

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA



**FILED**

05/21/19  
04:59 PM

Order Instituting Rulemaking Concerning  
Energy Efficiency Rolling Portfolios,  
Policies, Programs, Evaluation, and Related  
Issues.

Rulemaking 13-11-005  
(Filed November 14, 2013)

**COMMENTS OF THE PUBLIC ADVOCATES OFFICE  
ON ADMINISTRATIVE LAW JUDGE'S RULING INVITING COMMENTS  
ON DRAFT POTENTIAL AND GOALS STUDY**

**HENRY BURTON**  
Analyst

Public Advocates Office  
California Public Utilities Commission  
505 Van Ness Ave.  
San Francisco, CA 94102  
Telephone: (415) 696-7311  
Email: [henry.burton@cpuc.ca.gov](mailto:henry.burton@cpuc.ca.gov)

**TOVAH TRIMMING**  
Attorney

Public Advocates Office  
California Public Utilities Commission  
300 Capitol Mall, Suite 418  
Sacramento, CA 95814  
Telephone: (916) 823-4836  
Email: [Tovah.trimming@cpuc.ca.gov](mailto:Tovah.trimming@cpuc.ca.gov)

May 21, 2019

## TABLE OF CONTENTS

	<u>Pages</u>
I. INTRODUCTION .....	1
II. DISCUSSION .....	1
A. The Energy Division should revise the Draft Study to remove residential lighting incentive measures that duplicate the savings achieved through codes and standards. ....	1
1. The Draft Study should treat light-emitting diode (LED) lighting as the baseline. ....	1
2. The Draft Study envisions continued incentives for CFL lighting measures that are mandated by state and federal standards. ....	4
B. The Energy Division should revise the Draft Study to use a 1.25 TRC cost-effectiveness screen. ....	5
1. The Energy Division ignored stakeholder input. ....	6
2. Using a TRC screening threshold of 1.0 will result in unrealistic goals. ....	7
3. The Draft Study makes spurious claims about portfolio cost-effectiveness. ....	11
4. The Commission should apply a TRC screening threshold of 1.25. ....	12
C. The Energy Division should revise the Draft Study to correct unrealistic assumptions about participation in behavioral measures. ....	13
D. The Energy Division's Draft Study includes other factual and methodological errors. ....	14
1. The Draft Study includes flawed and unrealistic scenarios. ....	14
2. The Draft Study includes appliance recycling measures that are defunct. ....	15
3. The Draft Study lacks adequate resolution about the geographical applicability of climate-sensitive measures. ....	16
III. RESPONSES TO RULING QUESTIONS .....	17
IV. CONCLUSION .....	30

## I. INTRODUCTION

Pursuant to the *Administrative Law Judge's Ruling Inviting Comment on Draft Potential and Goals Study* (ALJ Ruling) issued on May 1, 2019, the Public Advocates Office at the California Public Utilities Commission (Cal Advocates) submits these comments on the ALJ Ruling.

In these comments, the Public Advocates Office makes the following observations:

- The Energy Division should revise the draft 2019 Energy Efficiency Potential and Goals Study (Draft Study) to remove residential lighting incentive measures that duplicate the savings achieved through codes and standards;
- The Energy Division should revise the Draft Study to use a 1.25 Total Resource Cost (TRC) cost-effectiveness screen;
- The Energy Division should revise the Draft Study to correct unrealistic assumptions about participation in behavioral measures; and
- The Energy Division's Draft Study includes other factual and methodological errors.

The California Public Utilities Commission (Commission) should direct the Energy Division to revise the draft study to correct the errors discussed in these comments.

## II. DISCUSSION

**A. The Energy Division should revise the Draft Study to remove residential lighting incentive measures that duplicate the savings achieved through codes and standards.**

**1. The Draft Study should treat light-emitting diode (LED) lighting as the baseline.**

The Draft Study forecasts potential for large electricity savings in residential lighting as far in the future as 2030. The Draft Study estimates that residential lighting incentive programs have market potential to save 29.5 gigawatt-hours in 2020 and 85.7 gigawatt-hours in 2030 (in the reference scenario). These totals include savings potential

for both single-family and multi-family housing. Additionally, the Draft Study finds significant market potential for electricity savings from lighting measures in the low-income residential sector: 6.5 gigawatt-hours of market potential in 2020 and 8.5 gigawatt-hours in 2030.<sup>1</sup>

However, the Draft Study incorrectly assumes that residential lighting incentive programs will continue in 2020 and beyond. State and federal efficiency standards for general service lighting have already driven consumers to adopt efficient lighting. As a result, there is little remaining space for efficiency gains in residential lighting and no reason to continue incentivizing lighting measures that consumers would adopt regardless.

Both California regulations<sup>2,3</sup> and the U.S. Department of Energy (DOE)<sup>4</sup> now prescribe efficiency standards for general service lightbulbs. The DOE efficiency standards cover nearly all general-purpose lighting, with a few very minor exemptions. Although compact fluorescent lamps (CFLs) can meet current efficiency standards, consumers are rapidly shifting to light-emitting diode (LED) lamps. Therefore, it is appropriate to treat LEDs as the baseline for all residential lighting applications. Energy

---

<sup>1</sup> 2019 Energy Efficiency Potential and Goals Study: Public Draft Report, prepared for the California Public Utilities Commission by Navigant Consulting, April 30, 2019 (Draft Study), “2019 PG Study Measure Level Results – Draft Public 4-26-19.xlsx.”

<sup>2</sup> Title 20 prescribes efficiency standards already require lightbulbs to provide at least 45 lumens per watt, which is approximately the efficiency level of a compact fluorescent lamp (CFL). California Energy Commission, “Frequently Asked Questions: State-Regulated Lamps,” [https://www.energy.ca.gov/appliances/documents/state-regulated\\_lamps\\_FAQ.html](https://www.energy.ca.gov/appliances/documents/state-regulated_lamps_FAQ.html).

<sup>3</sup> Title 20 also specifies quality and efficiency standards for light-emitting diode (LED) bulbs, which require LEDs to provide at least 80 lumens per watt. California Lighting Technology Center at UC Davis, “What’s New in the Title 20 Code? Lighting Appliance Efficiency Regulations,” <https://cltc.ucdavis.edu/sites/default/files/files/publication/2016%20Whats%20New%20TITLE%202020.pdf>.

<sup>4</sup> Under a rule adopted in January 2017, the Department of Energy (DOE) broadened the definition of general service lighting to include virtually all types of lighting used for general illumination. See: Department of Energy, “2017-01-19 Energy Conservation Program: Energy Conservation Standards for General Service Lamps; Final rule,” January 19, 2017, <https://www.regulations.gov/document?D=EERE-2013-BT-STD-0051-0097>.

efficiency (EE) program administrators agree that LEDs should be the baseline, and do not expect to offer incentive programs for residential lighting in 2020.<sup>5,6</sup>

Moreover, the Draft Study's inclusion of residential lighting programs undermines the current efforts of the State and its investor-owned electric utilities to retain and strengthen lighting standards. The California Energy Commission (CEC)<sup>7</sup> and all three investor-owned electric utilities recently filed comment letters with the DOE to urge the DOE to maintain a broad definition of general service lighting. In those comment letters, the electric utilities indicated that they did not expect to offer incentives for residential lighting in 2020. The Commission should not publish a study that undermines the CEC and electric utilities' position that energy savings in lighting are best realized through standards and, therefore, incentives for lighting are unnecessary.

