

ENERGY EFFICIENCY POLICY MANUAL

Version 6

April 2020

Applicable to post-2018 Energy Efficiency Programs

Table of Contents

(Click on each heading to access that part of the document)

i. **[Introduction](#)**

ii. **[How to Use this Document](#)**

iii. **[Common Terms and Definitions](#)**

I. [Energy Efficiency Policy Objectives](#)

1. [Energy Efficiency as a Procurement Resource](#)
2. [Energy Savings Goals](#)
3. [Implementation of California Energy Efficiency Strategic Plan](#)
4. [Energy Efficiency Program Design](#)
5. [Program Portfolio Development, Balance and Management](#)
6. [Integrated Demand Side Management](#)
7. [Emerging Technologies](#)
8. [Codes and Standards](#)
9. [Marketing, Outreach and Education](#)
10. [Competitive Bidding for Third Party Programs](#)
11. [Local Government and Institutional Partnerships](#)
12. [Pilot Programs](#)

II. [Funding Guidelines for IOUs](#)

1. [Energy Efficiency Funds from Procurement and Gas Surcharge](#)
2. [Cost Caps and Targets](#)
3. [Fund Shifting Rules](#) (See Appendix A)
4. [Funding Business Plans](#)

5. [Shared Funding and Funding for Evaluation, Measurement, & Valuation \(EM&V\)](#)
6. [Treatment of Unspent Funds from Prior Portfolio Cycles](#)
7. [Program Cancellation](#)

III. Regional Energy Networks & Community Choice Aggregators

1. [Regional Energy Networks](#)
2. [Community Aggregators](#)
3. [Business Plans](#)
4. [Implementation Oversight and Reporting Requirements](#)
5. [Threshold of Review](#)
6. [Program Cost-Effectiveness Threshold](#)
7. [Community Choice Aggregator \(CCA\) and Regional Energy Network \(REN\) Funding](#)
8. [Evaluation, Measurement and Verification Requirements](#)

IV. Cost-Effectiveness

1. [Standard Practice Manual \(SPM\)](#)
2. [Total Resource Cost Test \(TRC\)](#)
3. [Program Administrator Cost Test \(PAC\)](#)
4. [Application of the TRC and the PAC, the Dual-Test](#)
5. [Overall Cost-Effectiveness of Investor Owned Utilities \(IOU\), REN, and CCA Portfolios](#)
6. [Avoided Costs and Other Inputs](#)
7. [Cost-Effectiveness Adjustments for Free-Ridership & Market Effects](#)
8. [Portfolio Filing of Prospective Cost Effectiveness](#)
9. [Common Sector Level Metrics](#)
10. [Cost Sharing & Cost-Effectiveness Across Utility Service Territories](#)
11. [Cost Effectiveness Requirements for Fuel Substitution Programs](#)

12. [Mid-Cycle Funding Augmentations](#)

13. [References](#)

V. Implementation Oversight and Reporting Requirements

1. [Program Reporting Requirements](#)

2. [Business Plans and Annual Budget Advice Letters](#)

3. [Counting of Savings](#)

VI. Ex Ante Savings and Review

1. [CPUC Oversight of Ex Ante Values](#)

2. [Database of Energy Efficiency Resources \(DEER\) and Non-DEER Measures and Workpapers](#)

3. [Freezing of Ex Ante Values](#)

4. [Mid-year updates of Ex Ante Values](#)

5. [Ex Ante Review of Non-DEER Measures](#)

6. [Installation Rate for DEER and non-DEER Measures](#)

7. [Establishment of Baseline for use in Establishing TRC Savings and Costs.](#)

8. [Custom Projects](#)

9. [Heating Ventilation and Air Conditioning \(HVAC\) Interactive Effects](#)

10. [Persistence of Savings](#)

11. [Gross Realization Rate](#)

12. [Statewide Workpapers](#)

VII. Evaluation, Measurement and Verification (EM&V)

1. [Purpose of EM&V](#)

2. [IOU and Energy Division \(ED\) Collaboration on EM&V Plan](#)

3. [Energy Division Role in EM&V Administration](#)

4. [IOU Role in EM&V Administration](#)

5. [ED Role in IOU-led Studies](#)

6. [IOU Role in ED-led Studies](#)
7. [Dispute Resolutions](#)
8. [Public Vetting Process](#)
9. [EM&V in the Rolling Portfolio](#)

VIII. Shareholder Incentive Mechanism

1. [Incentive Mechanism Criteria.](#)
2. [Energy Savings and Performance Incentive \(ESPI\) Categories](#)
3. [Scaling Incentive Earnings Potential for Resource Savings](#)
4. [Ex Ante Review Performance Scoring](#)
5. [Uncertain Measures](#)
6. [Calculating Resource Savings Incentive Awards](#)
7. [Verification of Expenditure and Claims Data](#)
8. [Resource Savings Claim and Expenditure Eligibility](#)
9. [Approval of Incentive Claims](#)
10. [Dispute Resolution of Ex Post Evaluations](#)
11. [References](#)

IX. Third Party Solicitation Process

1. [The Two Stage Solicitation Process](#)

2. [Scoring Solicitations](#)
3. [Solicitation Schedule](#)
4. [Energy Division Review of Solicitations](#)
5. [Independent Evaluator's Role in Solicitation Process](#)
6. [Workforce Standards](#)

X. Advisory Groups

1. [California Energy Efficiency \(EE\) Advisory Coordinating Committee \(CAEECC\)](#)
2. [Procurement Review Groups \(PRGs\)](#)

XI. Affiliate & Disclosure Rules

1. [Transactions with IOU Affiliate](#)
2. [Treatment of Energy Efficiency Service Providers](#)
3. [Conflict of Interest](#)

XII. Process & Procedural Issues

1. [Energy Efficiency Policy Manual Disclaimer](#)
2. [Modifications to Rules or Existing Policy](#)
3. [Complaints and Dispute Resolution](#)

APPENDIX A: [Adopted Fund Shifting Rules](#)

APPENDIX B: [Glossary](#)

APPENDIX C: [Cost Categories, Related Cap, and Targets](#)

APPENDIX D: [Phase 2 Workpaper Review](#)

ENERGY EFFICIENCY POLICY MANUAL Version 6.0 FOR POST-2018 PROGRAMS

***i* Introduction**

This document presents the California Public Utilities Commission's (CPUC's) policy rules and related reference documents for the administration, oversight, and evaluation of energy efficiency (EE) programs funded by ratepayers in California. The purpose of the Energy Efficiency Policy Manual is to provide the most up to date list of the rules established by Commission Decisions and Resolutions that govern the administration of energy efficiency programs. This manual enumerates standing Commission rules that continue to apply to the current portfolio even as subsequent decisions supersede past rules. Version 6.0 shall apply to all energy efficiency activities commencing in program year (PY) 2018 and beyond. The policy rules, terms and definitions contained herein pertain to efficiency activities funded through the following mechanisms:

- The gas public purpose program (PPP) surcharges, as authorized by §890- 900.
- Electric procurement rates, as authorized by the Commission.

The rules in this policy manual, unless specifically indicated, apply to all the following entities that are funded through the mechanisms above and include the four large investor-owned utilities (and their third party implementers and administrators), including:

- Pacific Gas and Electric Company (PG&E),
- Southern California Edison Company (SCE),
- San Diego Gas & Electric Company (SDG&E) and
- Southern California Gas Company (SoCalGas);
- Community Choice Aggregators (CCA), and
- Regional Energy Networks (RENs)

Chapter III focuses more specifically on the CCA and RENs:

More information on CCAs can be found here:

- <https://www.cpuc.ca.gov/general.aspx?id=2567>

More information on Regional Energy Networks can be found here (among other EE program administrator information):

- <https://www.cpuc.ca.gov/General.aspx?id=4460>

This manual does not address the following programs:

- Energy Savings Assistance Programs for low income customers,
- California Alternative Rates for Energy (CARE) for low-income customers,
- Interruptible rate or load management programs,
- Self-generation and demand-response programs developed in response to Assembly Bill (AB) 970 (§ 399.15(b)), or
- Small and/or Multijurisdictional Utilities (SMJUs).

This document, which supersedes all previous versions of the Energy Efficiency Policy Manual, provides many of the CPUC's policy rules ("Rules") stipulated in CPUC decisions and resolutions that apply on an ongoing basis to current (circa 2018) and future energy efficiency portfolios. This manual is compiled by staff and is not formally adopted by the CPUC. As such, it is intended to be a handy reference for many of the significant and/or more commonly applied efficiency portfolio Rules, but it is not an exhaustive compilation of all rules developed in CPUC decisions and resolutions that apply to the energy efficiency portfolios. In addition, while much of the CPUC's guidance referenced in this document applies specifically to IOUs who implement and administer EE programs, all program implementers (including third-party, CCA's, etc.) should seek to adhere to them as well, unless clearly exempt, and should confer with the IOU program administrators, who oversee the EE portfolio and all EE programs, for clarification as needed.

i. How to Use this Document

This document is intended to provide a high-level overview of the significant policies that impact energy efficiency programs in the State of California as determined by the California Public Utilities Commission. It does not provide in-depth detail about each policy area but provides a summary and links to the various regulatory documents that do. The purpose of this document is to provide a birds-eye view of the relevant policy rules that all energy efficiency program implementers should know while also providing them the tools and resources needed to develop more expertise in this area as they see fit. As previously noted, this document should NOT be considered a completely detailed source of information, in and of itself, but it does provide comprehensive access to all the relevant policy documents in the form of references and links. While links to all documents referenced in this

document are provided, these documents can also be found on the Commission's website by typing in the document number (all letters capitalized with no dashes) in the search bars located here:

<https://www.cpuc.ca.gov/documents/#DocTypeSearches>

ii. Common Terms and Definitions

Common terms and definitions will facilitate the administration and evaluation of energy efficiency activities. In particular, program definitions should be designed to facilitate to the extent possible: (1) the identification of energy efficiency activities by end-use savings potential, (2) the evaluation, measurement and verification (EM&V) of those activities based on Commission-adopted EM&V protocols, and (3) the coordination of program administration and evaluation with resource planning and procurement needs. To this end, all entities subject to these rules and all program implementers should use the definitions included in Appendix B when characterizing any proposed program activity. The burden is on them to justify any departure from those definitions.

I. Energy Efficiency Policy Objectives

- 1. Energy Efficiency as a Procurement Resource.** CPUC and State energy policy, as expressed in the original 2005 Energy Action Plan (EAP) and reaffirmed in Decision [\(D\).04-12-048](#), strives to make energy efficiency and demand response the IOUs' highest priority procurement resources. The [2008 EAP](#) promotes ongoing support for the loading order and identifies energy efficiency and demand response as the State's preferred means of meeting growing energy needs. After cost-effective energy efficiency and demand response resources, we rely on renewable sources for power and distributed generation.¹ This is also consistent with Pub. Util. Code § 454.5(b)(9)(C),² which requires IOUs to first meet their "unmet energy resource needs through all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible." In order to promote the resource procurement policies articulated in the Energy Action Plan and by this CPUC, demand-side energy efficiency activities funded by ratepayers should offer programs that serve as alternatives to supply-side resource options (demand-side energy resource programs). By keeping energy resource procurement costs as low as possible through the deployment of a cost-effective portfolio of resource programs, over time all customers will share in the resource savings from energy efficiency. An additional type of EE program are non-resource demand-side programs

¹ http://docs.cpuc.ca.gov/word_pdf/REPORT/51604.pdf

² Hereafter all references to code sections are to the Public Utilities Code unless otherwise noted.

designed to promote market sector specific approaches that indirectly reduce energy usage (ex: marketing, education, and outreach programs)

2. Energy Savings Goals. One of the CPUC's objectives is to pursue all cost-effective energy efficiency opportunities over both the short and long term. The CPUC established electricity and natural gas savings goals, pursuant to Pub. Util. Code § 454.55 and 454.56. In [D.04-09-060](#), the CPUC first provided numerical goals for electricity and natural gas savings by utility service territory. The CPUC-adopted energy savings goals are expressed in terms of Gigawatt hours, million-therms, and peak Megawatt load reductions. These goals are informed by periodic Energy Efficiency Potential and Goals Studies, and historically were updated in D.08-07-047, D.09-05-037, D.09-09-047, D.12-05-015, D.12-11-015, and [D.17-09-025](#). The most recent goals decision; [D.19-08-034](#) established goals for 2020 – 2030. Energy Efficiency goals shall continue to be updated periodically by the CPUC. The IOUs should develop their energy efficiency program portfolios so that they will meet or exceed these savings goals. The CPUC's intent is for goals to:

- (1) be appropriately aggressive;³
- (2) support long-term procurement planning;⁴
- (3) encourage a focus on long-term savings;⁵ and
- (4) be based on the best available information.⁶

In [D.17-09-025](#), The *Decision Adopting Energy Efficiency Goals for 2018 – 2030*, the CPUC adopted energy savings goals for ratepayer-funded energy efficiency program portfolios for 2018 and beyond based on an assessment of economic potential using the Total Resource Cost test, the 2016 update to the Avoided Cost Calculator, and a greenhouse gas adder that reflects the California Air Resources Board Cap-and-Trade Allowance Price Containment Reserve Price. The CPUC also deferred the adoption of cumulative goals until the California Energy CPUC develops a method for calculating savings persistence and CPUC staff assesses the viability of that method for the purpose of EE goals.

