunities to engage local governments in DSM beyond the Company's existing Community Energy Efficiency Planning Pilot, which concludes at the end of 2014. The Company has agreed to consider engaging local governments on the M&V results from the Pilot during 2015.

**Q. DOES THE COMPANY INTEND TO SUBMIT 1-YEAR DSM PLAN FILINGS TO THE COMMISSION IN THE FUTURE?**

A. The Company has utilized a one-year DSM plan approach during years in which a Strategic Issues docket is also pending before the Commission to ensure alignment of future DSM plans with Commission guidance. It is not the intention of PSCo to utilize one-year DSM plans more frequently than necessary. It is the Company's preference to develop and submit two-year (biennial) DSM plans. However, the Company wishes to maintain the flexibility to utilize a one-year DSM plan filing, if necessary.

**Q. DOES THE COMPANY WISH TO CHANGE THE ANNUAL DSM PLAN FILING DEADLINE?**

A. No. EEBC has proposed to move the annual filing deadline for DSM plans from July 1 to June 1 to allow more time during the year-end for accommodating the Settlement process prior to a new plan year start (January 1). At this time, the Company does not wish to change the filing deadline, given that the previous year's status report will have just been filed on April 1, and a June 1 deadline would be complicated by a Memorial Day Weekend holiday each year. However, the Company does appreciate the desire to enable a decision in the plan dockets prior to year-end and will endeavor to deliver future DSM Plans prior to the July 1 deadline, where possible.[22]

[22] This approach will not be possible in the 2014 calendar year for preparation of the 2015/2016 Biennial DSM Plan filing, as the Commission has approved an October 30, 2014 filing deadline.

**Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

A. Yes, it does.