The Draft Study also appears to double-count energy savings in the residential lighting sector. The Draft Study counts energy savings in lighting that have been achieved through codes and standards, while also counting savings in lighting from the incentive programs. Table E-1 of the Draft Study lists efficiency codes and standards, including several related to lighting.<sup>8</sup> The ratepayer-funded codes and standards advocacy programs contribute to these standards and claim savings resulting from these standards.

---

<sup>5</sup> Southern California Edison, "2019-05-03 Comment response to the published Notice of proposed rulemaking and request for comment," May 3, 2019, <https://www.regulations.gov/document?D=EERE-2018-BT-STD-0010-0333>.

<sup>6</sup> Pacific Gas and Electric Company and San Diego Gas & Electric, "2019-05-03 Comment response to the published Notice of proposed rulemaking and request for comment," May 3, 2019, <https://www.regulations.gov/document?D=EERE-2018-BT-STD-0010-0348>

<sup>7</sup> California Energy Commission "2019-05-10 Comment response to the published Notice of proposed rulemaking and request for comment," May 3 2019, <https://www.regulations.gov/document?D=EERE-2018-BT-STD-0010-0332>.

<sup>8</sup> Draft Study, pp. E-3 – E-5.

Page E-3 lists several unevaluated Title-20 lighting standards, including GSLs – Original Scope – Tier 2, LED Lamps – Tier 1, and LED Lamps – Tier 2. It also lists a Future Title 20 standard for GSFLs (T12 Loophole). Pages E-4 and E-5 list federal standards, including General Service Fluorescent Lamps #1, GSFLs, and GSLs – Expanded Scope.

The Commission should direct the Energy Division to correct the Draft Study to reflect the fact that the available efficiency gains in residential lighting will be achieved through codes and standards. There is no significant remaining potential to save energy by incentivizing efficient residential lighting. The Energy Division, therefore, should revise the draft study to remove all residential lighting potential from incentive programs.

**2. The Draft Study envisions continued incentives for CFL lighting measures that are mandated by state and federal standards.**

Contrary to California and federal requirements, the Draft Study includes CFL measures. Inclusion of CFL measures is inappropriate because utilities should not continue to provide incentives to customers, at the ratepayers' expense, to adopt a technology that is mandated by efficiency standards, inferior to a readily available alternative, and less cost-effective than the alternative LEDs. The Commission considered this issue in D.18-05-041 and ordered EE program administrators to discontinue all incentive payments for CFLs by December 31, 2018.<sup>2</sup>

The Energy Division's inclusion of CFL measures in the Draft Study clearly contradicts the Commission's unambiguous direction to cease incentivizing CFLs with ratepayer funds. Compounding the unnecessary ratepayer burden and failure to heed clear Commission guidance, the Draft Study forecasts potential from incentivizing CFLs all the way to 2030.

Table 1 shows the Draft Study's estimates of market potential from CFL lighting.

///

///

///

---

<sup>2</sup> D.18-05-041, p. 183 (Ordering Paragraph 5).

Table 1 <b>Market Potential from CFL Measures in Residential Lighting</b>		
Electricity Savings in Gigawatt-hours in the Reference Scenario		
	<b>2020 Market Potential</b>	<b>2030 Market Potential</b>
<b>Residential</b>	3.30	3.10
<b>Low-Income Residential</b>	0.78	0.62
Totals include savings potential for both single-family and multi-family housing.		
<b>Source:</b> Draft Study, 2019 PG Study Measure Level Results – Draft Public 4-26-19.xlsx		

**B. The Energy Division should revise the Draft Study to use a 1.25 TRC cost-effectiveness screen.**

The Draft Study includes five scenarios for EE market potential. For the purpose of determining economic and market potential, the Draft Study uses a cost-effectiveness screen: measures are included in the forecast only if they have a forecast Total Resource Cost (TRC) ratio that exceeds the threshold. Using a minimum TRC threshold ensures that the forecast of market potential is based on EE measures that can realistically be offered in cost-effective ratepayer-funded EE portfolios.

Unfortunately, the Draft Study uses a TRC threshold for the reference scenario that is too low. Consequently, this scenario is inconsistent with Commission policy. As explained below, the Commission should revise the Draft Study to set a threshold of 1.25 in the reference scenario.

<p>Table 2</p> <p><b>Market Potential Scenarios in the Draft Study</b></p>					
	Reference	Alternate 1	Alternate 2	Alternate 3	Alternate 4
<b>TRC Screening Threshold</b>	1.0	0.85	1.25	1.0	0.85
<b>Source:</b> Draft Study, Table ES-1. <sup>10</sup>					

### 1. The Energy Division ignored stakeholder input.

In setting a threshold of 1.0 in the reference scenario, the Energy Division disregarded the recommendations of its consultant and all participating stakeholders. Navigant, the lead consultant for the Potential and Goals Study, recommended setting a screening threshold of 1.25 for all measures in the reference scenario. No stakeholder disagreed with Navigant's recommendation.

<p>Table 3</p> <p><b>Navigant's Proposed Scenarios for Market Potential</b></p>				
	Reference	Alternate 1	Alternate 2	Alternate 3
<b>TRC Screening Threshold</b>	1.25	1.0	1.0	0.85
<b>Source:</b> Navigant presentation for Potential and Goals Scenarios Webinar, February 21, 2019.				

Several stakeholders provided input on the proposed scenarios, and all of them either supported a screening threshold of at least 1.25 in the reference scenario or did not comment on this issue.<sup>11</sup>

<sup>10</sup> Draft Study, p. 3.

<sup>11</sup> Stakeholders' informal comments are available at <https://pda.energydataweb.com/#!/documents/2133/comments/list?q=potential%20scenario>.



- The Public Advocates Office and the Natural Resources Defense Council (NRDC), in joint comments, recommended using a TRC threshold of either 1.25 or 1.0 for all scenarios to align with current Commission policy.
- Southern California Edison Company (SCE) recommended using a TRC threshold of 1.25 in the reference scenario. For the other three scenarios, SCE recommended a threshold of 1.0.
- Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E), in joint comments, supported Navigant’s proposed scenarios and did not specifically comment on screening thresholds.
- Enverve recommended adding at least one scenario that uses the Societal Cost Test (SCT), but did not recommend lowering the numerical thresholds proposed by Navigant.

Not a single stakeholder recommended setting lower screening thresholds for any of the scenarios.

The Energy Division inexplicably and unilaterally decided to lower the screening threshold to 1.0. Energy Division’s action is without basis and is contrary to the recommendations of participating stakeholders.

## **2. Using a TRC screening threshold of 1.0 will result in unrealistic goals.**

Adopting a cost-effectiveness screening threshold of 1.0 will result in unrealistic and unachievable forecasts of market potential. The cost-effectiveness of the EE portfolios typically declines from forecasts to reported (claimed) results, and then declines again when programs are evaluated. Thus, measures that are only marginally cost-effective on a forecast basis – that is, measures that have forecast TRC ratios between 1.0 and 1.25 – are unlikely to be cost-effective when evaluated.