³ D.04-09-060 at 3

⁴ D.04-09-060 at 35

⁵ D.07-10-032 at 5

⁶ D.08-07-047 at 18-19

Goals for the 2018 - 2030 portfolio cycle will be applied on the following basis:

- a. Energy savings goals are based on achieving 100 percent of incremental market potential identified in the most recent Potential Study for both gas and electric savings.⁷
- b. Separate energy savings goals were adopted for IOU Codes and Standards (C&S) advocacy. The C&S advocacy category represents the estimated energy savings forecasted for the Title 20 and 24 updates and federal appliance standards that can be attributed to the IOUs'

C&S advocacy program ([D.12-11-015](#), pp. 56-58).

- c. Energy savings goals are set on a "net basis." ([D.16-08-019](#), p. 19).
- d. The CPUC intends to develop a better understanding of the sustained impact of the utility programs (including decay and market transformative effects) to encourage programs that will have lasting impacts and to hold IOUs accountable for long-term savings in future portfolios. ([D.12-05-015](#) at 95.)

3. **Implementation of the California Long-Term Energy Efficiency Strategic Plan.** [D.07-10-032](#) established a broader framework for statewide coordination on energy efficiency program design, in order to overcome market barriers to more widespread adoption of energy efficiency and to capture longer-term savings. The decision directed the IOUs to work with CPUC staff and market participants to prepare the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan). Adopted in [D.08-09-040](#), the Strategic Plan set forth a roadmap for energy efficiency in California through 2020 and beyond, by articulating a long-term vision and goals for each market sector and identifying specific near-term, mid-term and long-term strategies to achieve the goals. (The Strategic Plan can be viewed at <http://www.cpuc.ca.gov/NR/rdonlyres/D4321448-208C-48F9-9F62-1BBB14A8D717/0/EEStrategicPlan.pdf>).

⁷ The Potential Study can be viewed at <http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/Energy+Efficiency+Goals+and+Potential+Studies.htm>

D.08-09-040 and the subsequent October 30, 2008 Ruling in A.08-07-021 directed the IOUs to align their programs with Strategic Plan goals by clearly identifying utility actions for all Strategic Plan near-term strategies and action steps, where a utility role is important, and to provide programs that reflect the Strategic Plan short-term steps and milestones. ([D.08-09-040](#), ordering paragraph 2.)

- i. Among the market strategies identified as necessary to achieve market transformation, the Strategic Plan established three long-term goals for energy efficiency:
 - All new residential construction in California will be zero net energy by 2020;
 - All new commercial construction in California will be zero net energy by 2030; and
 - The Heating, Ventilation, and Air Conditioning (HVAC) industry will be reshaped to ensure optimal equipment performance
- ii. The Strategic Plan expanded the CPUC’s objectives for the energy efficiency portfolios to also pursue market transformation, which was defined as “long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies until they are adopted into codes and standards (or otherwise adopted by the market), while also moving forward to bring the next generation of even more efficient technologies to the market.” ([D.09-09-047](#) at 354.)

4. Energy Efficiency Program Design. [D.15-10-028](#) established a “Rolling Portfolio” process for regularly reviewing and revising portfolios. Central to the rolling portfolio cycle framework is the rolling portfolio schedule. This schedule is described in Attachment 5 and 6

in D.15-10-028.⁸ IOUs, CCAs, and RENS must use the same process for program design. For example, program related business plans must be submitted for CPUC review and approval and revised if prompted by certain triggers as described in D.15-10-028, p. 56-57. Existing plans (prior to the adoption of D.15-10-028) do not need a new application until they have one year of funding left for the corresponding program. The IOUs should implement statewide programs in order to achieve economies of scale and employ industry best practices.⁹

5. Program Portfolio Development, Balance and Management. The most appropriate program design and balance of program funding across market sectors (e.g., residential, industrial, commercial) should be based on maximizing cost-effective long-term savings. [D.07-10-032](#) directed the IOUs to work with stakeholders, including the CPUC and the California Energy Commission (CEC) staff as well as market participants, to encourage the application of best practices, portfolio diversity and innovation. IOUs are expected to coordinate to develop and manage statewide programs, in order to avoid duplications of efforts and promote innovation and good program management. IOUs should also include a selection of non-resource programs such as statewide marketing and outreach programs, information and education programs, workforce education and training, emerging technologies programs and other activities in their proposed portfolios that support the CPUC's short-term and long-term energy savings goals. Non-resource programs also help in achieving Strategic Plan objectives. Lastly, the IOUs have been directed by the CPUC to utilize a percentage of their program funding for third party designed and implemented programs. [D.18-01-004](#), modified by [D.18-05-041](#) requires the IOUs to use at least 25 percent of their program funding for third parties by PY 2020, 4 percent by PY 2021, and 6 percent by 2023.

6. Integrated Demand Side Management. In order to achieve maximum savings while avoiding duplication of efforts, reducing transaction costs, and diminishing customer confusion, the IOUs are required to integrate customer demand side programs, such as energy efficiency, self-generation, advanced metering, and demand response in a coherent and efficient manner. Integrated demand side management (IDSMS) is identified in the Strategic Plan as an overarching strategy to promote customer-side energy management and achievement of zero net energy goals.¹⁰ In Ordering Paragraph (OP) 10 of [D.18-05-041](#), the CPUC directed that a set amount of the IOUs' IDSMS budget shall focus on the integration between energy efficiency and demand response. The CPUC also has related work on

⁸ 2013-14 Portfolio cycle program guidance provided in D.12-05-15 and D.12-11-015 for RENS, and [D.14-01-033](#) for CCAs

⁹ In D.07-10-032 at 31

¹⁰ D.09-09-047, p. 214

Integrated Distributed Energy Resources (IDER) with more information available at <https://www.cpuc.ca.gov/IDER>.

- 7. The Emerging Technologies Program (ETP).** ETP supports EE program uptake of cost-effective new and underutilized commercial technologies. In order to filter this uptake, ETP is primarily engaged in technology evaluation with a focus on achieved savings and cost-effectiveness via the ETP Technology Assessment subprogram. In this capacity, ETP both identifies suitable technologies for program inclusion and eliminates unsuitable technologies from consideration. Technologies with positive evaluation results are then recommended for inclusion into the portfolio and passed off to EE resource programs for workpaper development. To support the technology intake process, the ETP Technology Development Support subprogram works with technology development actors to support their engagement with ETP and IOU programs and gather information about current and upcoming technology innovations. ETP also holds annual or semi-annual ET Summits to encourage discussion and knowledge sharing. The Technology Introduction Support subprogram engages in work intended to smooth the transition of technologies into EE programs and subsequently into the market. [D.18-05-041](#), Attachment A, requires the IOUs to initiate Technology-focused Pilots, which will be ETP's first efforts at accelerating high-priority technologies into the market by identifying technology-specific market barriers and initiating market barrier breakdown activities. Along with this expanded scope, ETP is expanding its role as a technology communications hub spanning from R&D to C&S in California with several tools, including the Technology Priority Maps and an updated dissemination website (<https://www.etcc-ca.com/>).
- 8. Codes and Standards (C&S).** In order to ensure that energy efficiency programs support the adoption of higher efficiency standards rather than compete with them, the IOUs shall implement programs to advocate for the adoption of higher codes and standards. [D.12-05-015](#) established separate goals for codes and standards and affirmed that 100 percent of verified net savings shall count toward meeting these goals. The baseline for gross savings should be the previous standard or the prevailing market practice. The purpose of Codes and Standards goals is to give the IOUs credit for their specific contributions to new energy savings via their Codes and Standards advocacy work, which should not include naturally occurring savings or the advocacy work of other entities.
- 9. Marketing Outreach and Education (ME&O).** In the CPUC's Proceeding A.12-08-007 directs the IOUs to implement the statewide Marketing, Education, and Outreach program called "Energy Upgrade California", which encourages Californians to save energy, and informs them about time-of-use rates. For more information go to <https://www.energyupgradeca.org/>.

- 10. Competitive Bidding for Third Party (3P) Programs.** Competitive solicitations help to identify innovative approaches or technologies for meeting savings goals with improved performance that might not otherwise be identified during the program planning process, and can take advantage of the unique strengths that third parties bring to the table. The IOUs shall propose a portfolio of programs that reflects the continuation of successful IOU and non-IOU designed and implemented programs. As part of that process, the IOUs will solicit competitive bids from third parties for the purpose of soliciting innovative ideas and proposals for improved portfolio performance. Please see section IX for a more detailed description of the CPUC adopted rules associated with IOU third party solicitations.
- 11. Local Government and Institutional Partnerships.** Local Government Partnerships (LGPs) are partnerships between an IOU and a Lead Local Partner (LLP), which could be a city, county or region for the purpose of engaging local governments to promote demand side management (DSM) activities. Specifically, LGPs are designed to generate energy and demand savings within their own facilities and in their communities through joint utility-local government program designs that incorporate utility offerings and local government leadership, take actions that support the California Energy Efficiency Strategic Plan, leverage their local government role/authority, and provide DSM outreach in the community. Pursuant to [D.12-05-015](#), beginning in the 2013-2014 cycle, new candidate partners must also adhere to deep retrofit criteria, as defined in the IOUs' program implementation plans.
- 12. Pilot Programs.** Pilot programs should be designed to create the measures and program delivery mechanisms of the future, enabling EE programs to achieve deeper savings and market transformation. The pilots should be limited in scope and duration so that results are available in a specified time frame and limited in budget so that unsuccessful programs have a minimal impact on the overall portfolio. All results of pilot programs must be shared widely with the other program implementers and with the stakeholders in the sector impacted by the pilot. There should be a specific plan and timeframe to move successful pilot programs into statewide use (if applicable), or other more significant program efforts.

Each proposed pilot should contain the following elements¹¹:

¹¹ D.09-09-047 at 48-49

- i. A specific statement of the concern, gap, or problem that the pilot seeks to address and the likelihood that the issue can be addressed cost-effectively through utility programs;
- ii. Whether and how the pilot will address a Strategic Plan goal or strategy and market transformation;
- iii. Specific goals, objectives and end points for the project;
- iv. New and innovative design, partnerships, concepts or measure mixes that have not yet been tested or employed;
- v. A clear budget and timeframe to complete the project and obtain results within a portfolio cycle - pilot projects should not be continuations of programs from previous portfolios;
- vi. Information on relevant baselines metrics or a plan to develop baseline information against which the project outcomes can be measured;
- vii. Program performance metrics (see Section 4.6.3);
- viii. Methodologies to test the cost-effectiveness of the project;
- ix. A proposed EM&V plan; and
- x. A concrete strategy to identify and disseminate best practices and lessons learned from the pilot to all California IOUs and to transfer those practices to resource programs, as well as a schedule and plan to expand the pilot to utility and hopefully statewide usage.

II. Funding Guidelines for IOUs

These guidelines provide the IOUs with ways to be compensated for their energy efficiency programs.

1. **Energy Efficiency Funds from Electric Procurement Rates and Gas Public Purpose Program (PPP) Surcharges.** Pursuant to § 381, 381.1, 399 and 890-900, gas PPP surcharge and/or electric procurement funds must be spent to deliver energy efficiency benefits to ratepayers in the IOU service territory from which the funds were collected. Gas PPP surcharge and/or electric procurement collections must fund energy efficiency programs that benefit gas and/or electric customers within an IOU's service territory, as adopted by the CPUC. However, nothing in these Rules is intended to prohibit or limit the ability of the CPUC to direct the IOUs to jointly fund selected measurement studies, statewide marketing and outreach programs,

or other EE programs and activities that reach across service territory boundaries that serve statewide energy efficiency efforts.

