

**Attachment HG-2a**

---

**DISCOVERY REQUEST CEC 3-1:**

Please refer to the Company's response to discovery request CEC 1-3 and attachment CEC1-3.A1. This discovery request asked for the projected electric DSM program costs for 2017 and 2018.

- a. Please confirm that the DSM cost amounts provided in CEC1-3.A1 of \$112,964,467 for 2017 and \$129,042,948 for 2018 represent electric DSM costs only, and do not include natural gas DSM costs.
- b. If confirmed, please explain the factors that caused the projected electric DSM program costs in CEC1-3.A1 to exceed the DSM Plan Budgets from the 2017/2018 DSM Plan by \$13.4 million for 2017 and \$30.7 million for 2018, based on the 2017 budget of \$99,609,881 and 2018 budget of \$98,367,166 from the 2017/2018 DSM Plan (Revised November 17, 2016).
- c. If denied, please provide the projected electric DSM program costs for 2017 and 2018 as originally requested.

**OBJECTION:**

Public Service Company of Colorado ("Public Service" or "Company") objects subpart (b) to this data request to the extent the request is overly broad and it would be unduly burdensome to produce the information requested, as portions of the data requested can be derived from publicly available documents or is publically available to CEC.

Legal Sponsor: Susan L. Bailey  
13, 2017

Date: November

**RESPONSE:**

In providing this discovery response, the Company identified an error in the DSM Costs total for 2017 provided in Attachment CEC1-3.A1. The intial summary excluded the costs associated with the Peak Partner Rewards product and the Critical Peak Pricing pilot product.

- a. Confirm.
- b. The total DSM costs provided in response to CEC1-3 includes the Comany's most recent forecast of energy efficiency, demand response,

and ISOC costs. However, the values referenced in subpart (b) by CEC include only the Company's forecast of energy efficiency and demand response costs as forecasted in the 2017/2018 Plan. The Company's most recent forecast accounts for the activity during the first nine months of 2017 and the forecast of activity for the remaining three months of 2017. The response for 2018 uses the Company's forecast included in the 2017/2018 DSM Plan, which is the most recent forecast conducted by the Company.

The following table provides a comparison of the Company's forecasted costs, as provided in the DSM Plan, versus the most recent forecast available to the Company.

	2017 Forecast (DSM Plan)	2017 Forecast (most recent)	2018 Forecast (DSM Plan)
Energy Efficiency	\$80,429,748	\$76,342,236	\$77,741,665
Demand Response	\$19,180,133	\$12,558,267	\$20,625,501
ISOC	\$30,675,782	\$24,528,768	\$30,675,782
Total	\$130,285,663	\$113,429,271	\$129,042,948

The Company's initial forecast of costs, excluding ISOC, are included in Table 3a, 3b, 3c, and 3d of 2017/2018 DSM Plan. ISOC costs are provided on page 307. The Company's DSM Plan is available on its website at: [https://www.xcelenergy.com/company/rates\\_and\\_regulations/filings/colorado\\_demand-side\\_management](https://www.xcelenergy.com/company/rates_and_regulations/filings/colorado_demand-side_management)

c. Not applicable.

Sponsor: Shawn M. White, Donna A. Beaman

Date: November 13, 2017

**Attachment HG-2b**

---

---

**DISCOVERY REQUEST SWEEP 1-4:**

Please provide the energy savings goals and peak demand reduction goals adopted by the Commission for 2017.

- a. Does PSCo expect to meet the 2017 goals?
- b. Does the Company expect to meet its 2017 energy savings goals and do so while spending less than its approved budget for DSM programs in 2017?
- c. If the answer to part c. is yes, how much less does the Company expect to spend relative to the full budget, in percentage terms?

**RESPONSE:**

- a. See the Company's response to SWEEP1-2.
- b. The Company expects to achieve the energy savings goal of 400 GWh and the energy efficiency demand reduction target of 65 MW. The Company does not forecast to achieve the energy savings goal of 429.3 GWh agreed to as part of the settlement in Proceeding No. 16A-0512EG. Nor does the Company forecast it will achieve the natural gas savings goals agreed to in Proceeding No. 16A-0512EG.