Table 4 clearly shows part of the slippage from forecast values to evaluated results. The EE portfolios are substantially and consistently less cost-effective when evaluated than when the program administrators’ report results.

Table 4				
<b>Comparison of Reported and Evaluated Cost-Effectiveness of Energy Efficiency Portfolios</b>				
Total Resource Cost (TRC) Ratio, Excluding Codes & Standards				
<b>Program Administrator</b>	<b>2010-2012 Cycle</b>		<b>2013-2015 Cycle</b>	
	Reported TRC	Evaluated TRC	Reported TRC	Evaluated TRC
<b>Statewide Portfolio (All PAs)</b>	1.43	1.04	1.14	0.86
<b>PG&amp;E</b>	1.45	1.23	1.34	0.97
<b>SCE</b>	1.51	1.12	1.00	0.82
<b>SDG&amp;E</b>	1.27	0.89	0.90	0.74
<b>SoCalGas</b>	1.21	1.32	1.06	0.89
<b>MCE</b>	NA	NA	0.47	0.48
<b>BayREN</b>	NA	NA	0.53	0.35
<b>SoCalREN</b>	NA	NA	0.10	0.04
<b>Source:</b> 2010-2012 and 2013-2015 EE Evaluation Reports <sup>12 13</sup>				

Relying on marginally cost-effective measures will result in an inflated forecast of market potential and unrealistic goals. To meet these inflated goals, the utilities will presumably be obliged to include many marginally cost-effective measures in their portfolios. The resulting portfolios will be at high risk of falling below a 1.0 cost-

<sup>12</sup> 2010-2012 Energy Efficiency Annual Progress Evaluation Report, California Public Utilities Commission, March 2015 (2010-2012 EE Evaluation Report), Appendix D, p. D-5 (Table D-3). Available at <http://www.cpuc.ca.gov/General.aspx?id=6391>.

<sup>13</sup> Energy Efficiency Portfolio Report, California Public Utilities Commission, May 2018 (2013-2015 EE Evaluation Report), Appendix D, p. 132. Available at <http://www.cpuc.ca.gov/General.aspx?id=5080>.

effectiveness ratio when the utilities report the results and the Commission evaluates the portfolios.

The Commission has an acknowledged responsibility to ensure that the ratepayer-funded energy efficiency portfolios are actually cost-effective.<sup>14,15,16</sup> Unfortunately, the statewide energy efficiency portfolio has not been cost-effective on an evaluated basis since 2012.<sup>17</sup> Table 5 shows the portfolio cost-effectiveness results for recent years.

///

///

///

---

<sup>14</sup> Public Utilities Code section 381(b)(1) directs the Commission to allocate public purpose funds to cost-effective energy efficiency and conservation activities.

<sup>15</sup> D.12-11-015, p. 99; D.18-05-041, pp. 161 (Findings of Fact 19-20), 168 (Finding of Fact 74), 176-177 (Conclusions of Law 36-37), and 185 (Ordering Paragraph 13).

<sup>16</sup> In D.12-11-015, p. 18, the Commission found that it is “the responsibility of the Commission to approve a portfolio, including both utility and REN proposals, that is cost-effective overall.”

<sup>17</sup> Evaluated results are not yet available for 2016-2018. However, because evaluated savings and cost-effectiveness results are consistently lower than reported (claimed) values and the reported values for 2016-2018 are already below the Commission’s 1.0 TRC threshold, there is little doubt that the 2016-2018 statewide portfolios will also be below 1.0 once they are evaluated.

<p>Table 5</p> <p><b>Cost-Effectiveness Ratios of Energy Efficiency Portfolios</b></p>				
<p>Total Resource Cost (TRC) Ratios of Evaluated or Reported Results, Excluding Codes &amp; Standards but Including Market Effects</p>				
<b>Program Administrator (PA)</b>	<b>2013-2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
	Evaluated	Reported		
Statewide Portfolio (All PAs combined)	0.86	0.85	0.97	0.92
Combined Utility PAs	Not available	0.88	1.00	0.95
PG&E	0.97	0.79	0.87	0.70
SCE	0.82	1.00	1.01	1.10
SDG&E	0.74	0.96	1.46	1.40
SoCalGas	0.89	0.74	0.81	0.88
Marin Clean Energy (MCE)	0.48	0.27	0.65	0.31
BayREN	0.35	0.37	0.40	0.34
SoCalREN	0.04	0.05	0.31	0.26
<p><b>Sources:</b> 2013-2015 EE Evaluation Report;<sup>18</sup> California Energy Data and Reporting System (CEDARS), Statewide Claims Summaries for 2016-2018.<sup>19</sup></p>				

<sup>18</sup> 2010-2012 Energy Efficiency Annual Progress Evaluation Report, California Public Utilities Commission, March 2015 (2010-2012 EE Evaluation Report), Appendix D, p. D-5 (Table D-3). Available at <http://www.cpuc.ca.gov/General.aspx?id=6391>.

<sup>19</sup> California Energy Data and Reporting System (CEDARS), Claims Dashboard, Statewide Claims Summaries for 2016-2018, accessed May 10, 2019.

Setting a TRC screening threshold of 1.0 for the reference scenario in the Draft Study will perpetuate this cycle of poor results. A low threshold means that the Commission will continue to rely on marginally cost-effective measures to estimate market potential, which directly affects the goals that the Commission sets for each EE program administrator.

### **3. The Draft Study makes spurious claims about portfolio cost-effectiveness.**

The Draft Study erroneously claims that it is unnecessary to apply a screening threshold higher than 1.0. The Draft Study asserts that “maintaining a 1.0 TRC cutoff at the measure-level results in an overall cost-effective portfolio, suggesting that it is not necessary for the CPUC to set the highest cutoff.”<sup>20</sup> This statement is unsubstantiated and misleading.

The EE Potential and Goals Study only considers resource programs (that is, EE programs that produce measurable energy savings). However, the Commission measures cost-effectiveness for EE portfolios as a whole. Each EE program administrator offers non-resource programs (such as workforce education and training), in addition to the resource savings programs. Because the non-resource programs do not have measurable benefits in terms of energy savings, they reduce the cost-effectiveness of the portfolio.

In other words, while the Draft Study provides estimates of the savings potential and costs of resource programs, it provides no information about non-resource programs. Therefore, the Draft Study cannot provide defensible estimates of the overall cost-effectiveness of the program administrators’ portfolios. Moreover, the Draft Study’s “portfolio cost-effectiveness” estimates exclude behavioral programs, which represent a

---

<sup>20</sup> Draft Study, p. 72 (Table 4-1).

large share of total savings and total spending in the forecast.<sup>21</sup> The Draft Study also acknowledges that there is uncertainty about non-incentive costs.<sup>22</sup>

The Draft Study's claims about portfolio cost-effectiveness are unsubstantiated and misleading. The Commission should direct the Energy Division to correct and substantiate claims regarding cost-effectiveness in the Draft Report.