2. **Cost Caps and Targets.** All IOUs shall reflect all costs associated with the delivery of their energy efficiency programs in their submissions in the EE portfolio annual budget advice letters (ABAL) as stated in [D.18-05-041](#) and shall note, where applicable, when the costs are recovered in other proceeding. Costs shall reflect the caps and targets defined in [D.09-09-047](#) and clarified in [D.12-11-015](#) (D.09-09-047, pg. 49). Administrative cost definitions are further delineated in Appendix C of this manual.
 - i. **Administration** – Administrative costs for utility EE programs (excluding non-IOU third party and/or government partnership budgets) are limited to 10 percent of total EE budgets. These costs shall be inclusive of any energy efficiency-related costs authorized and collected in other proceedings. These costs should also reflect the fully-loaded personnel costs of delivering EE programs and shall also note where the costs have been or will be recovered elsewhere to avoid double counting of costs. Administrative costs shall be consistent across IOUs and can only be shifted into other cost categories subject to the fund shifting rules as described in [D.15-10-028](#). The IOUs shall not reduce the non-utility portions of government partnership and third-party implementer administrative costs without following authorized fund shifting guidelines subject to the fund shifting guidelines in Appendix A. ([D.09-09-047](#), pg.369.)
 - ii. **Marketing, Education, & Outreach (ME&O)** – ME&O cost targets for energy efficiency are set at 6 percent of total adopted EE budgets, subject to the fund-shifting rules in Rule II.3 and Appendix A.
 - iii. **Direct Implementation Non-Incentive (DINI)** -- DINI costs are defined in Appendix C as resource program delivery support costs and shall have a target value set at 20 percent of the total adopted energy efficiency budgets.¹² The IOUs are required to minimize their non-incentive budgets as much as possible to achieve savings targets ([D.12-](#)

¹² This target was adopted for 2010-12 cycle in D.09-09-047 at 6, at 74, and OP 13c and re-iterated for the 2013-14 cycle. D.12-11-015 at 98 states “This provision of D.09-09-047 is still in effect and has not been superseded, though the target is also not met by the proposed portfolios. We find that such a target is still reasonable for 2013-2014.”

[11-015](#), pg. 101).

- iv. **Local Government Partnerships and Third Party Programs** – The utilities will seek to limit administrative costs of third party and local government partnership direct costs to 10 percent, striving for an entire cost cap of 10 percent. This amount is separate from utility costs to administer these programs ([D.09-09-047](#), pg. 63).
- v. The utility PAs shall ensure that their EE portfolios contain third party designed and implemented programs funded as a percentage of each IOU's overall EE budget utilizing the following schedule and budget amount by the end of each given year: 25 percent by 2019, 40 percent by 2020, and 60 percent by 2022. These PAs shall file a Tier 2 advice letter for each third party contract, or a batch of third party contracts, that is valued at \$5 million or more and/or with a term of longer than three years for Commission review ([D.18-01-004](#), pg.61, and [D.18-05-041](#)).

3. **Fund Shifting Rules.** [D.15-10-028](#) modifies prior fund-shifting rules established in [D.12-11-015](#), the December 22, 2011 Assigned Commissioner's Ruling (ACR) in [R.09-11-014](#), [D.09-09-047](#), [D.09-05-037](#), [D.07-10-032](#), [D.06-12-013](#), and [D.05-09-043](#) to apply to the current funding cycle. Each energy efficiency program administrator (PA) must file a Tier 2 advice letter highlighting the next calendar year's budget, all fund shifting activity, annual spending, and cost-effectiveness statements ([D.15-10-028](#),p.123).

In [D.15-10-028](#), the CPUC also eliminated prior requirements that EE PAs must file advice letters to obtain authorization to shift funds among EE programs. However, if CPUC Staff or stakeholders identify fund-shifting activities that substantially depart from CPUC policy direction or, in the opinion of CPUC Staff or stakeholders, are not in the best interest of ratepayers and/or the efficiency portfolios, they may raise their concerns in a protest to the PA ([D.15-10-028](#), pg.127).

4. **Funding Business Plans.** Each PA will file an initial business plan for new programs as an application to receive EE funding. Business plans will explain at a relatively high level how PAs will effectuate the strategic plan and correspond with their more detailed implementation plans. PAs will organize business plans into market sectors and subsectors as discussed below. After the initial filing, PAs *must* file revised business plans only when a "trigger" event happens; PAs *may* also file revised business plans whenever they choose to do so. Business plan filings will

generally be untethered to the calendar except that PAs will need to apply for an extension of funding – that is, a restarting of the ten-year clock -- no less than one year before funding is set to end. ([D.15-10-028](#), pg. 123).

Business plans will be considered as part of a stakeholder process and shall contain the following:

- a) Portfolio summary and description of applicable intervention strategies;
- b) A chapter for each of six sectors (residential, commercial, industrial, agriculture, public, cross-cutting) providing;
 - a. A description of each PA's overarching goals, strategies and approaches; near-, mid- and long-term strategic initiatives;
 - b. Sector-specific intervention strategies;
 - c. Descriptions of how each sector approach advances the goals, strategies and objectives of the strategic plan;
 - d. Descriptions of which and how strategies are coordinated statewide and regionally among PAs and/or with other demand-side options;
 - e. Descriptions of how cross-cutting "sectors" are addressed;
 - f. Descriptions of leveraging of cross-cutting activities for success for particular customer groups;
 - g. Descriptions of work to minimize redundancy;
 - h. Descriptions of efforts voiding working at cross purposes with other PAs;
 - i. A description of any pilots contemplated or underway for the sector.
 - j. A chapter for each of six sectors (residential, commercial, industrial, agriculture, public, cross-cutting) providing a statement of evaluation.

Utility program administrators shall not opt out of funding statewide programs and must fund at levels consistent with their proportional share based on load, unless specifically approved by the CPUC for a deviation by means of a new business plan ([D.18-05-041](#), pg.186). In a rolling portfolio, where budgets are annualized rather than in a multi-year (portfolio cycle) period, if the program calendar year ends before disposition of the advice letter with the budget for the next calendar year, the prior year's budget shall remain in place until disposition of the pending

advice letter. IOUs shall continue to recover costs, and make transfers to CCAs and RENs, based on the prior year's authorized budget ([D.15-10-028, OP 5](#)).

5. **Shared Funding and Funding for EM&V** - The utilities shall file a Tier 1 advice letter to propose a mechanism for shared funding of statewide programs detailing proportional amounts and discrepancies or issues ([D.18-05-041](#), pg.187). Energy efficiency PAs shall fund the coordinating committee (as created via [D.15-10-028](#), p. 70) budget pro-rata based on their share of the overall authorized annual energy efficiency spending, filed through a Tier 1 advice letter ([D.15-10-028](#) pg.125-126). Evaluation budgets will remain at four percent of the total portfolio, with at least 60 – 72.5 percent reserved for CPUC staff evaluation efforts and from 27.5 and up to 40 percent for program administrators, to be further divided proportionally among utilities, community choice aggregators, and regional energy networks by appropriate utility service area, with the exact amounts to be finalized during the collaborative process between program administrators and CPUC staff. ([D.16-08-019](#), pg. 3.)

6. **Treatment of Unspent Funds from Prior Portfolio Cycles.** At the beginning of each portfolio cycle, IOUs should apply prior cycle(s) unspent funds to the new portfolio, including any associated interest collected, to offset revenue requirements in the new portfolio cycle as approved by the CPUC through the IOUs' EE applications ([D.12-11-015](#), pg. 93). Committed funds are defined as those associated with individual customer projects and/or are contained within contracts signed during a previous program cycle and associated with specific activities under the contract. Committed funds are not considered “unspent funds,” and need not be spent during that particular program cycle so long as there is an expectation that the activities will be completed and that the committed funds are spent to complete the activities for which they were committed. Savings will be counted in the cycle in which the project is completed ([D.12-11-015](#), pg. 92).

7. **Program Cancellation.** IOUs shall not eliminate any energy efficiency program or sub-program except through the energy efficiency portfolio application or an Advice Letter seeking such a change. ([D.12-11-015](#))

III. **Regional Energy Networks & Community Choice Aggregators**

This section provides information on the option for local government entities to apply with the CPUC to directly administer and report of energy efficiency related programs. This section also

includes compliance requirements for Regional Energy Networks (RENs) and Community Choice Aggregators (CCAs) administering Energy Efficiency programs.

1. **Regional Energy Networks.** In [D.12-11-015](#), the CPUC authorized the formation of RENs, to enable local government entities to plan and administer energy efficiency programs independent from the IOUs. RENs are distinguishable from other local government partnerships (LGPs) by the fact that they have applied to the CPUC to become a REN vs. LGPs that propose to and are selected by the IOUs. RENs are intended to be additional to and not in replacement of design or budget of LGPs contracting to IOUs. The RENs will have the independent ability, within the confines of CPUC approval, to manage, deliver, and oversee their own programs independently, without utility interference or direction as it relates to the design and delivery of their programs. Within California there are three RENs; 1) The Bay Area Regional Energy Network, 2) The Southern California Regional Energy Network, and 3) The Tri-County Energy Network. The IOUs will serve as fiscal managers responsible for all usual fiscal and management functions including fiscal oversight and monitoring, such as providing the day-to-day contract management functions and disbursement of ratepayer funds ([D.12-11-015](#), pg. 10). The CPUC retains the authority to direct changes to the REN energy efficiency portfolio. The RENs and IOUs are required to submit Joint Cooperation Memorandum advice letters ([D. 18-05-041](#), OPs 38-39). These memos ensure coordination between the Program Administrators with overlapping service territory. The memos identify program offerings that are distinct and similar. Where programs are similar, the RENs and the IOUs state their plan for seamless program offerings and to avoid customer confusion. Finally, [D.16-08-019](#), page 11 reaffirmed the RENs as “pilots” and that they should be evaluated on an equal basis as the IOUs and that the RENs should continue to directly apply to the CPUC for funding.

On December 5, 2019, the CPUC approved [D.19-12-021](#) which adopted Frameworks for RENs and Market Transformation. The language in this decision authorizes the continued operation of the RENs and “invites new REN proposals as business plans to be filed with the Commission” so long as they meet specific criteria laid out in the proposed decision.¹³ Reiterates that the RENs have no cost-effectiveness threshold given that they exist to fill gaps in California’s energy efficiency portfolio of programs and serve hard-to-reach (HTR) customers. Allows some geographic overlap among more than one REN and other program

¹³ The new criteria for RENs in D.19-12-021 include that they must represent more than local government entity (pg 22); coordinate with existing program administrators in their geographic area prior to filing a business plan (pg 22); vet their proposal with stakeholders through the California Energy Efficiency Coordinating Committee (CAEECC) (OP 2); explain their governance structure in the business plan filing (OP 2); A description of its new and unique value to contribute to California’s energy, climate, and/or equity goals (OP 2); and a proposed set of metrics and savings targets (OP 2).

administrators, with appropriate coordination and requires that all PAs file JCMs to avoid duplication ([D.19-12-021](#), pgs 25-26). Finally, the decision re-designates the RENs as program administrators instead of pilots, requires that the RENs business plans demonstrate a value add, in addition to filling gaps and serving HTR customers, and does not limit them to any specific sector or program area ([D.19-12-021](#)).

2. **Community Choice Aggregator (CCA).** Community Choice Aggregators (CCAs), are an alternative to the investor owned utility energy supply system in which local entities in California can aggregate the buying power of individual customers within a defined jurisdiction in order to secure alternative energy supply contracts. In 2010 the first CCA, Marin Clean Energy (MCE) launched. The passage of AB 117 (Midgen, 2002) which allowed formation of CCAs as an alternate load serving entity also created the option for CCAs to administer EE programs under Public Utility Code (PUC) § 381.1 by allowing a CCA to “apply to administer” ratepayer funded EE programs. This act was later modified by Senate Bill (SB) 790 (Stats. 2011, Ch.599, Leno) which allowed another route for CCA’s to offer ratepayer funded EE programs through “electing to administer” and [D.14-01-033](#) provided further clarity for CCAs choosing either approach. CCAs “applying to administer” EE programs must file an application with their Business Plan which must comply with the CPUC’s prior decisions and resolutions per [PUC § 381.1\(a-d\)](#). Additionally, CCAs shall submit their plans factoring in cost effectiveness approved by their governing board, then the CPUC. CCAs “electing to administer” programs can only offer only EE services to their own customers pursuant to Section 381.1(e-f). A formula that sets the maximum funding the electing CCA can request ([D.14-01-033](#), pg. 22). CCAs elect to administer through filing a proposed plan via a Tier 3 advice letter ([D.14-01-033](#), pg. 54).