2017	Forecast EE	Statutory EE	Settlement EE	Forecast \$	Settlement \$
Electric GWh	407.7 GWh	400 GWh	429.3 GWh	\$76.3M	\$77.7 M
Electric MW	74.1 MW	65 MW	65.6 MW	N/A	N/A
Natural Gas	601k Dth	636,077 Dth	636,077 Dth	\$ 12.3M	\$13.1 M

- c. The Company interprets the term "approved budget" to refer to the electric and gas budgets for energy efficiency programs agreed to as part of the settlement in Proceeding No. 16A-0512EG. With that definition, the Company responds "yes". See the response to subpart (b).
- d. The Company interprets the term "approved budget" to refer to the electric and gas budgets for energy efficiency programs agreed to as part of the settlement in Proceeding No. 16A-0512EG. With that definition, the percentage of forecasted spend to budget is 98% for electric energy efficiency and 94% for natural gas energy efficiency.

Sponsor: Donna A. Beaman

Date: October 30, 2017

**Attachment HG-2c**

---

---

**DISCOVERY REQUEST SWEEP 1-27:**

Referring to p. 39, line 6 through p. 42, line 14 of Mr. White's Direct Testimony,

- a. How many hours per year is PSCo projecting that DSM programs will curtail wind power generation in 2017 and 2018, given the set of programs and goals in the Company's 2017-18 DSM plan?
- b. How many hours per year is PSCo projecting that DSM programs will curtail wind power generation each year during 2019-23 given the energy savings goals proposed by the Company in its filing in this docket?
- c. How many hours per year would DSM programs curtail wind power generation each year during 2019-23 if the energy savings goals proposed by the Company were increased by 50%?

**OBJECTION:**

Public Service Company of Colorado objects to all subparts of this data request on grounds that they would require conducting one or more special studies to produce the requested information. The request is therefore overly broad and unduly burdensome. The Company further objects to subpart (c) on grounds it seeks modeling information that is irrelevant to the Company's Application or direct case and is therefore not reasonably calculated to lead to the production of admissible evidence.

Legal Sponsor: Susan L. Bailey  
1, 2017

Date: November,

**RESPONSE:**

Notwithstanding and without waiving its objection(s), the Company states as follows:

- a. See objection. The Company has not analyzed how many hours per year its DSM programs will result in the curtailment of wind generation during 2017 or 2018.
- b. See objection. The Company has not conducted an analysis of wind curtailment related to the energy savings goals proposed by the Company in this proceeding. However, the Company notes that the hours of marginal energy price at \$0/MWh are forecasted as: 129 hours in 2019; 124 hours in 2020; 74 hours in 2021; 70 hours in 2022; and, 25 hours in 2023. These values are based upon the PLEXOS modelling provided in response to OCC2-1, and can be used to approximate the hours during which the Company's DSM goals may result in wind curtailment.

- c. See objection. The Company has not conducted the requested analysis and doing so would require a special study.

Sponsor: Shawn M. White

Date: November 1, 2017

**Attachment HG-2d**

**DISCOVERY REQUEST OCC1-8:**

Mr. Wishart discusses the Utility Cost Test (ratio) incentive on page 25, line 10-19. Please provide the actual utility cost test for PSCo DSM programs for 2013- 2016 and the projected utility cost test ratio for 2017-2018.

**RESPONSE:**

Year	Electric Residential Program UCT	Electric Low-Income Program UCT	Electric Business Program UCT
2013 (actual)	3.42	1.39	4.77
2014 (actual)	3.01	1.09	2.24
2015 (actual)	3.11	0.99	3.79
2016 (actual)	4.33	1.25	3.53
2017 (forecasted)	2.22	0.66	3.08
2018 (forecasted)	2.25	0.67	3.28

Sponsor: Shawn White

Date: July 20, 2017

**Attachment HG-2e**

**DISCOVERY REQUEST SWEEP4-8:**

Regarding PSCo’s commercial lighting programs (Lighting Efficiency and Small Business Lighting), what is the typical reduction in wattage in percentage terms when fluorescent lamps are replaced by LED lamps for projects participating in these programs. Please provide this estimate for programs in 2017 if available, or if not for 2016 programs.

**RESPONSE:**

The table below shows the average reduction in wattage in percent terms when fluorescent lamps are replaced by LED lamps for projects completed year to date in 2017 in the Lighting Efficiency and Small Business Lighting products.