#### **4. The Commission should apply a TRC screening threshold of 1.25.**

The Commission should take prudent steps to ensure that ratepayer-funded EE portfolios are cost-effective, as prescribed by state statutes and Commission decisions.<sup>23</sup> A sensible first step is to avoid relying on marginally cost-effective measures when developing forecasts of market potential or goals for EE portfolio savings.

The Commission should adopt a cost-effectiveness screening threshold of 1.25 for the reference scenario. This is consistent with stakeholder recommendations and with the Commission's criteria for EE annual budget advice letters (ABALs). In D.18-05-041, the Commission set a clear expectation that program administrators would submit annual budget advice letters with a forecast TRC ratio of 1.25 or higher.<sup>24,25</sup> Using a 1.25 cost-

---

<sup>21</sup> In the Alternative 2 scenario, behavioral programs constitute 18.8 percent of total spending. See: California 2019 Energy Efficiency Potential and Goals Study: Results Explorer, May 1, 2019, <http://acp.analytica.com/acpbeta/shared/#dash/fca42209-b98d-4e83-852f-3d075f99ce9b>.

<sup>22</sup> Draft Study, p. 113.

<sup>23</sup> See, Public Utilities Code section 381(b) says: "The Commission shall allocate [public purpose] funds ... [to] cost-effective energy efficiency and conservation activities." Also see D.18-05-041, p. 181 (Conclusion of Law 75).

<sup>24</sup> While 1.25 threshold is not binding for the "ramp years" of 2018-2022, the Commission established an additional process for program administrators that submit an ABAL with a TRC ratio between 1.0 and 1.25. These program administrators are required to hold a workshop "to explain why its forecasted TRC does not meet or exceed 1.25 and propose how it will transition to a TRC forecast of 1.25 during the ramp years. The PA must describe how it intends to achieve a portfolio TRC that meets or exceeds 1.0 on an evaluated basis." See D.18-05-041, p. 135.

Additionally, if a program administrator submits an ABAL with a forecast portfolio TRC ratio below 1.25, the Commission requires the program administrator to provide "an explanation of why the PA is not proposing a portfolio that meets a 1.25 TRC." See D.18-05-041, p. 129.

<sup>25</sup> D.18-05-041, pp. 132-137, 147-148, 161 (Findings of Fact 19-21), 176-177 (Conclusions of Law 36-37), and 181 (Conclusions of Law 74-75).

effectiveness screen for the market potential forecast would be reasonable and consistent with Commission policy.

**C. The Energy Division should revise the Draft Study to correct unrealistic assumptions about participation in behavioral measures.**

The Draft Study shows a rapid expansion in potential energy savings from behavioral, retrocommissioning, and operational (BRO) measures.<sup>26</sup> These results rely on unrealistic assumptions about the reach and effectiveness of BRO programs. Among other things, the Draft Study forecasts a rapid expansion of the Home Energy Reports programs that cannot feasibly be achieved while maintaining the effectiveness of these programs. Additionally, the Draft Study appears to rely on flawed assumptions about the impact of Building Benchmarking measures. Consequently, the forecast of energy savings potential from BRO measures is unrealistically high.

Additionally, the Draft Study does not apply the same cost-effectiveness screening threshold to BRO measures that it applies to equipment rebate measures.<sup>27</sup> The overall market potential scenarios apply a cost-effectiveness screening threshold of 0.85, 1.0 or 1.25 to equipment rebate measures. However, there is no equivalent variation across scenarios in the selection of BRO measures: Navigant applied a 1.0 TRC screen to BRO measures in all scenarios.<sup>28</sup> This means that although Alternative 2 uses a TRC screen of 1.25, it includes BRO measures (notably, Home Energy Reports) that may not clear this threshold.

The Energy Division should ensure that Alternative 2 includes only BRO measures that pass its cost-effectiveness screen. Specifically, the Energy Division should

---

<sup>26</sup> Draft Study, pp. 115-118.

<sup>27</sup> 2019 Potential and Goals Draft Study Presentation Workshop, May 9, 2019.

<sup>28</sup> The Draft Study provides just two scenarios for the BRO potential: The Reference BRO scenario and the Aggressive BRO scenario. These differ in the assumed penetration rate of BRO measures. Each of the five scenarios for overall market potential incorporates either the Reference BRO scenario or the Aggressive BRO scenario. Specifically, the Reference, Alternative 1, and Alternative 2 market potential scenarios include the Reference BRO scenario, while the Alternative 3 and Alternative 4 market potential scenarios include the Aggressive BRO scenario.

review the BRO measures and determine whether each measure has a TRC ratio of 1.25 or greater. For the purposes of estimating total market potential in Alternative 2, the BRO potential should be the sum of potential (in the Reference BRO scenario) from those measures that pass a 1.25 cost-effectiveness screen.

**D. The Energy Division’s Draft Study includes other factual and methodological errors.**

**1. The Draft Study includes flawed and unrealistic scenarios.**

The five scenarios provided in the Draft Study include several unrealistic features. First, as noted previously, the Draft Study does not reflect stakeholder recommendations to use a TRC screening threshold of 1.25 for the reference scenario and to use a TRC threshold of at least 1.0 for all scenarios.

Second, Alternative 4 caps incentive levels at 75 percent of incremental measure cost. As the Public Advocates Office and NRDC noted in feedback on scenarios, this is inconsistent with the Commission’s policy direction to limit incentives to 50 percent of incremental measure cost.

Third, Alternative 4 assumes that financing programs are “broadly available” to residential customers.<sup>29</sup> This is unrealistic, at least for the next several years. Current Commission policy does not allow program administrators to offer on-bill financing to residential customers,<sup>30</sup> outside of small pilots.<sup>31</sup> There are no active proposals to expand financing programs to residential customers. The Public Advocates Office and NRDC noted this issue in comments on scenario design.<sup>32</sup> SCE also recommended removing

---

<sup>29</sup> Draft Study, p. 3 (Table ES-1).

<sup>30</sup> D.09-09-047, pp. 275, 278, 290 and 349 (Finding of Fact 112). See also: D.13-09-044, p. 101 (Finding of Fact 25)

<sup>31</sup> D.13-09.044, p. 101 (Findings of Fact 20-24), p. 107 (Conclusions of Law 16-20), and pp. 113-114 (Ordering Paragraph 1)

<sup>32</sup> Joint Comments of the Public Advocates Office and Natural Resources Defense Council: Recommended Scenarios for EE Potential and Goals Study, February 28, 2019, <https://pda.energydataweb.com/#!/documents/2133/comments/list?q=potential%20goals%20scenario>.



assumptions about financing.<sup>33</sup> However, the Energy Division has taken no action to date to correct these errors in the Draft Study.

Fourth, Alternatives 3 and 4 rely on “aggressive” assumptions about participation in behavioral (BRO) measures. These assumptions are likely to prove unrealistic. In informal comments on the modeling of BRO measures, SCE recommended relying on the default assumptions about BRO measures or making “minimal adjustments” to the default.<sup>34</sup> The Public Advocates Office noted that the modeling shows a high degree of uncertainty about the key parameters for BRO measures. The Public Advocates Office recommended using simpler forecasting techniques and acknowledging the uncertainty in the forecast.