Compliance Requirements for Regional Energy Networks and Community Choice Aggregators:

3. **Business Plans.** CCAs were encouraged apply to be non-IOU program administrators of energy efficiency programs and local governments were allowed to submit regional pilots for the CPUC to review in D.12-05-015, COL 50 and the applications of BayREN, MCE and SoCalREN were later approved in D.12-11-015, OPs (8-11). RENs and MCE submitted their applications, which were proposed in Business Plans, to the CPUC in January of 2017. Each year, after approval of the overall business plans, MCE and RENs’ annual budget advice letters are to be shared with stakeholders by leveraging the California Energy Efficiency Coordinating Council (CAEECC) prior to submission to CPUC, a process endorsed in [D.15-10-028](#) ([16-08-019](#), OP 1 and OP 2). All EE PAs, including the RENs and MCE are subject

to the triggers for refiling their business plans per OP 2 of [D.15-10-028](#).¹⁴ However, RENs are not required to meet a cost-effectiveness threshold and do not have assigned savings targets through the ED led Potential and Goals Study.¹⁵ MCE is required to meet the same cost-effective threshold as the IOUs, but also do not have assigned savings targets through the ED led Potential and Goals Study).¹⁶ To ensure that MCE and the RENs are more accountable to meeting a saving threshold, [D.18-05-041](#) stated that RENs and MCE forecasted energy savings goals must meet or exceed the annual energy savings targets included in their business plan as a criteria for approval of their ABALs.¹⁷ However, MCE and the RENs each submitted budget and savings true-up tables in their PY 2019 ABALs. These true-up tables reflected more accurate and updated planning assumptions and forecasts, for each program year through 2025, than their business plans. Thus, [D.19-08-034](#) stated that for each year MCE and the RENs request energy efficiency funding authorization via an ABAL, they shall meet or exceed the annual savings forecasts presented in their true-up tables as submitted in their prior year's ABALs.¹⁸

4. **Implementation Oversight and Reporting Requirements.** The RENs and CCA's who implement EE programs are subject to the same periodic reporting requirements to the CPUC as the IOUs are required to submit. The IOUs will receive attribution toward their portfolio goals for REN and CCA energy savings ([D.12-11-015](#), pg. 11). Additionally, RENs and CCAs will submit monthly narrative reports, which enable CPUC staff to track and perform approved EE activities. These reports are found on the CEDARs (<https://cedars.sound-data.com/>). The CCAs and RENs shall conduct financial and management audits of its energy efficiency programs and provide a copy of the audits to the CPUC ([D.12-11-015](#), pg.10).

¹⁴ Each energy efficiency program administrator must file an application with a revised business plan when a "trigger" event happens. Triggers are:

1. A Program Administrator (PA) is unable to adjust its portfolio in response to goal, parameter, or other updates to:
 - a. meet savings goals,
 - b. stay within the budget parameters of the last-approved business plan, or
- c. meet the Commission-established cost effectiveness (excluding Codes and Standards and spillover adjustments)
2. The Commission calls for a new application as a result of a decision in the policy track of the proceeding (or for any other reason);

¹⁵ D.19-08-034, pg 28.

¹⁶ Ibid

¹⁷ D.18-05-041, pg. 134.

¹⁸ D.19-08-034, pg 28.

5. **Threshold of Review.** [D.19-12-021](#) revised the criteria that the CPUC will consider in approving new or renewed REN business plans. Specifically, the decision states new RENs must show also new or unique value to the CPUC’s energy, climate, and/or equity goals. In addition, to qualify for consideration, a REN program activity must meet one or more of the following criteria to be considered for approval:
- Activities that utilities or CCA program administrators cannot or do not intend to undertake.
 - Pilot activities where there is no current utility or CCA program offering, and where there is potential for scalability to a broader geographic reach, if successful.
 - Activities serving hard-to-reach markets, whether or not there is another utility or CCA program that may overlap ([D.19-12-021](#), pg 32).
6. **Program Cost-Effectiveness Threshold.** [D.14-01-033](#) required the CCA’s portfolios to meet the same cost-effectiveness tests as IOUs, with an exception in the three years following their first application where a TRC of 1.0 is permitted (pg. 50). Regional Energy Networks are not required to hit a cost-effectiveness threshold, but [D.16-08-019](#) did “encourage RENs to manage their programs with an eye toward long-term cost-effectiveness” ([D.16-08-019](#), pg 12).
7. **CCA and REN Funding.** CCA’s submitting applications to administer programs pursuant to Section 381.1 shall receive funding only for electricity savings programs ([D.14-01-033](#), pg. 54). For the three RENs, Southern California Edison Company, Southern California Gas Company, and Pacific Gas and Electric Company remain the fiscal managers for their contracts without exercising control over program design or program changes ([D. 14-10-046](#), pg.162). If funding year ends prior to CPUC disposition of program administrator budget via their annual budget advice letter, RENs and CCAs will continue to receive prior years funding ([15-10-028](#), OP5, pg. 124).
8. **Evaluation, Measurement and Verification Requirements.** CPUC staff shall include CCA -administered programs under [PUC § 381.1](#) (a)-(d) within the scope of its EM&V activities ([D.12-11-015](#), pg. 51). REN evaluations, including impact and process evaluations should be managed by CPUC staff. CPUC Staff shall retain an accounting consultant using EM&V funds to cover the cost both to review prior cycle reporting and to develop a proposal to rationalize accounting practices for energy efficiency going forward ([D. 14-10-046](#), pg.162). In OP 16 of [D.16-08-019](#), CCAs and RENs funding for evaluation shall be set

on a proportional basis, based on total program budget, from among the up-to-40 percent allocation within the relevant utility service territory.

IV. Cost-Effectiveness

This section provides the rules and policies governing cost effectiveness analysis for the purposes of measuring the performance of program administrator programs and ensuring that public purpose funds are responsibly allocated. This section also provides details regarding program performance metrics as another metric to measure the performance of programs and portfolios.

1. **Standard Practice Manual (SPM).** The cost-effectiveness indicators referred to in these rules are described in the *California Standard Practices Manual: Economic Analysis of Demand-Side Management* ([D.12-05-015](#), p. 28). Cost-effectiveness analyses must be performed in a manner consistent with the indicators and methodologies included in the SPM, with clarifications indicated in CPUC decisions relating to this subject.
2. **Total Resource Cost Test (TRC).** This CPUC relies on the Total Resource Cost Test (TRC) as the primary indicator of energy efficiency program cost effectiveness, consistent with our view that ratepayer-funded energy efficiency should focus on programs that serve as resource alternatives to supply-side options. The TRC measures net costs as a resource option based upon the total costs for the participants and the utility. The benefits are the net present value of avoided costs of the supply-side resources avoided or deferred. The TRC costs encompass the net present value of the net costs to participants for installed measures over the measure life plus all the costs incurred by the program administrator. The net benefits and net participant costs exclude the benefits derived from and costs paid by free-rider participants ([D.07-09-043](#), p. 157). The net cost to participants is the actual costs minus any rebates¹⁹ from the program administrator. The net present values are calculated using a discount rate that

¹⁹ Per SPM and Decisions including D.08-01-006, rebate amounts used to reduce participant costs are defined to include only dollar benefits such as rebates or rate incentives (monthly bill credits) paid by the program administrator to a participating customer (ratepayer). These costs are included in the program administrator total cost so must not be counted twice. Rebates paid to free-rider participants are included as TRC costs in the program administrators cost.

reflects each utility's after-tax weighted average cost of capital (WACC), based on the most recent cost of capital decision.²⁰

3. **Program Administrator Cost Test (PAC).** The Program Administrator Cost (PAC) test of cost-effectiveness should also be considered in evaluating program and portfolio cost-effectiveness. Under the PAC test the program benefits are the same as used in the TRC test. The costs include only the net present value of all costs incurred by the program administrator while excluding the costs incurred by the participating customers. As in the TRC test, the net present values for the PAC are calculated using a discount rate that reflects each PA's after-tax weighted cost of capital, based on the most recent cost of capital decision.

4. **Application of the TRC, RIM and PAC Tests.** Though TRC is the primary cost effectiveness test used by the CPUC, also considering the RIM and PAC test supplemental to the TRC appropriately acknowledges the dual-cost issue unique to energy efficiency investments ([D.19-05-019](#), p. 24). Since it is expected that incentives offered for the installation of a measure will not exceed the incremental cost of the measure, activities that pass the TRC test normally will also pass the PAC test.²¹ However, if deployment of the program requires rebates or financial incentives to participants that exceed the measure cost, then the program may pass the TRC test, but fail the PAC test. Incentives or rebates that exceed the TRC cost for a measure must be justified in workshop submissions that are approved by CPUC Staff.²² The RIM test provides information on the rate impacts. Therefore, all determinations based on the cost-effectiveness analyses of distributed energy resources should include a written description of the results of the TRC, PAC, and RIM ([D.19-05-019](#), p. 25).

[D.18-05-041](#) modified the portfolio requirements to include a 1.25 ex-ante TRC by 2023, with an ex-ante TRC of 1.0 during the ramp years of 2020-2022 (p.72). The decision did not

²⁰ D.12-05-015, p. 38 contains a table of the current IOU WACC values and OP 2 directs the use of the after-tax Weighted Average Cost of Capital as the discount rate. D.12-12-034 provides the latest review of utility cost of capital. Further historical data is provided at <http://www.cpuc.ca.gov/General.aspx?id=12056>.

²¹ [D.06-06-063](#), p. 72 recognizes only "limited instances for program design purposes where the cash rebate to the customer exceeds the measure installation cost"

²² Originally defined in D.92-09-080, the dual test was last modified in D.05-04-051

modify that the evaluation of portfolios take into consideration passing both the TRC and PAC tests for each service territory and for the entire approved portfolio, including RENS (p.161). However, the TRC will not exceed the PAC unless incentives exceed incremental measure costs.²³

5. **Overall Cost-Effectiveness of IOU, REN, and CCA Portfolios.** It is the responsibility of the CPUC to approve the total portfolio- which includes both utility and REN proposals- and ensure that it is cost-effective overall, because the IOUs are not in control of the REN proposals and therefore cannot make the cost-effectiveness tradeoffs within their portfolio. The CPUC therefore applies the dual test for overall portfolio cost effectiveness, taking into consideration passing both the TRC and PAC tests for each utility service territory portfolio without the RENS, as well as entire approved portfolio that includes the RENS ([D.12-11-015](#), p. 18). The CPUC emphasized in [D.18-05-041](#) that RENS ought to focus in filling gaps in IOU energy efficiency portfolios, piloting different approaches, and targeting hard-to-reach customers. Due to challenges associated with RENS diversifying portfolios, the CPUC did not adopt specific cost effectiveness requirements for RENS (p.95)

6. **Avoided Costs and Other Inputs.** TRC and PAC benefits should be computed using the avoided cost methods and input assumptions, including avoided greenhouse gas emissions related cost²⁴ that have been developed for the evaluation of energy efficiency programs in the Standard Practice Manual and in Proceeding R.14-10-003. As set forth in [D.16-06-007](#), data for the avoided cost calculator shall be updated on an annual basis, and shall be conducted through the CPUC Resolution process ([D.16-06-007](#), p. 6 and OP 2, p. 26).