Measure Name	CO - Lighting Efficiency Rebate	CO - Small Business Lighting	Grand Total
LED Linear Tube Type A 2 foot	25%	30%	26%
LED Linear Tube Type A 4 foot	47%	45%	47%
LED Linear Tube Type C 2 foot	40%	38%	39%
LED Linear Tube Type C 4 foot	36%	36%	36%
LED Linear Type B 4 Foot	48%	41%	45%
LED Tube Type A 4 foot (T12 Baseline)	72%	63%	66%
LED Tube Type B 4 foot (T12 Baseline)	65%	62%	63%
LED Tube Type C 4 foot (T12 Baseline)	60%	60%	60%
LED Ref and Frz Cases 5' or 6' doors	66%	71%	69%
LED Ref and Frz Cases 5' or 6' doors (T12 Baseline)	72%	78%	74%
LED PL/G Based CFL Replacement lamp	56%	60%	58%
<b>Grand Total</b>	<b>49%</b>	<b>52%</b>	<b>51%</b>

Sponsor: Donna A. Beaman

Date: November 27, 2017

**Attachment HG-2f**

---

---

**DISCOVERY REQUEST SWEEP 1-54:**

Referring to p. 65, lines 12-16 of Mr. White’s Direct Testimony, please provide a revised estimate of the Company’s resource needs each year during 2019-2028 given the proposed DR goals and the energy efficiency demand reduction goals proposed in Table SMW-D-8, and compare these resource needs to those in the Company’s 2016 ERP.

**RESPONSE:**

The Resource Acquisition Period of the 2016 ERP does not include summer peaks for the years 2024-2028 and are therefore not provided.

The table below presents the ERP resource need using the DR included in the original ERP Phase I filing and two resource needs using the Phase II updated assumption filing.

Line		<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
1.	<b><u>Demand Response (MW):</u></b>					
2.	DR in 2016 ERP	598	623	623	623	623
3.	Proposed Demand Response Goal	465	476	489	503	520
4.	<b><u>Resource Need (MW):</u></b>					
5.	Phase I ERP Filing ( <i>Uses Line 1 DR</i> )	0	0	0	-284	-615
6.	Phase II ERP Updated Assumption Filing ( <i>Uses Line 1 DR</i> )	0	0	0	0	-454
7.	Phase II ERP Updated Assumption Filing ( <i>Uses Line 3 DR</i> )	0	0	0	-129	-574

*Note: Negative values indicate resource shortfall (need).*

Sponsor: James Welsh

Date: October 30, 2017

**Attachment HG-2g**

---

**DISCOVERY REQUEST SWEEP 1-40:**

Referring to p. 53, lines 11-14 of Mr. White's Direct Testimony, a) Have any customers complained in writing or via a phone call that PSCo was spending too much money on energy efficiency or DSM programs in the past five years? b) If the answer is yes, how many customers complained each year during 2012-16?

**OBJECTION:**

Public Service Company of Colorado ("Public Service") objects to this data request on the grounds that it would require a special study to produce such information and is therefore overly broad and unduly burdensome.

Public Service further objects to this data request on the grounds that it seeks information that is not relevant to the Company's Application or direct case and is therefore not reasonably calculated to lead to the discovery of admissible evidence.

Legal Sponsor: Susan L. Bailey

Date: October 30, 2017

**RESPONSE:**

Notwithstanding the objections, the Company responds:

The Company has identified five complaints between 2012 and 2017 regarding Demand-Side Management. Of those, one complaint was related to the Company's DSM expenditures.

Sponsor: Shawn M. White, Tommy Gallegos

Date: October 30, 2017

**Attachment HG-2h**

---

---

**DISCOVERY REQUEST SWEEP2-23:**

Regarding p. 13, lines 3-15 of the Supplemental Direct Testimony of Scott B. Brockett as well as the Supplemental Direct Testimony of Steven W. Wishart, a) Is PSCo proposing that the \$6.5 million contingent disincentive offset be collected only from large C&I customers? If not, please explain from which customer classes it will be collected. b) Please explain how will this amount be distributed to specific customers and customers classes within the broad group of large C&I customers. c) Is PSCo proposing to “true up” this disincentive offset to actual levels of lost fixed cost recovery from DSM programs and measures implemented by large C&I customers? If not, please explain why not. If yes, please explain how this true-up will be done.