Lastly, the Draft Study does not provide a scenario that examines downside risks to portfolio performance. The Public Advocates Office and NRDC recommended developing a scenario that examines reduced customer interest in EE incentive programs, potentially reduced BRO savings claims due to increased rigor in measurement (metered savings), and the need for new third-party programs to ramp up.<sup>35</sup> The Energy Division has thus far failed to incorporate any of this feedback in the Draft Study.

## **2. The Draft Study includes appliance recycling measures that are defunct.**

The Draft Study incorrectly forecasts savings from recycling secondary refrigerators and freezers.<sup>36</sup> These measures have not been offered in available ratepayer-funded EE programs for several years, and none of the program administrators have

---

<sup>33</sup> SCE Comments on the February 21, 2019 Scenario Analysis webinar, February 28, 2019, <https://pda.energydataweb.com/#!/documents/2133/comments/list?q=potential%20goals%20scenario>.

<sup>34</sup> SCE Comments on the February 21, 2019 Scenario Analysis webinar, February 28, 2019, <https://pda.energydataweb.com/#!/documents/2133/comments/list?q=potential%20goals%20scenario>.

<sup>35</sup> Joint Comments of the Public Advocates Office and Natural Resources Defense Council: Recommended Scenarios for EE Potential and Goals Study, February 28, 2019, <https://pda.energydataweb.com/#!/documents/2133/comments/list?q=potential%20goals%20scenario>.

<sup>36</sup> The Draft Study estimates that residential refrigerator and freezer recycling programs have market potential of 16.17 gigawatt-hours in 2020, in the reference scenario. See Draft Study, 2019 PG Study Measure Level Results – Draft Public 4-26-19.xlsx.

indicated any intention of reviving them. Stakeholders noted this issue in the calibration workshop and recommended that the Energy Division remove the appliance recycling measures from the market potential forecast.<sup>37</sup> Despite stakeholder identification of this error, the Energy Division has thus far failed to revise the Draft Study to remove the appliance recycling measure from its forecast.

### **3. The Draft Study lacks adequate resolution about the geographical applicability of climate-sensitive measures.**

The Draft Study estimates potential for each measure at the geographical level of a utility service territory. Unfortunately, it does not account for differences in climate within service territories. This results in distorted estimates of the market potential of climate-sensitive measures.

Climate-sensitive measures (mainly heating, ventilation, and air conditioning measures) are likely to be cost-effective in some climate zones but not all. For example, an efficient residential air-conditioner may be cost-effective in the Central Valley but not in the Bay Area.

The Draft Study calculates the *average* cost-effectiveness of each measure across the utility's entire service territory. If the measure's cost-effectiveness is sufficient to pass the cost-effectiveness screen in a given scenario, then it is deemed to be available to all customers in the utility's service territory. If it fails the cost-effectiveness screen on average, then it is not available to any customers.

Using the example of residential air-conditioning, if the air conditioner has a TRC ratio slightly above 1.0 for PG&E's entire service territory, then the model assumes that PG&E will incentivize it for coastal homes as well as Central Valley residents. On the other hand, if the air conditioner fails the cost-effectiveness screen due to low cost-effectiveness in the coastal regions, then the model assumes that PG&E will not incentivize it anywhere.

---

<sup>37</sup> 2019 Potential and Goals Study Calibration Workshop, March 21, 2019.

In practice, EE incentive programs designs are likely to be better designed and more targeted. Therefore, to develop accurate and useful forecasts of market potential, the model should disaggregate climate-sensitive measures geographically. Ideally, the potential and goals study would model market potential in each of California's climate zones to accurately represent climate-sensitive measures. However, at a minimum, the model should be revised to break each climate-sensitive measure into at least two geographic zones that reflect coastal climates and interior climates.

The Public Advocates Office recognizes that it may not be feasible to make changes to the model to account for climate-sensitive measures geographically before approval of goals for 2020. However, at a minimum, the Commission should direct the Energy Division to update the model to account for climate-sensitive measures for the subsequent potential and goals cycle.

### **III. RESPONSES TO RULING QUESTIONS**

- 1. Commission staff proposed five scenarios that attempt to capture a reasonable range of energy efficiency potential for 2020-2030. Which scenario – either in the Navigant study or an alternative recommendation – is most appropriate to inform 2020 – 2030 goals? Justify your recommendation.**

The Commission should base the goals on Alternative 2 in the Draft Study, with revisions to correct the errors discussed in these comments. Navigant initially proposed to use Alternative 2 as the reference scenario. All stakeholders supported using these parameters as the reference scenario. Without substantiation, the Energy Division disregarded stakeholder input. Alternative 2 is ambitious but also achievable, unlike the current reference scenario, which is likely to lead to energy efficiency portfolios that are not cost-effective.

The Energy Division should revise Alternative 2 to address the issues discussed in these comments. Specifically, the Energy Division should make the following modifications:

- Remove residential lighting incentive programs from the market potential forecast (while retaining these measures in the forecast of technical potential).
- Remove appliance recycling programs from the market potential forecast (while retaining these measures in the forecast of technical potential).
- Modify the Reference BRO scenario to moderate the assumed expansion of Home Energy Reports. The Energy Division should reduce the expected penetration rate, by assuming that Home Energy Reports will target only the upper 50 percent of residential customers in terms of usage, rather than the 75 percent currently assumed.<sup>38</sup>
- Reduce the applicability rate of Home Energy Reports to account for master-metered manufactured homes, as discussed below in response to question 2(b).
- Apply a cost-effectiveness screening threshold of 1.25 to BRO measures. For Alternative 2, the Energy Division should sum the savings potential (in the Reference BRO scenario) of each BRO measure that has a TRC ratio of at least 1.25.
- Correct the treatment of Building Benchmarking or remove this measure, as discussed below in response to question 2(b).

With these revisions, Alternative 2 is an appropriate basis for goals.

The Energy Division should also develop a “business as usual” scenario that reflects cautious assumptions about near-term participation in EE incentive programs and behavioral programs, in line with the previous recommendations of the Public Advocates Office and NRDC. This scenario will inform the Commission about the amount of energy savings that are likely to be realized if current trends continue and program administrators do not make substantial changes to EE programs.

This scenario should use a slower adoption curve for equipment rebate measures, and the status quo rate of participation in BRO programs. It should incorporate the following assumptions:

---

<sup>38</sup> The Draft Study correctly assumes that Home Energy Reports programs should have a comparison group equal in size to the participant group. This means that, if Home Energy Reports programs target 50 percent of customers, the penetration rate should be capped at 25 percent.

- Lower customer interest in participating in rebate programs compared to past years, because savings opportunities are less dramatic than formerly, incentives are less generous, or the *ex ante* review process deters participation in custom projects.
- Newly procured third-party programs require time to ramp up and enroll customers, resulting in lower savings claims in the first one to two years.
- The penetration rate of Home Energy Reports remains stable or increases modestly, because these programs are targeted at homes with high energy usage.
- Normalized Metered Energy Consumption (NMEC) brings increased rigor to the measurement and verification of savings claims for programs other than Home Energy Reports. It is likely that new third-party programs will offer BRO measures and will use NMEC to validate savings claims. This may result in lower savings claims than anticipated.

Developing a scenario with these assumptions will model the impact of several recent trends or policy developments that are likely to reduce participation in EE programs.