7. **Cost Effectiveness Adjustments for Free-Ridership and Market Effects.** Net to Gross (NTG) ratios are used to estimate and describe the “free ridership” that may be occurring within energy efficiency programs, that is, the degree to which customers would have installed the program

²³ [D.06-06-063](#), p. 72 recognizes only “limited instances for program design purposes where the cash rebate to the customer exceeds the measure installation cost”

²⁴ [D.17-08-022](#) adopted a series of values based upon the California Air Resources Board Cap-and-Trade Allowance Price Containment Reserve Price as an interim greenhouse gas adder value for use in the avoided cost calculator when analyzing the cost-effectiveness of distributed energy resources. Resolution E-4942 incorporates the update of these values set forth in [D.18-02-018](#) for use in the IDER proceeding and any other proceedings that rely on assumptions about the avoided GHG costs of DERs for evaluating cost effectiveness.

measure or equipment even without the financial incentive (e.g., rebate) provided by the program. Cost-effectiveness of the portfolio shall be calculated as net of free riders, or on a “net savings basis” for the purpose of establishing budget levels that meets the legislative requirement in § 454.5.²⁵

- a. CPUC Staff has the responsibility to perform research on free ridership and market effects and to use the results of that research to develop updated NTG values for use in portfolio planning and utility reporting. This research often involves interviews with customers and others who participate in the utility programs. The IOUs are required to cooperate and facilitate this research. Utility customers are required cooperate with CPUC staff in this research as a condition of receipt of energy efficiency funds. The IOUs must respond to CPUC Staff’s request for evaluation data in a timely manner to facilitate this research so as to improve the reliability of NTG results ([D.12-05-015](#), p.51). Our adopted DEER is the repository of the NTG values to be used for planning and reporting. CPUC Staff shall strive to update DEER with uniform statewide NTG values that represent typical expected results (p. 54 and OP 6).
- b. The “default” NTG values shall be used when there is a lack of research on the NTG value for the program or delivery mechanism. This may apply to new or existing measures (or if a proposed delivery mechanism has deviated substantially from past related program activities).²⁶ When new measures or programs are proposed, CPUC staff may utilize the results of previously completed research produced during similar program or measure piloting activity to set an appropriate NTG value ([D.12-05-015](#), p. 339). Alternatively staff may determine that no piloting research is required and accept proposed use of default or other appropriate NTG values.
- c. For measures added to the portfolio as a direct result of Emerging Technology Program activities (Emerging Technology measures) the IOUs may request in their non-DEER work paper submissions that a measure be assigned a NTG value at or above 0.85. CPUC Staff shall have the authority to accept or reject a utility Emerging Technology measure classification and

²⁵ Definition and calculation of Net-to-Gross adjustments to TRC test were described in Attachment 9 of [D.07-09-043](#).

²⁶ [D.12-05-015](#) adopted DEER NTG table. [D.15-10-028](#) adopted the DEER update process through the rolling portfolio cycle schedule which includes the update of default and prescribed NTG values.

to set any Emerging Technology measure NTG value at or above 0.85 as it deems appropriate ([D.12-05-015](#), p. 62 and OP 14 and OP 15).

- d. For all projects undertaken by schools, and for programs targeting specific transmission, distribution, or generation constrained areas (other than bottoming-cycle combined heat and power projects), for purposes of determining net savings, default ex ante lockdown rules apply, except that a Net-to-Gross ratio of .85 (before spillover effects) is “locked down” for all above code projects. Eligibility includes requirements that customer incentives shall be the higher of 75 percent of incremental measure cost, or what is available under prior policies ([D.14-10-046](#), pp. 163-164).
 - e. For custom projects the adopted ex ante review process provides CPUC Staff with the ability to review and update ex ante values including NTG for those projects (OP 149). The IOUs are expected to respond to CPUC staff reviews by taking steps to improve NTG results. Utility programs should strive to push customers to augment projects to include action that would not occur without incentive support or redesign the incentive structure to encourage deeper and more comprehensive activities as well as aligning the incentive amounts to be commensurate with the level of savings that can be attributed to the program (p.61 and OP 12).
 - f. Market effects are defined as additional energy savings that occur as a result of the energy efficiency programs, but that are not included in the utility savings claims. The CPUC acknowledges that market effects occur. However, in D.12-11-015 the CPUC determined that there were not sufficiently current or technically rigorous market effects studies to base market effect estimates on, and instead determined to apply a portfolio-level “market effects adjustment” of 5 percent, ex-post, across all resource programs for the entire cost effectiveness calculation ([D.12-11-015](#), p. 49). This 5% market effect adjustment shall be applied to increase TRC and PAC benefits as well as to increase TRC participant costs (excluding the deduction of program rebates or incentives paid to participants).
8. **Portfolio Filing of Prospective Cost Effectiveness.** A prospective showing of cost-effectiveness using for the TRC test (with consideration also given to PAC) for the entire portfolio of ratepayer-funded energy efficiency activities and programs (i.e., individual programs, plus all costs not assignable to individual programs, such as overhead, planning,

evaluation, measurement verification and administrator compensation and performance, if applicable) is a consideration when authorizing ratepayer funds.

This consideration applies to each of the following: (1) the service- territory wide program portfolios offered by each IOU and CCA Program Administrator, excluding: 1) RENs, 2) emerging technologies programs, and (3) On-Bill Financing loans ([D.09-090-47](#), p.288). IOU program administrators must demonstrate that the first threshold requirement is met on a prospective basis in their program funding applications to the CPUC. IOUs must also demonstrate that the proposed level of electric and natural gas energy efficiency program activities are expected to meet or exceed the CPUC-adopted electric and natural gas savings goals, by service territory.²⁷

- a. The CPUC adopted several safeguards against certain risks that the annual portfolios would not achieve their forecasted TRC estimates. As the basis for determining cost-effectiveness of proposed program portfolios, IOU Program Administrators omit codes and standards (C&S) advocacy costs and benefits, and spillover effects. The CPUC also sets a higher prospective TRC threshold of 1.25 ([D.12-05-015](#), p. 100 and [D.18-05-041](#), pp. 54-55), to hedge against eventual reductions in savings as determined by evaluations.²⁸
- b. To support comparisons of all resources in the IOUs' procurement portfolio, the program administrators are required to also provide levelized unit cost estimates at the portfolio, end-use and measure level consistent with the methods described in the SPM. This information should be submitted with the program administrators' compliance filings.

²⁷ Per [D.04-09-060](#), p.2 savings from LIEE programs will also count towards these goals.

²⁸ D.18-05-041 established the ramp period, program years 2019-2022, in the context of third party solicitations, setting up the statewide administration framework, and affording the PAs an opportunity to improve portfolio cost-effectiveness. Forecasted TRC must meet or exceed 1.25 in the ABAL, except during program years 2019 – 2022, when the forecasted TRC must meet or exceed 1.0.

If a Program Administrator's prospective showing of cost effectiveness does not meet the threshold set-forth by the CPUC²⁹, the PA will need to file an application with a revised business plan for CPUC approval.³⁰

9. **Common Sector-level Metrics.** Metrics should be designed to be valuable to implementers as well as other stakeholders to improve the chances of longevity of the metric and associated perspective of measuring it over time.³¹ Program administrators shall set sector-level metrics in the business plans and will set more granular, program level metrics in implementation plans ([D.15-10-028](#), p. 53)³² In addition to sector-level metrics developed by program administrators, CPUC Staff has developed common sector-level metrics to be reported annually in the annual report by all program administrators to (1) consolidate metrics around common problems identified by most program administrators for each sector, (2) enable consistent tracking and progress assessment for the whole sector, (3) enable comparisons across and within sectors, and (4) enable tracking of high-level portfolio progress over a period of time.³³ Attachment A of [D.18-05-041](#) provides a listing of the minimum set of common metrics to be reported. PA's can submit additional metric (fields) within the Annual Budget Advice Letters, and submit associated data in their annual report.

10. **Cost Sharing and Cost-Effectiveness Across Utility Service Territories.** Energy efficiency statewide program costs are shared between utilities on an upfront pre-set basis, then trued up based on customer participation ([D.16-08-019](#), p.110) Though costs are shared upfront, program cost-effectiveness is still evaluated by utility area, considering just the program costs and benefits relevant to the customers in that area ([D.16-08-019](#), p. 55). The budget for each statewide program in each utility territory shall be counted toward the cost-effectiveness of each utility's energy efficiency portfolio and each utility shall be given energy savings and Energy Savings Performance Incentive credit consistent with their customers' funding and program participation ([D.16-08-019](#), p. 110, OP 7).

²⁹ D.18-05-041 at pp. 133-134 further set annual budget advice letter approval criteria for IOU, CCA, and REN program administrators.

³⁰ D.15-10-028, OP 1 identifies the trigger events which require a program administrator to file a revised business plan. The development of business plan filings are described in [D.16-08-019](#).

³¹ D.18-05-041 dictates that a metric includes a baseline and a target or targets (short, medium, or long term). An indicator does not include baselines or targets.

³² Guiding principles for business plan metrics are laid out in Table 2 of the May 10, 2017 Administrative Law Judge's Ruling Seeking Comment on Energy Efficiency Business Plan Metrics.

³³ Administrative Law Judge's Ruling Seeking Comment on Energy Efficiency Business Plan Metrics, May 10, 2017, p. 5-6 and [D.18-05-041](#), pp. 22-23.

11. Cost Effectiveness Requirements for Fuel Substitution Programs / Measures/ Projects. Fuel substitution programs/projects may offer resource value and environmental benefits. Fuel-substitution programs should reduce the need for supply without degrading environmental quality. For purposes of applying these tests, fuel substitution proponents must compare the technologies offered by their program/measure/project with the baseline technology determined in the same manner as for other measures in the energy efficiency portfolio (namely, using code baseline, industry standards practice, or existing conditions depending on the circumstances of the measure installation). The burden of proof falls on the party sponsoring the analysis to show that the baseline comparison adheres to this requirement. [D.19-08-009](#) (OP 1, p.57) updates the Fuel Substitution Test as follows. Retrofit measures in fuel-substitution programs/projects must pass the following Fuel Substitution Test:

- a. The program/measure/project must not increase source- British Thermal Unit (Btu) consumption when compared with the baseline comparison measure available utilizing the original fuel, as currently defined by the baseline policies in [D.16-08-019](#) and Resolution [E-4939](#), Attachment A.
- b. The program/measure/project must not adversely impact the environment compared to the baseline measure utilizing the original fuel. This means that the use or operation of the measure must not increase forecasted CO2 equivalent greenhouse gas (GHG) emissions.

The Fuel Substitution test does not apply to new construction applications. Program Administrators proposing fuel substitution measures must provide all assumptions and calculations for CPUC review, and utilize the most recent versions of the Avoided Cost Calculator, Cost-Effectiveness tool, and other fuel substitution documents available at the time the measure is proposed.

[D.19-08-009](#) also directed CPUC staff to issue technical guidelines for fuel substitution measures, including, but not limited to, guidance on calculation of source energy savings and environment offsets for fuel substitution measures. [Fuel Substitution Technical Guidance for Energy Efficiency](#) is a 'living' document, whose first version was released on September 2019.

12. Mid-Cycle Funding Augmentations. Costs and energy savings from mid-budget cycle funding additions for programs other than Energy Savings Assistance Programs (ESAP) shall be counted when calculating portfolio cost-effectiveness and shall count towards the IOUs' energy efficiency goals for resource planning purposes.

13. References. See the following references below for further information on cost effectiveness.

- a. CPUC Cost Effectiveness page – <http://www.cpuc.ca.gov/General.aspx?id=5267>
- b. CPUC Standard Practice Manual –
[http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy -
Electricity and Natural Gas/CPUC STANDARD PRACTICE MANUAL.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/CPUC_STANDARD_PRACTICE_MANUAL.pdf)
- c. CPUC Online Tool - <https://cedars.sound-data.com/>

V. Implementation Oversight and Reporting Requirements

The CPUC requires program administrators to both report on annual program achievements as part of its regular reporting requirements and file budget requests for subsequent program year based on prior-years' performance.

1. **Reporting Requirements.** CPUC staff is directed to develop and update reporting requirements to ensure that the types of data and the format of the information presented in the IOUs', RENS' or CCAs' filings and reports are as consistent as possible. The IOUs, RENS and CCAs (except as modified for RENS and CCAs in Rule III.3) are required to follow the CPUC's Energy Efficiency Reporting Requirements Manual for the current program cycle. Please refer to the California Energy Data and Reporting System (CEDARS) at (<http://www.eestats.cpuc.ca.gov>) for the most current reporting templates and Energy Division guidelines. The following regularly occurring reports are required:
 - a) Monthly Reports on expenditures and savings
 - b) Quarterly Reports on budgets and expenditure caps
 - c) Utility Tracking data to report program accomplishments, evaluation sampling and cost effectiveness calculations

- d) Common Sector Metric Annual Reporting - per [D.15-10-028](#), program administrators were relieved of reporting requirements laid out in Resolution [E-4385](#). Program administrators will report on metrics approved in [D.18-05-041](#) in their Annual Budget Advice Letter (ABAL) filings due September of each year and in the May 1 annual reports
- e) Energy Efficiency Program Annual Reports³⁴
- f) Annual Budget Advice Letters³⁵
- g) Other reports as required by the CPUC.