**RESPONSE:**

- a) PSCo intends to continue the current methodology of calculating the DSMCA rider. This methodology allocates total DSM costs, including the Disincentive Offset, by each rate class’ proportional share of the 4CP-AED allocator.
- b) The costs collected through the DSMCA rider are allocated based on the 4CP-AED allocator.
- c) The DSMCA includes as cost (including Disincentive Offset) and revenue tracker. The balance of the tracker is added to the DSMCA rider on July 1 of each year.

Sponsor: Steve Wishart

Date: November 6, 2017

**Attachment HG-2i**

---

---

**DISCOVERY REQUEST SWEEP 3-1:**

- a. Please provide the number of LED lamps that participated in Home Lighting program and the fraction of the total energy savings from the Home Lighting program provided by LED lamps in 2016. This information is not provided in 2016 DSM Annual Status report.
- b. Please provide the number of LED lamps that are projected to participate in the Home Lighting program in 2017 and 2018 and the fraction of the total projected energy savings from the Home Lighting program that is projected to be provided by LED lamps in 2017 and 2018. This information is not provided in 2017-18 DSM plan.

**RESPONSE:**

a.

	<b>2016 LEDs</b>
Number of LEDs	1,813,495
Fraction of Energy Savings from LEDs	47.5%

b.

	<b>2017 LED Forecast</b>	<b>2018 LED forecast</b>
Number of LEDs	2,346,900	2,785,000
Fraction of Energy Savings from LEDs	87%	100%

Sponsor: Donna Beaman

Date: November 20, 2017

**Attachment HG-2j**

---

---

**DISCOVERY REQUEST SWEEP 1-43:**

Referring to p. 55, lines 14 through p. 56, line 15 of Mr. White’s Direct Testimony, a) What were the total low-income bill reductions resulting from the Company’s energy efficiency programs (electric and gas) implemented each year during 2012-16? b) Did PSCo receive any complaints that these bill reductions were not high enough? c) If so, please explain.

**OBJECTION:**

Public Service Company of Colorado (“Public Service”) objects to this request to the extent it seeks data from time periods more than four years prior to the filing of this proceeding. As set forth in Rule 1405(f), of the Commission’s Rules of Practice and Procedure, it is presumed that a request for such data is not reasonably calculated to lead to the discovery of admissible evidence and is therefore beyond the scope of discovery.

Public Service also objects to this data request on the grounds that it would require a special study to produce such information and is therefore overly broad and unduly burdensome.

Public Service further objects to this data request on the grounds that it seeks information that is not relevant and the request is not reasonably calculated to lead to the discovery of admissible evidence.

Legal Sponsor: Susan L. Bailey

Date: October 30, 2017

**RESPONSE:**

- a. The table below shows the bill reductions from the Company’s energy efficiency programs (electric and gas) implemented each year during 2012-2016. These reductions are presented as the present value for each program year of the lifetime bill reductions resulting from the installation of equipment for each program year:

	<b>Lifetime Present Value Bill Reductions</b>	
	<b>Electric</b>	<b>Gas</b>
2012	\$6,563,254	\$6,425,416
2013	\$7,085,338	\$9,406,659
2014	\$7,602,068	\$5,948,921
2015	\$6,538,911	\$5,561,478
2016	\$9,482,496	\$6,146,567

- b. The Company has identified five complaints between 2012 and 2017 regarding Demand-Side Management. None was related to low-income bill reductions.
- c. See the Company's response to subpart (b).

Sponsor: Shawn M. White, Tommy Gallegos  
30, 2017

Date: October

**Attachment HG-2k**

**DISCOVERY REQUEST OCC4-15:**

Regarding the Direct Testimony of Brian Doyle

For the years 2019-2023, please provide the total proposed demand response (MW) by program or product, including Saver's Switch, AC Rewards, grandfathered ISOC, new ten-minute ISOC, CPP, PPR, etc.

**OBJECTION:**

Public Service objects to this data request on grounds it does not define each program or product through the use of the term "etc.," i.e., etcetera.

Legal Sponsor: Susan Bailey

Date: August 7, 2017

**RESPONSE:**

Notwithstanding and without waiving its objection, the Company states as follows:

The following table provides the estimate of demand savings, at the generator level, by product for the 2019 through 2023 period.

Year	ISOC	PPR	CPP	Saver's Switch	AC Rewards
2019	171	67	5.3	193	22
2020	170	67	10.7	182	34
2021	169	67	16	174	46
2022	168	67	21.4	166	58
2023	167	67	26.7	159	70

Sponsor: Brian Doyle

Date: August 7, 2017