**2. Do you recommend alternative values for any of the inputs or modeling used in the Navigant study? If so, specify the particular input or modeling (with section or page references, if applicable) and your recommendation for alternative values. Justify your recommendation and provide references. In particular, we invite responses regarding the following specific assumptions used in the Navigant study:**

**a. Do you agree with the cost assumptions used in the Navigant study? Explain why or why not, and (if applicable) provide references to alternative sources of information for specific cost assumptions used in the Navigant study.**

No comment at this time.

**b. Do you agree with the assumptions used in the BROs section of the Navigant study? Explain why or why not, and (if applicable) provide specific references to alternative sources of information for specific assumptions used in the Navigant study. In particular:**

**i. HERs represent a significant amount of incremental electric savings in 2020. Do you agree with the assumptions used to forecast HERs energy savings in this study?**

The Draft Study incorporates several flawed assumptions about Home Energy Reports. The Commission should direct the Energy Division to correct these flaws before issuing a final study.

First, the Draft Study assumes that the penetration rate of Home Energy Reports will increase dramatically. However, such an increase would represent a significant shift in the nature of the Home Energy Reports programs. The program administrators currently target homes with unusually high usage, which offer the greatest opportunities for energy savings.<sup>39</sup> The program administrators will not be able to achieve the penetration rates assumed in the Reference BRO Scenario (much less the Aggressive BRO Scenario) while continuing to target primarily high energy users.

If program administrators expand Home Energy Reports to a broader set of residential customers, then the program's effectiveness and savings per household will decline. The new participants will likely have fewer opportunities to rectify problems that waste energy. Accordingly, the percentage of energy saved in each participating home will decline.

Second, the Draft Study estimates the rate of savings in each participating home based on evaluations of the existing Home Energy Reports programs.<sup>40</sup> However, these evaluations show the savings rates for high-usage homes, not typical homes. The Draft Study fails to recognize that the expected energy savings per home will decline as the penetration rate rises.

Moreover, the Draft Study fails to consider how expanding Home Energy Reports to typical homes will affect the program's cost-effectiveness. The per household costs of Home Energy Reports are largely fixed and independent of household energy use, so if

---

<sup>39</sup> 2019 Potential and Goals Draft Study Presentation Workshop, May 9, 2019.

<sup>40</sup> Draft Study, pp. C-2 to C-3.

the programs achieve less savings per participating home, their cost-effectiveness will decline. The programs may even fall below a cost-effectiveness ratio of 1.0. For instance, SCE noted in the May 9, 2019 workshop that SCE's Home Energy Reports program currently has a TRC ratio of 1.07, indicating that the program has little capacity to support increased costs or decreased benefits.<sup>41</sup> As noted in Section C above, the Draft Study applies a 1.0 TRC screening threshold to BRO measures but does not employ a dynamic analysis of cost-effectiveness depending on the penetration rate. It is possible that the Home Energy Reports programs are already appropriately scaled to capture cost-effective energy savings, and a substantial expansion would cause them to fall below the screening threshold.

Lastly, the Draft Study fails to account for master-metered manufactured homes. The Draft Study recognizes that Home Energy Reports are not applicable to master-metered multifamily homes.<sup>42</sup> However, it does not make a corresponding adjustment for manufactured homes, many of which are also master-metered. The Energy Division should revise the Draft Study to estimate the fraction of residential customers who live in master-metered manufactured homes and reduce the applicability of Home Energy Reports by this percentage.

**ii. The Navigant study includes new items in BROs forecasting, which indicate significant savings potential. Do you agree with the building benchmarking and universal audit tool assumptions used to calculate BROs savings?**

The Draft Study makes several problematic assumptions about the Building Benchmarking program, which accounts for a significant share of the electricity savings potential in the reference scenario.<sup>43</sup> Any savings from Building Benchmarking are highly speculative given the limitations in currently available data, and the Draft Study appears to misinterpret the underlying evidence.

---

<sup>41</sup> 2019 Potential and Goals Draft Study Presentation Workshop, May 9, 2019.

<sup>42</sup> Draft Study, pp. C-1 to C-2.

<sup>43</sup> Draft Study, p. 116 (Figure 4-69).

First, the Draft Study treats all energy savings from Building Benchmarking as claimable through incentive programs.<sup>44</sup> However, as the Draft Study notes, Building Benchmarking is mandated by ordinance in San Francisco and “there is uncertainty as to whether the utilities will be able to claim savings if benchmarking is mandated by some level of government.”<sup>45</sup> To the extent that building benchmarking is mandated by law, it should be treated as a code or standard, and should be included in the codes and standards component of the forecast.

Second, the Draft Study draws on very limited evidence to estimate the savings that each participating customer will realize. The study draws on four examples of past benchmarking programs, only one of which took place in California. Each of these examples has serious problems that cast doubt on its relevance:

- The California example (San Francisco’s mandatory program) reported results for only 176 properties.<sup>46</sup>
- Results from Chicago and New York City may not be applicable to California, given the substantial differences in climate.
- The national Energy Star Portfolio Manager program reported results for the three-year period from 2009 to 2011, with 2008 as the baseline.<sup>47</sup> This study coincided with the Great Recession, an economically unique period. It is likely that some (if not all) of the measured energy savings are due to reduced economic activity.
- The national Energy Star Portfolio Manager program appears to have been a voluntary, opt-in program rather than a broad

---

<sup>44</sup> The incentive programs forecast includes equipment rebate programs, BRO programs, and low-income programs. The total market potential forecast comprises savings from incentive programs and savings from codes and standards programs.

<sup>45</sup> Draft Study, p. C-19.

<sup>46</sup> San Francisco Department of the Environment, “San Francisco Existing Commercial Buildings Performance Report, 2010-2014,” p. 14.  
[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwihi76tv4ziAhXCqp4KHd60DMIQFjAAegQIAhAC&url=http%3A%2F%2Fuli.org%2Fwp-content%2Fuploads%2FULI-Documents%2FSEnergybenchmarkingreport.pdf&usg=AOvVaw0begNQMHVZ\\_UbO0aH2\\_ayS](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwihi76tv4ziAhXCqp4KHd60DMIQFjAAegQIAhAC&url=http%3A%2F%2Fuli.org%2Fwp-content%2Fuploads%2FULI-Documents%2FSEnergybenchmarkingreport.pdf&usg=AOvVaw0begNQMHVZ_UbO0aH2_ayS).

<sup>47</sup> Energy Star Portfolio Manager, “Data Trends: Benchmarking and Energy Savings,”  
[https://www.energystar.gov/sites/default/files/buildings/tools/DataTrends\\_Savings\\_20121002.pdf](https://www.energystar.gov/sites/default/files/buildings/tools/DataTrends_Savings_20121002.pdf).



program with default or randomly assigned participation.<sup>48</sup> It is likely that the voluntary participants were unusually conscious of their energy usage or motivated to reduce their energy bills.