2. **Business Plans and Annual Budget Advice Letters.** IOUs, RENs and CCAs are no longer required to submit Program Implementation Plans, as they were associated with previously three-year program cycle applications. As of January 1, 2017, IOU, REN and CCA program administrators are required to submit Business Plans, which provide a 10-year high-level description of a program administrator’s respective portfolio in terms of sectors, budgets and strategies, as well as Annual Budget Advice Letters (ABALs), which are filed each year in September and present the program administrator’s budget request for the subsequent program year.³⁶ The Business Plans do not have a formal template; program administrators work with CPUC staff to ensure relative similarity across the various program administrators filed plans.

Implementation Plans – As of January 1, 2019, IOU program administrator portfolios are transitioning to a larger role for third party administrators. By 2023, at least 60 percent of the IOUs’ respective portfolios (by budget) must be bid out to third party implementers, who will be solely responsible for proposing, designing, implementing, and delivering programs for utility program administrators. Consequently, the next few years will see a mix of program-level implementation plans for existing programs that may continue as well as implementation plans for new programs designed as part of the third-party expansion. (The program implementation plan (PIP) addendum process required by [D.04-12-048](#) is no longer in force.)

³⁴ Pursuant to Attachment C of ALJ Ruling Adopting Annual Reporting Requirements for Energy Efficiency and Addressing Related Reporting Issues, dated August 8, 2007

³⁵ As required by D. 15-10-028.

³⁶ Initial Business Plans were filed January 17, 2017 and subsequently approved via Commission Decision 18-05-041 in June 2016. Program administrators may file a subsequent business plan of their own accord or in the instance that they fail to meet specific portfolio review criteria as laid out in D. 18-05-041, including a failure to: meet energy savings goals; be cost-effective; or maintain a budget under the authorized cap.

Implementation plans for *existing programs* that will be continued by the IOUs during the third-party process will be posted to the California Energy Data and Reporting System (CEDARS) on <http://www.eestats.cpuc.ca.gov>) after a brief public review opportunity via CAEECC.

Implementation plans for *new programs*, developed as part of the third-party process, will be reviewed subsequent to a contract signed between an IOU and a third-party implementer and within the sector-specific Peer Review Group for that contract.³⁷

Implementation plan updates are likely to follow guidance provided in [D.18-01-004](#), which recognizes that implementation plans will be initially posted at the conclusion of the third party solicitation process and requires IOU program administrators' implementation plans to be "developed and posted, consistent with the requirements of [D.15-10-028](#), within 60 days after contract execution." As of January 2019, the timing and nature of updating implementation plans that flow from successful third-party solicitation(s) has yet to be determined. However, the IOU program administrators, CPUC staff, and stakeholders, as part of the third-party Procurement Review Group(s) overseeing solicitations, are developing process that will guide implementation updates.

If a REN or CCA desires to modify an existing implementation plan, it should notify the appropriate utility and CPUC staff, and document the changes on the EEStats website, utilizing the same process by which the IOUs make changes to their implementation plans.

- 3. Counting of Savings.** The reporting of ex ante savings estimates in the compliance filings is subject to Rule VI on ex ante review. When estimating ex ante savings values for either portfolio planning or accomplishment reporting the IOUs, RENS and CCAs shall use values and methods from the most recent version of Database for Energy Efficient Resources (DEER) if the measure values are available. If DEER values and methods are not available, the IOUs, RENS and CCAs may propose new values for staff review and approval, subject to Rules VI 4-6. The protocols for developing ex post savings estimates are provided in the California Energy Efficiency Evaluation Protocols,³⁸ updated in [D.09-05-037](#), and through DEER updates.

³⁷ See "Energy Efficiency Programs Implementation Plan Template" at [Implementation Plan Template on EEStats](#)

³⁸ April 16, 2006 ALJ Ruling in R.01-08-028

The definition of peak megawatt load reduction contained in the most recently adopted DEER shall be used to estimate and verify peak demand savings values. The DEER method utilizes an estimated average grid level impact for a measure between 2 p.m. and 5 p.m. during a “heat wave” defined by three consecutive weekdays for weather conditions that are expected to produce a regional grid peak event.³⁹ The new DEER peak timeframe of 4 p.m. to 9 p.m. will replace the existing hours on January 1, 2020 ([Resolution E-4952](#)).

VI. Ex ante Savings and Review

This section explains the annual timeline of the Rolling Portfolio process to determine ex ante values, and the role of CPUC staff, IOU’s and stakeholders in arriving at those values.

- 1. CPUC Oversight of Ex Ante Values.** The estimated energy savings values for energy efficiency measures used for planning and reporting accomplishments for energy efficiency programs, referred to as the ex ante values, are subject to the review and approval of CPUC staff. The ex ante review process must be managed by CPUC staff because it involves judgments that can influence both the development of performance targets and the measurement of program achievements ([D.05-01-055](#), p.120). Due to the conflict-of-interest concerns the IOU Portfolio Managers would not be the appropriate entities to manage or directly contract for the ex ante review process ([D.05-01-055](#), p.121).
- 2. DEER and non-DEER measures and workpapers –** Non-DEER workpapers must use DEER assumptions, methods and data

IOUs are instructed to use DEER values as starting points and/or apply the DEER methodologies for estimating the non-DEER parameter value for cases in which any of the specific parameters of an IOU installation differ from the assumptions that form the basis of a DEER measure. The utilities cannot replace DEER assumptions and values with their

³⁹ D.06-06-063 OP 1. The DEER version adopted in D.12-05-015 utilizes a 3-day “heat wave” that occurs on consecutive days in June through September such that the three consecutive days do not include weekends or holidays, and where the heat wave is ranked by giving equal weight to the peak temperature during the 72-hour period, the average temperature during the 72-hour period and the average temperature from noon – 6pm over the three days.

preferred values unless the CPUC Staff agrees with their proposal for such replacements ([D.12-05-015](#), p.331). Non-DEER values may not be used without CPUC Staff approval.

DEER measures are located in the official Ex Ante database (EAdb). Non-DEER workpapers are typically new measures that have values from sources other than what is in the DEER ex ante database. These may use some values in the DEER ex ante database but the energy savings are determined externally and do not just adopt an energy savings value in DEER.

Workpapers must use DEER assumptions, methods, and data in the development of non-DEER values when available/appropriate and shall follow CPUC Staff direction relating to the appropriate application of DEER to non-DEER values. Any proposed workpaper measure definitions that are different from DEER definitions should be calculated using DEER reference impacts ([Statewide Deemed Workpaper Rulebook v.2.0, p.18](#)). DEER is updated on an annual basis. Workpapers must use the appropriate DEER version based on their program implementation year.

If DEER values and methods are not available, new values may be proposed for CPUC Staff review and approval. For non-DEER measures, DEER values should be used as the starting point. In cases where any of the installation parameters differ from the assumptions for the DEER measure, the Implementer should apply DEER methodologies for estimating the non-DEER parameter value. Non-DEER values may not be used without CPUC Staff approval. Direct replacement of DEER measures is not allowed in workpapers ([Statewide Deemed Workpaper Rulebook](#)). Workpapers can be found at www.deeresources.net.

- 3. Freezing of Ex Ante Values.** The Rolling Portfolio schedule for review and approval of ex ante values was established in D-15-10-028 (see Appendix F here; Appendix 6 in the Decision). The Decision sets a “January 1 deadline for IOU’s to update their workpapers to reflect changes in DEER values adopted by the CPUC earlier in September of the previous year. These set of workpapers are also referred to as *Phase 1 workpapers*. Workpapers for new measures, and workpapers that do more than just update values to conform with revised DEER values, can be submitted by IOU’s at any time or on the first and third Monday, respectively ([D.15-10-028](#), p.84) and are referred to as Phase 2 workpapers. Upon approval by CPUC staff, the ex ante values are frozen until the workpaper is superseded by a revised workpaper or if the measure expires by virtue of the guiding disposition . This freeze of *ex ante* energy savings values applies both to energy efficiency measures contained in the DEER and non-DEER measures covered by workpapers which are developed by IOUs and other program implementers. Unreviewed non-DEER workpapers are granted interim approval

([D.12-05-015](#), p.334). Interim approval indicates that all values and approaches have been approved until a formal review occurs. If a formal review of an interim approved work paper requires significant changes to be made, then those significant changes are applied prospectively from the time of the completed review and the new values are then frozen and entered into the non-DEER database. In the case of an error such as using the wrong parameter values, the changes will be made retroactively. All active workpapers are posted at the workpaper website (www.deeresources.net).

4. **Mid-year updates of Ex Ante Values.** Ex ante values should be adopted and held constant throughout the year. However, mid-year updates of ex ante values are warranted if newly adopted codes or standards take effect during the year. These changes are known at least one year ahead of their effective date. The IOUs shall make appropriate adjustments to their participation and incentive calculation rules as well as update their ex ante value calculations in response to codes and standards changes ([D.12-05-015](#), p.324). IOUs, RENs and CCAs are expected to update non-DEER workpapers with the latest Codes and Standards updates. CPUC staff may perform mid-year review of any non-DEER workpapers with interim approval and require revisions to those workpapers. Mid-year workpaper review shall follow the Phase II review process outlined in the Rolling Portfolio schedule in [D.15-10-028](#), Appendix 5; p.2).

5. **Ex-Ante Review of Non-DEER Measures.** For non-DEER measures, the IOUs are instructed to use DEER values as starting points and/or apply the DEER methodologies, where appropriate, for estimating the non-DEER parameter value for cases in which any of the specific parameters of an IOU installation differ from the assumptions that form the basis of a DEER measure. D.12-05-015 directed the IOUs to update their WPs with all applicable updated DEER values ([D.12-05-015](#), p.290). The current process allows only Program Administrators (PAs) to submit workpapers for review, a Third Party must submit a workpaper through a PA. The PAs do not have the option to replace DEER assumptions and values with their preferred values unless the CPUC Staff agrees with their proposal for such replacements ([D.12-05-015](#), p.326). Additionally, PAs must utilize the latest information available, including the CPUC's most recently available evaluation results, when updating or developing new workpapers ([D.12-05-015](#), p.332). Current and past evaluation results are available at <https://pda.energydataweb.com>. All ex ante values are to be updated or developed in consideration of the latest information available, including Unit Energy Savings (UES), Effective Useful Life (EUL), Installation Rate (IR), NTG and Cost. CPUC staff reviews all utility proposed non-DEER assumptions and values. PAs work with CPUC Staff, following the workpaper and non-DEER workpaper submittal, review and approval process that was originally issued in the November 18, 2009 ruling and updated in [D.10-12-054](#),

[D.11-07-030](#), [D.12-05-015](#), and [D.15-10-028](#).⁴⁰ CPUC Staff's review of "interim approval" workpapers or new workpapers submitted mid-year adheres to the Phase 2 workpaper review process, including the dispute resolution process described in Appendix D.

- 6. Installation Rate for DEER and non-DEER Measures.** All deemed measures have an installation rate, which is the ratio of the number of verified installations of that measure to the number of claimed installations rebated by the utility during a claim period ([D.11-07-030](#), p.22). The installation rate is reported separately in claims and not included in the reported savings for the measure. For any measures not listed in the DEER database, the installation rate is assumed to be 1.0. In their workpapers, PA's include the proposed installation rates for the measure covered by a workpaper. The Gross Savings and Installation Adjustment ([GSIA](#)) is a DEER adjustment factor that combines the Realization Rate and Installation Rate. It is dependent on both the measure technology and how the measure is delivered. The GSIA table can be accessed at www.deeresources.com.⁴¹

- 7. Establishment of Baseline for use in Establishing TRC Savings and Costs.** The approach to establish a baseline for ex ante gross savings values requires the review of the evidence related to one of the three baseline choices: (1) new equipment that is normal replacement, turnover or replacement due to normal retrofit and remodeling activities, and new construction (NC); or (2) the pre-existing equipment used in the program-induced accelerated replacement (AR) case. For new equipment choices that are selected under the NR and NC cases and are subject to existing regulations, codes or standards, the baseline equipment is determined by the regulation, code, or industry standard. The customer's reason for equipment replacement could alter the baseline choice, depending on whether compelling evidence demonstrates that the replacement was a program induced accelerated replacement ([D.11-07-030](#), p. 40, Appendix I to Attachment B). [Resolution E-4818](#) provides measure level baseline assignment and guidance to establish eligibility for an accelerated replacement baseline treatment.