Third, the Draft Study misinterprets the findings of past benchmarking programs. The San Francisco program reported the energy savings rate of the “consistently complying properties,” rather than all participants.<sup>49</sup> This is likely to represent a skewed estimate, not a representative sample. Even so, San Francisco found savings of only 0.1 to 3.9 percent annually. The Energy Star, Chicago<sup>50</sup> and San Francisco<sup>51</sup> programs all reported cumulative savings over multiple years,<sup>52</sup> or year-over-year annual energy savings for the same property, rather than savings relative to a comparison group. It is unclear whether the Draft Study treats these savings estimates as annual or cumulative values.

Fourth, the available evidence suggests that benchmarking has very little behavioral impact. The Energy Star, Chicago and San Francisco reports all find that savings persist for multiple years. If benchmarking programs find persistent energy savings, this strongly suggests that the program is driving adoption of efficient technologies, rather than behavior change. For example, in 2017, Chicago found minimal savings (0.37 percent) in the first year of participation but *increasing* savings in subsequent years of participation<sup>53</sup> – a pattern that is consistent with commercial building

---

<sup>48</sup> Energy Star Portfolio Manager, “Data Trends: Benchmarking and Energy Savings,” [https://www.energystar.gov/sites/default/files/buildings/tools/DataTrends\\_Savings\\_20121002.pdf](https://www.energystar.gov/sites/default/files/buildings/tools/DataTrends_Savings_20121002.pdf).

<sup>49</sup> San Francisco Department of the Environment, “San Francisco Existing Commercial Buildings Performance Report, 2010-2014,” p. 14.

<sup>50</sup> City of Chicago, “2017 Chicago Energy Benchmarking Report,” p. 21 (Table 2). [https://www.chicago.gov/city/en/depts/mayor/supp\\_info/chicago-energy-benchmarking/Chicago\\_Energy\\_Benchmarking\\_Reports\\_Data.html](https://www.chicago.gov/city/en/depts/mayor/supp_info/chicago-energy-benchmarking/Chicago_Energy_Benchmarking_Reports_Data.html).

<sup>51</sup> San Francisco Department of the Environment, “San Francisco Existing Commercial Buildings Performance Report, 2010-2014,” p. 14.

<sup>52</sup> For example, Energy Star reported that participants achieved 2.4 percent savings each year, so that energy consumption was 7.0 percent lower in year 3 than in the baseline year.

<sup>53</sup> City of Chicago, “2017 Chicago Energy Benchmarking Report,” p. 21 (Table 2). [https://www.chicago.gov/city/en/depts/mayor/supp\\_info/chicago-energy-benchmarking/Chicago\\_Energy\\_Benchmarking\\_Reports\\_Data.html](https://www.chicago.gov/city/en/depts/mayor/supp_info/chicago-energy-benchmarking/Chicago_Energy_Benchmarking_Reports_Data.html).

owners using the benchmarking data to identify opportunities for capital improvements. The Draft Study assumes that “half of the energy savings [from building benchmarking] come from technologies and half from operation-related behaviors,” but there is no data to support this assumption.<sup>54</sup>

Fifth, the Draft Study uses an ad hoc assumption that 60 percent of the energy savings are in electricity and 40 percent are in gas. There is no evidence for this assumption. Changing this assumption could substantially affect the cost-effectiveness of the program.

Finally, Navigant used 2016 results from Chicago’s benchmarking program, but 2017 data are now available. The 2017 results show sharply reduced impacts.<sup>55</sup> For example, the 2016 report found that properties reduced energy consumption by 4.0 percent after two years of participation, but the 2017 report found only a 1.3 percent savings after two years.<sup>56</sup>

- c. Whole Building rebate programs represent a significant portion of potential savings. Whole Building rebate programs encompass elements from multiple technology types and construction measures. Do you agree with the assumptions used in the Whole Building section of the Navigant study? Explain why or why not, and (if applicable) provide specific references to alternative sources of information for specific assumptions used in the Navigant study.**

No comment at this time.

---

<sup>54</sup> Draft Study, p. C-20.

<sup>55</sup> City of Chicago, “City of Chicago Energy Benchmarking Report 2016,” p. 51 (Figure 14). [https://www.chicago.gov/city/en/depts/mayor/supp\\_info/chicago-energy-benchmarking/Chicago\\_Energy\\_Benchmarking\\_Reports\\_Data.html](https://www.chicago.gov/city/en/depts/mayor/supp_info/chicago-energy-benchmarking/Chicago_Energy_Benchmarking_Reports_Data.html).

<sup>56</sup> City of Chicago, “2017 Chicago Energy Benchmarking Report,” p. 21 (Table 2). [https://www.chicago.gov/city/en/depts/mayor/supp\\_info/chicago-energy-benchmarking/Chicago\\_Energy\\_Benchmarking\\_Reports\\_Data.html](https://www.chicago.gov/city/en/depts/mayor/supp_info/chicago-energy-benchmarking/Chicago_Energy_Benchmarking_Reports_Data.html).

**d. Do you agree with the assumptions used in the Low-Income section of the Navigant study? Explain why or why not, and (if applicable) provide specific references to alternative sources of information for specific assumptions used in the Navigant study.**

The Draft Study inappropriately uses a market-adoption model to forecast the diffusion of efficient technologies in the low-income residential sector. This model is not applicable to the Energy Savings Assistance program (ESA), where customers are not making a purchasing decision.

Rather than using the market-adoption model to develop a “market potential” for low-income energy efficiency, the potential and goals study should develop a technical potential forecast and a “program achievement potential” for ESA. To estimate ESA’s program achievement potential, the Energy Division should follow these steps:

- Estimate technical potential in the low-income sector.
- Assume that ESA will reach a significant percentage (but less than 100 percent) of eligible customers by 2030, since no program can feasibly reach every customer.
- Assume that ESA will achieve a significant percentage of the savings potential in each participating home (but less than 100 percent). Not every measure is feasible in every home: the structural condition of certain homes may preclude installing certain measures, and customers may prefer not to adopt measures that require either extensive retrofits or behavioral changes.
- Divide the remaining potential by 11 to spread it across the years 2020 to 2030.

The above approach can inform the Commission about the energy savings that can feasibly be achieved through ESA.

**3. Should the Commission adopt goals that include energy savings potential from the low-income sector? Explain why or why not.**

The Commission should not adopt goals that include energy savings potential from the low-income sector. As noted above, a market-adoption model based on incentives does not accurately represent the savings potential in households facing

substantial income constraints and is at odds with the Commission's programmatic approach to capturing energy savings in the low-income sector.

Furthermore, the goals adopted in this proceeding are binding on portfolios administered with energy efficiency funds, but not on low-income assistance programs. Recent decisions have repeatedly included failure to meet savings goals as a triggering event requiring program administrators to file new Business Plan applications.<sup>57</sup> Including low-income savings in EE program administrators' goals reduces clear lines of accountability for EE program administrators and EE funding.

The Commission should remove savings potential from the low-income sector from the goals for programs funded by mainline EE portfolios and instead include only those sectors that the EE portfolios are charged with reaching. For the low-income sector, the final results on low-income savings potential identified by the study (whether using the market-adoption model or the method recommended above) should be forwarded to the upcoming low-income assistance programs application dockets for consideration in setting energy savings goals in those proceedings.

**4. In D.10-04-029, the Commission adopted a different process for crediting savings from comparative energy use (e.g., HERs) programs, prohibiting the utilities from submitting workpapers for ex ante numbers to project savings for these programs; instead, savings from these programs can only be credited after the Commission verifies them. Results from HERs program impact evaluations have been consistently high for the past several (approximately seven) years. Should the Commission continue to evaluate home energy report behavior programs that have had consistent evaluation results for several years?**

No comment at this time.

---

<sup>57</sup> D.15-10-028, p. 123 (Ordering Paragraph 2) and D.18-05-041, p. 57.

**5. What are the impacts of reduced energy savings goals, if adopted by the Commission? Should reduced energy savings goals result in smaller portfolio budgets, going forward? Explain why or why not, and (if applicable) how much smaller.**

Yes, lower energy savings goals should lead to lower budgets. The program administrators' budgets should be based on the level of spending required to efficiently achieve cost-effective energy savings. If there is less potential to capture than in previous years, then program administrators should request less funding in their next annual budget advice letter or Business Plan application.

The Draft Study shows that EE budgets for resource programs can be reduced significantly while continuing to achieve all energy savings that are feasible and cost-effective. The Draft Study provides estimates of the level of spending for EE incentive programs that is required to achieve the potential energy savings.<sup>58</sup> The online Results Explorer provides additional detail.<sup>59</sup> Table 6 summarizes the program spending forecasts from the Draft Study. (These program spending estimates will be updated when the Energy Division revises the Draft Study.)

---

<sup>58</sup> Draft Study, pp. 78-81 and 117. Figures 4-3 through 4-8 illustrate the statewide spending levels needed to achieve the market potential in each scenario. These figures include spending on equipment rebate programs, BRO programs, and low-income programs. Additionally, figures 4-71 and 4-72 isolate the spending expected for BRO programs.

<sup>59</sup> California 2019 Energy Efficiency Potential and Goals Study: Results Explorer, May 1, 2019, <http://acp.analytica.com/acpbeta/shared/#dash/fca42209-b98d-4e83-852f-3d075f99ce9b>.

<p style="text-align: center;"><b>Table 6</b></p> <p style="text-align: center;"><b>EE Resource Program Spending to Achieve Goals</b></p>					
<p style="text-align: center;">2020 Program Spending Estimates, in Millions</p> <p style="text-align: center;">Alternative 2 Scenario in the Draft Study</p>					
<b>Sector</b>	<b>PG&amp;E</b>	<b>SCE</b>	<b>SDG&amp;E</b>	<b>SoCalGas</b>	<b>Statewide</b>
Residential	\$28	\$22	\$9	\$5	\$65
Industrial	\$16	\$10	\$1	\$7	\$34
Commercial	\$41	\$77	\$8	\$11	\$137
Agricultural	\$19	\$4	0	\$1	\$24
Behavioral*	\$26	\$18	\$7	\$8	\$60
<p>*Spending values for BRO programs are visual approximations from the online Results Viewer. Numbers may not be precise.</p>					
<p><b>Source:</b> Draft Study, Results Explorer.</p>					

The figures in Table 7 exclude non-resource programs and low-income programs. Spending levels for ESA will be determined in upcoming low-income assistance program application proceedings, but EE budgets need to allow for non-resource programs. In considering likely funding requests associated with changes in EE potential and goals, it is reasonable to assume that budgets hold steady for non-resource programs such that the spending levels that each program administrator requested in its EE business plan and its most recent annual budget advice letter continue as planned.

Therefore, as a guidepost for future funding requests in upcoming annual budget advice letters or Business Plan applications, it is reasonable to assume that the overall EE budget for each program administrator will approximate the sum of the program spending forecast from the final Potential and Goals study (in the same scenario used to set energy savings goals) and the expected non-resource spending level. Since annual budgets and

cost recovery authority are approved in annual budget advice letters due in September, program administrators will have a timely opportunity to adjust budgets in response to the Commission's final decision on goals.

**6. Given the changes in potential for 2020, should there be any changes to the required components of annual budget advice letters (ABALs) due from the PAs in September 2019, and/or to the process or criteria for reviewing the September 2019 ABALs (Sections 7.2 and 7.3 of D.18-05-041)? Explain why or why not. Any recommendations in response to this question should focus on new ideas and not repeat recommendations previously made and that the Commission has already dismissed.**

The Commission should adhere to the ABAL review process described in D.18-05-041 and enforce its requirements. Unfortunately, the Energy Division disregards the Commission's clear direction regarding the review and approval of ABALs and, therefore, essentially changes Commission decisions in substantive and important ways.

In its April 2, 2019 dispositions of PG&E's and SCE's 2019 ABALs, the Energy Division ignored the approval criteria that the Commission adopted in D.18-05-041,<sup>60</sup> as well as the triggers for filing new business plans that the Commission adopted in D.15-10-028 and reiterated in D.18-05-041.<sup>61</sup> In doing so, the Energy Division relieved PG&E and SCE of obligations that the Commission adopted.

The Energy Division's actions undermine the Commission's authority. When the Commission establishes clear rules and policies, the Commission must enforce them. Otherwise, the Commission reduces its own authority and invites further disregard for Commission decisions, which leads regulated utilities to act with impunity.

To ensure that the Energy Division correctly applies the mandates of D.18-05-041, the Energy Division's review of the ABALs should be limited to a ministerial review to

---

<sup>60</sup> D.18-05-041, pp. 132-134, 181 (Conclusion of Law 74), and 193 (Ordering Paragraphs 49-51).

<sup>61</sup> D.15-10-028, p. 123 (Ordering Paragraph 2); D.18-05-041, pp. 57, 130-131, and 181 (Conclusion of Law 74)

verify that the submitted portfolio meets the goals, meets the cost-effectiveness threshold, fits within the budget cap, and contains no factual, technical, or legal errors. If an ABAL is protested by any party on factual, technical, legal, or compliance grounds, the Commission should require the Energy Division to prepare a resolution for the Commission to review the ABAL.

Finally, the Commission should consider whether it is time for all EE program administrators to file new business plans, based on the new information provided by the potential and goals study. The Potential and Goals Study provides useful information about the total potential for energy savings from EE programs and about the specific sectors, program types, and measures where the greatest opportunities exist. Filing new business plan applications would allow the program administrators to optimize their portfolios to align with these opportunities.

The Public Advocates Office previously advocated that the Commission require PG&E and SCE to file new business plans because they have met the triggers established in D.15-10-028 and D.18-05-041.<sup>62</sup> The Commission should consider directing all PAs to file new business plans.

#### **IV. CONCLUSION**

For the above stated reasons, the Public Advocates Office respectfully requests that the Commission adopt the recommendations discussed herein.

---

<sup>62</sup> D.15-10-028, p. 123 (Ordering Paragraph 2); D.18-05-041, pp. 57, 130-131, and 181 (Conclusion of Law 74).



Respectfully Submitted,

/s/ TOVAH TRIMMING

---

Tovah Trimming  
Attorney

Public Advocates Office  
California Public Utilities Commission  
300 Capitol Mall, Suite 418  
Sacramento, CA 95814  
Telephone: (916) 823-4836  
Email: [Tovah.trimming@cpuc.ca.gov](mailto:Tovah.trimming@cpuc.ca.gov)

May 21, 2019