 - a. In the cases when there is no regulation, code, or standard that applies, which would normally set the baseline equipment requirements, the baseline must be established using

⁴⁰ November 18, 2009 ALJ Ruling in A.08-07-021. D.09-09-047 OP 4 states that, "Review of completed IOU work papers regarding ex-ante savings estimates are subject to Commission Staff review and approval, as set forth in an ALJ Ruling of November 18, 2009 in Application 08-07-021, et al. Each IOU shall cooperate with Commission Staff to allow upfront consultation regarding such work papers.

⁴¹ Log in to the READI portal accessed through www.deeresources.com. Then select either the official ex-ante database (EAdb) or the preliminary ex ante review database (PRdb). Then click on the tabs: Support Table, Cost Effectiveness and GSIA value.

a “standard practice” choice. For purposes of establishing a baseline for energy savings, we interpret the standard practice case as a choice that represents the typical equipment or commonly-used practice. Resolution [E-4939](#) establishes the standard practice baseline definition and baseline selection process.

- b. For the case of program-induced accelerated replacement, the remaining useful life (RUL) of the existing equipment is to be used as the starting assumption for the period of accelerated retirement. To establish the period of accelerated retirement, we recommend using one-third of the effective useful life in DEER as the remaining useful life until further study results are available to establish more accurate values (see Summary of effective useful life (EUL)-RUL Analysis for the April 2008 Update to DEER, p.2). CPUC staff has been given flexibility to utilize alternative remaining useful life values, based upon compelling project or technology specific evidence ([D.12-05-015](#), p.348).
- c. The measure or project cost utilized in an early-retirement case is the full cost incurred to install the new high-efficiency measure or project, reduced by the net present value of the full cost that would have been incurred to install the standard efficiency second baseline equipment at the end of the remaining- useful-life period. Thus, the early-retirement cost in the cost effectiveness calculation is higher than the incremental cost used in a normal-replacement case (previously referred to as replace-on-burnout), only by the time value of the dollar amount of the standard equipment full installed cost, using the adopted cost-effectiveness discount rate to calculate that time valuation.
- d. A “dual baseline” must be utilized for program-induced accelerated replacement measures. The dual baseline reflects the difference between the savings that should be credited for the initial years of installation based upon the pre- existing or replaced equipment versus the savings credit in later years that should be based upon an eventual pre-existing equipment replacement assumed to occur if the measure had not been installed as part of the program. At the later date, when the pre-existing equipment would have been replaced due to normal turnover for reasons such as imminent failure or remodeling, an alternate equipment efficiency baseline should be utilized. This “dual baseline” requires two savings calculation periods:
 - The remaining useful life (RUL) which DEER establishes as one-third of the expected useful life (EUL) for the equipment type (which may reflect the EUL of the new equipment rather than the replaced equipment). During the RUL period (“first baseline”), savings is calculated

using the full reduced energy use between the measure and the pre-existing condition. The measure cost for this period is the full cost of equipment, including installation, for the measure.

- The period between the RUL and EUL defines the second baseline calculation period. For this period, the savings are calculated based on the difference between the measure and code/regulations or industry standard practice baseline technologies. The measure cost for this period is the full cost of equipment, including installation, for the second baseline equipment measure. As discussed above, the TRC cost for an ER measure is calculated by subtracting this value discounted by the RUL number of years at the adopted discount rate from the measure cost utilized for the measure equipment in the initial baseline period.
8. **Custom Projects.** The adopted process for CPUC staff's review of custom projects is provided in Attachment B of [D.11-07-030](#) (p.40). The Program Administrators (PA) shall follow the custom project ex ante value review process set forth in Attachment B (OP 7). Section 381.2 of the Public Utilities Code (Senate Bill 1131), effective July 1, 2019, requires the review of a proposed project to conclude within 30 business days of the CPUC receiving the complete project documentation for review. The "[CPUC Staff Selection and Response Timing Protocol For Energy Efficiency Custom Projects Review](#)" guidance document operationalizes the timing of communication on custom project document review and feedback between the PA and CPUC staff to meet this strict review timeline. This guidance document and other custom projects review guidance documents are available on the Energy Efficiency Custom Project Review Guidance Document webpage at:

<https://www.cpuc.ca.gov/General.aspx?id=4133>

The other guidance documents include:

- Energy Efficiency Savings Eligibility at Sites with non-IOU Supplied Energy Sources
- [Statewide Custom Project Guidance Document, version 1.0](#)
- [Statewide Project Feasibility Study template, version 1.1](#)
- [Statewide Post Installation Report template, version 1.0](#)
- [Industry Standard Practice, version 2.0](#)

- [Project basis as Early Retirement \(ER\)/Replace-on-burnout \(ROB\)/Normal Replacement \(NR\)/New Construction \(NC\)/Add-on Retrofit \(Ret\) and remaining/Effective useful Life \(RUL/EUL\), and Preponderance of evidence](#)

- 9. Heating, Ventilation, and Air Conditioning (HVAC) Interactive Effects.** Measures, such as lighting and refrigeration, have a secondary impact on heating and cooling loads and thus heating and cooling energy consumption. These “interactive effects” are appropriate for incorporation into DEER.⁴² The gas and electric IOUs shall include those effects in non-DEER workpapers and custom measures and projects calculations. In its review of IOUs’ workpapers and custom measures and projects, CPUC Staff shall ensure the IOUs include these effects when Staff deems that inclusion has a significant impact on the savings estimate.
- 10. Persistence of Savings.** Until EM&V results inform better metrics, the IOUs may apply a conservative deemed assumption that 50 percent of savings persist following the expiration of a given measure’s life ([D.09-090-47](#), OP 49).
- 11. Gross Realization Rate.** The gross realization rate (GRR) is a multiplier that addresses the likely reality that not all CPUC-approved projects undertaken by IOUs will come to fruition. Based on studies from past years’ outcomes, a GRR value of 0.90 shall be applied as a conservative value to account for the difference between projected and actual energy savings for unreviewed custom projects ([D.11-07-030](#) p. 38, OP 6).
- 12. Statewide workpapers.** The CPUC in Decision [D.12-05-015](#), p.54 states that “similar measures delivered by similar activities should have single statewide values unless recent evaluations show that a significant variation between utilities and that difference is supported by a historical trend of evaluation results”.

⁴² D.09-05-037, OP 3 denied the IOUs’ proposal to eliminate HVAC interactive effects from DEER.

The Program Administrators (PAs) will begin submitting statewide consolidated workpapers for PY2020 in November 2018. The PAs have hired California Technical Forum (CalTF) to consolidate multiple WPs for the same measure to a single, statewide workpaper.⁴³

Only one workpaper may be submitted for each set of programs/measures which are adopted by more than 1 program administrator; such workpapers have been termed “statewide workpapers” and program administrators have been directed to collaborate on such efforts.⁴⁴

Prior to 2018, workpapers were submitted separately by PG&E, SoCalGas, SDG&E and SCE for the same or similar efficiency measures. The CPUC instructed the IOUs to submit one consolidated workpaper for each measure. The IOUs hired CalTF to consolidate their four individual workpapers. These consolidated workpapers have been submitted from the November 2018 through and through calendar year 2019. These workpapers will become effective on January 1, 2020.

VII. Evaluation, Measurement and Verification (EM&V)

The CPUC is responsible for evaluating energy efficiency programs and provides annual savings estimates to ensure that ratepayer dollars are spent cost-effectively and in accordance with the achievement of the state’s energy efficiency goals.

1. **Purpose of EM&V.** The development of energy efficiency programs that deliver reliable energy savings for California’s ratepayers depends on well-designed policies and methods of portfolio performance evaluation, measurement and verification (EM&V). Rigorous and strategically focused EM&V practices are required to gauge the performance of IOUs, RENs, CCAs, and Implementers, verify energy savings, improve the design and success of future energy efficiency programs and enhance the reliability of forecasted savings for resource planning purposes.

In [D.05-04-051](#) the CPUC ordered portfolio evaluation efforts to be structured such that they can:

⁴³ [Ex Ante 2018-2019 Workpaper Workplan, p. 2](#)

⁴⁴ [2017 Workpaper Guidance Memo](#)

- 1) inform the program selection process,
- 2) provide early feedback to program implementers,
- 3) produce impact evaluations at the end of the funding period, and
- 4) feed the planning process for future program cycles.

[D.07-10-032](#) and [D.10-04-029](#) further updated the EM&V process.

[D.16-08-019](#) described how the evaluation budgets for EM&V may shift and updated the schedule requirements for EM&V studies.

- 2. IOU and ED Collaboration on EM&V Plan.** Per [D.09-09-047](#), [D.10-04-029](#), and [D.12-11-015](#), the IOUs and CPUC staff are expected to jointly prepare an EM&V Plan in order to enhance timeliness, transparency and consistency across EM&V work products and to streamline EM&V processes. The IOUs and CPUC staff are expected to adhere to the plan. [D.10-04-029](#) set out the roles and relationships among the CPUC staff, IOUs, and stakeholders regarding Evaluation, Measurement and Verification (EM&V) of energy efficiency programs for 2010 through 2012. In [D.12-05-015](#), the CPUC indicated that guidelines for collaboration, cooperation, and dispute resolution adopted by [D.10-04-029](#) will continue to apply to the 2013-2014 EM&V activities.

- 3. Energy Division Role in EM&V Administration.** [D.05-01-055](#) adopts an approach to EM&V administration whereby Energy Division has management and contracting responsibilities for all EM&V impact-related studies that will be used to:
 1. Measure and verify energy and peak load savings;
 2. Generate data for savings estimates, cost-effectiveness inputs, and the CPUC's adopted performance basis; and
 3. Evaluate whether portfolio goals are met.

Additionally, in [D.10-04-029](#) the CPUC determined that the ED is permitted to manage evaluations that may be considered process or formative evaluations. ED may, on a case by case basis, use program implementers as a vehicle for collecting EM&V data when this would clearly be more efficient.

4. **IOU Role in EM&V Administration.** [D.05-01-055](#) adopts an approach to EM&V administration whereby IOUs may directly contract for (and serve as technical lead in managing) early EM&V, process and program design evaluations as well as market assessment studies. Managing these studies assists IOUs in selecting and managing a portfolio of programs to meet the CPUC's objectives as well as provide them with access to information on a real-time basis to improve program delivery. While soliciting input from CPUC staff, the IOUs should also take the lead in allocating CPUC-authorized funding for this category of EM&V across individual studies, develop the scope of work for each study and prepare the RFPs when needed. In their program plan applications, the IOU should also describe each type of study (including general scope of work) that they plan to manage and/or directly contract for in this category. All interested parties should have an opportunity to consider whether any of those proposed studies would create a conflict of interest if the IOU or program implementers managed and directly contracted for them.

The EM&V budget is set at four percent of the total portfolio budget per [D.12-05-015](#) and is split between the program administrators and Energy Division, with the program administrators responsible for 27.5 percent and Energy Division responsible for 72.5 percent. While the IOUs and Energy Division are responsible for setting budgets for the evaluation work they respectively oversee, the IOUs administer the overall budget in that they are responsible for paying evaluation contractor invoices. The program administrators' portion of the budget may be increased to a maximum of 40 percent, however an increase above 27.5 percent is subject to discussions through the EM&V planning process, as outlined in [D.16-08-019](#).

5. **ED Role in IOU EM&V Studies.** CPUC staff's role for approval and involvement in IOU EM&V projects shall be as set forth in Attachment 2 of [D.10-04-029](#).
 - a. An IOU shall seek approval from CPUC staff before initiating EM&V ex-ante studies, or EM&V process and formative evaluations. The EM&V ex ante studies referred to here are studies conducted by an IOU to develop energy savings estimates in specific cases where there is no existing ex-ante estimate or an existing estimate is out of date and needs testing, and for which CPUC staff is not already conducting or planning to conduct a project to develop estimates for the same measure (regardless of the funding dollars). The IOU management role for developing ex-ante savings estimates or EM&V process or formative evaluations shall be under the oversight of CPUC staff, who shall have the authority to deny approval of IOU proposed projects. This authority is limited to situations where there is a conflict of interest with a contractor the IOU wishes to hire, where there is duplication or significant overlap with studies

already planned or carried out by Energy Division, or where CPUC staff can specify why a study is unnecessary or inappropriate. Energy Division's approval process for IOU's ex-ante studies, or EM&V process or formative evaluations, is limited to no more than two weeks. Any CPUC staff denial of approval shall be in writing to the IOU requesting approval. If the proposed IOUs study is not approved within the two-week timeframe, then it will be approved by default.

- b. If CPUC staff expects to take three months or more to complete an ex ante study, an IOU may request to develop the ex-ante study in order to ensure more timely information. The CPUC staff may approve, or reject the request by providing the IOU, within two weeks of the IOU's request, with a written statement indicating that such rejection is due to duplication of a study that will also be completed within 3 months, conflict of interest or other specific rationale.
- c. CPUC staff may make case-by-case exceptions to the CPUC-adopted firewall policy regarding program implementers in order to collect data needed for EM&V.

6. **IOU Role in Energy Division managed EM&V Studies.** All EM&V related projects undertaken by the IOUs and Energy Division, regardless of funding source, shall adhere to the same policies and procedures adopted in [D.10-04-029](#) as EM&V-funded projects, except that such EM&V policies and procedures do not apply to projects not previously considered to be in the EM&V category. The process for the IOUs involvement in ED's EM&V studies shall supersede the process adopted in [D.05-01-055](#), and shall be as follows:

- a. CPUC staff and the IOUs will convene publicly-noticed meetings among their staff, EM&V contractors, and stakeholders to share key results and EM&V findings that might lead to improvements in the portfolio and identify best practices and possible improvements to evaluation methods. Such meetings will take place sometime around the middle of the program cycle or at such time when significant results from various EM&V projects are available. If asked by parties or stakeholders, ED or IOUs, or both, should hold short informal meetings with groups or individual organizations, to discuss EM&V work progress and results.
- b. CPUC staff and IOUs will convene ad hoc meetings (approximately quarterly) among CPUC staff, EM&V contractors, IOU EM&V staff and IOU program managers to discuss work progress and results. These meetings are to provide for timely feedback to program design and implementation. The IOUs can request meetings with ED to discuss work progress and results at any time.

- c. When significant results are produced by the EM&V work, and a technical report is not immediately pending, the CPUC staff and/or the IOUs will provide informal written summaries of the results to the IOUs and other stakeholders. These written summaries will be posted on the same website used for posting EM&V work plans and comments.

7. Dispute Resolutions. A party may file a “Motion for Evaluation, Measurement and Verification Dispute Resolution” (EM&V Motion) with the assigned Administrative Law Judge for resolution of an EM&V matter. The EM&V Motion must include a statement from CPUC staff giving its side of the dispute and documentation of an attempt at informal dispute resolution. The Administrative Law Judge may issue a Ruling to resolve the dispute. The filing party or the CPUC staff may ask that the matter be resolved by the assigned CPUC or the full CPUC. In that case, the Administrative Law Judge (ALJ) will consult with the assigned Commissioner to determine the appropriate course of action. In this situation, the assigned Commissioner or ALJ may issue a Ruling to resolve the dispute. If the assigned Commissioner determines the matter should be brought before the full CPUC, the ALJ or assigned Commissioner shall issue a Proposed Decision and allow for comment under Rule 14 of the CPUC’s Rules of Practice and Procedure. An EM&V motion filed pursuant to [D.10-04-029](#) may be used for the following purposes only:

- Dispute over selection of an EM&V contractor;
- Disputes about project-specific final EM&V work plans;
- Disputes over results of EM&V studies or reports (except for Energy Division Verification Reports, which are issued via draft resolutions per D.08-12-059);
- Disputes regarding final EM&V technical reports; and
- Disputes concerning public vetting of EM&V projects.

8. Public Vetting Process. ED shall determine which EM&V projects should be publicly vetted and shall follow the process laid out in the Energy Division Straw Proposal, pages 8-11, issued by Ruling in Proceeding A.08-07-021 on July 7, 2009. CPUC staff should coordinate with other pertinent state agencies wherever such coordination enhances the State’s overall energy policy goals. ED should weigh the value of public input on EM&V studies versus the extra time such input would entail.

9. EM&V in the Rolling Portfolio. The adoption of the Rolling Portfolio in [D.15-10-028](#) also laid out an updated approach to ED-led impact evaluation studies. While market and process evaluations are not tied to any evaluation schedule other than that in their respective

research plan(s), impact evaluations of uncertain measures are conducted within the Rolling Portfolio schedule on an annual basis. Each year features a list of “bus stops” that are deadlines for the critical steps in the portfolio update process. Bus stops set a “reliable, regular schedule for future updates, so that any new information that ‘misses a bus’ can get on board when the bus rolls around to the stop the following year.” The annual evaluation “bus stop” schedule flows first from the annual EM&V plan update, which is expected to be completed at the end of each year and reflect studies planned for the following year. In addition to the timeline for impact evaluation studies, the bus stop process includes deadlines for IOU workpaper updates as well as ED-determined DEER updates. [D.15-10-028](#) as well as the EM&V Plan (will be hyperlinked when updated) provide specific information on the bus stop schedule and ongoing evaluation planning.

The EM&V funds for RENs and CCAs should be proportional to the program budgets implemented by those administrators. Additionally, EM&V budget allocation to program administrators may be increased to 40 percent on an approved and as-needed basis.

VIII. Shareholder Incentive Mechanism

This section outlines the Energy Savings and Performance Incentive (ESPI) Mechanism established in [D.13-09-023](#), as modified through [D.15-10-028](#) and [D.16-08-019](#), to promote achievement of energy efficiency goals through programs. This new mechanism supersedes the Risk/Reward Incentive Mechanism (RRIM) originally adopted in [D.07-09-043](#) and subsequently modified through a series of later decisions.

The ESPI Mechanism applies to EE program activities that began effective January 1, 2013, and will continue in effect for subsequent cycles until further notice or direction. Relevant supplemental documentation related to the ESPI include Resolutions [E-3497](#), [E-3510](#), [E-4807](#), [E-4897](#), and [E-5007](#) which have approved IOU incentive awards for program years 2013, 2014, 2015, 2016, and 2017.

1. **Incentive Mechanism Criteria.** The ESPI mechanism complements, integrates with, and promotes EE programs and policy goals as adopted in [D.12-11-015](#) (in Proceeding A.12-07-001 et al). The following criteria inform the design of the incentive mechanism. The incentives offered must:

- **Be effective** in spurring the utilities to a commitment to capture all cost-effective energy savings as the first priority in the loading order by fostering innovation in approaches to capture energy savings.
- **Value longer-lasting and deeper savings.** The mechanism should value efforts that achieve deeper, more comprehensive, and longer-lasting savings. The mechanism should maximize GHG reductions and encourage both market transformation and resource acquisition programs.
- **Rely on accurate, transparent, and timely EM&V** to ensure clear, fair, and timely implementation.
- **Prudently use customer funds** to ensure that customers are better off when utilities invest in efficiency instead of supply-side alternatives ([D.13-09-023](#), p. 19).

2. **Energy Savings and Performance Incentive (ESPI) Categories.** The ESPI mechanism shall incorporate opportunities for performance incentives in the following categories:

a. Energy Efficiency Resource Savings:

An incentive is offered to encourage energy efficiency resource savings, paid as a combination of ex ante “locked down” and ex post verified units of savings results, according to the level of uncertainty of the measures for which savings are being claimed. The methodology for measuring resource savings is modified from previous cycles to focus on net lifecycle savings. Incentives for EE resource savings are capped at 9 percent of resource program budgets, minus funding dedicated to administrative activities, codes and standards programs, ME&O, On Bill Financing, EM&V, and CCA/RENs.

The energy savings performance award is split between ex-ante (i.e., estimated savings pre-implementation) and ex-post (i.e., evaluated savings post implementation) savings values. IOUs may file for incentive payments for ex-ante savings in the year following the program year (PY+1) and for ex-post savings two years following the program year (PY+2). Ex-post savings values will apply to custom measures and deemed measures on the ESPI Uncertain Measure List for the corresponding year. Ex-ante values will apply to deemed measures not on the ESPI uncertain measure list for the corresponding year ([Resolution E-4897](#), p. 5).

b. Ex-Ante Review Process Performance:

For performance in implementing the lock down of ex ante parameters, a performance award shall be paid based on the scoring of performance metrics in accordance with the protocol set forth in Section 7 of [D.16-08-019](#).

The ex-ante review performance award is the product of the final IOU score and the earnings cap for the component. Each IOU's score is based on an evaluation of their respective ex-ante review activities in accordance with the metrics below (further detailed in Section 7 of [D.16-08-019](#)):

Metric Category	Adopted Weighting
1. Timing and Timeliness of Submittals	10%
2. Content, Completeness, and Quality of Submittals	30%
3. Proactive Initiative of Collaboration	10%
4. Program Administrator's Due Diligence and Quality Assurance/Quality Control Effectiveness	25%
5. Program Administrator's Responsiveness to Needs for Process and Program Improvements	25%

The award is capped at 3 percent of approved resource program expenditures. Administrative costs, On-Bill Financing Loan Pool budget, and IOU Direct Implementation Non-incentive (DINI) expenditures incurred beyond 20 percent of resource program expenditures are subtracted from the authorized resource program expenditures before calculating the 3 percent award. In case the IOU expenditures exceed the authorized budget for resource programs, the approved annual budget for the resource program category is used for calculating the caps. In that case, administrative costs, On-Bill Financing Loan Pool budget, and IOU Direct Implementation Non-incentive (DINI) expenditures incurred beyond 20 percent of resource program expenditures are subtracted out from the approved program budget.

c. Codes and Standards (C&S) Program Management Fees:

An incentive for savings from building C&S advocacy is paid as a management fee equal to 12 percent of approved C&S program expenditures, not to exceed authorized expenditures, and excluding administrative costs.

d. Non-Resource Program Management Fees:

For performance in implementing non-resource programs (which support savings based programs but in which there are no direct savings), a management fee shall be paid equal to 3 percent of non-resource program expenditures, not to exceed authorized

expenditures for these programs exclusive of administrative costs ([D.13-09-023](#), pp. 19-20)

Incentive caps are specific to each component. If a utility does not earn up to the cap of one component, those incentives are not available to be earned under a different incentive component ([D.13-09-023](#), p. 95, OP 3).

3. **Scaling Incentive Earnings Potential for Resource Savings.** It is the intent of the mechanism to award incentive based on net savings goals, adjusted for the effects of “free riders” and "spillover”(D.13-09-023, p. 36). For purposes of designing incentive performance metrics, incentive earnings potential are scaled in relation to the appropriate level of resource savings goals (D.13-09-023, p. 33-34). Savings incentive earnings accrue as a function of: (a) a pre-determined level of earnings potential, and (b) designated efficiency savings goals (D.13-09-023, p. 32).

The following formula derives net lifecycle goals (in units of energy savings) ([D.13-09-023](#), p. 37):

Annualized Goals *	Target Effective Useful Life *	Target Net-to-Gross % =	Lifecycle
(in kWh, MW, MMth)	(in years)	(in %)	Net Target Goal

Earnings rate coefficients shall be calculated as the amount that correlates incentive earnings potential for resource savings with a cap of 9 percent of the approved resource program budget for each savings type, excluding funding for administrative activities, Evaluation, Measurement and Verification, codes and standards programs, On Bill Financing Loan program budgets, Marketing Education and Outreach program budget, and the Regional Energy Network/Community Choice Aggregation programs not administered by the utilities (D.13-09-023, p. 97, OP 13). The coefficient (i.e., earnings per unit of resource savings) that correlates incentive earnings with EE Net lifecycle goals is calculated based on the following formula ([D.13-09-023](#), p. 33):

$$\begin{aligned} & \text{(Total incentive earnings potential)} / \text{(Net Lifecycle units of resource savings)} \\ & = \text{Incentive Earnings Per Unit of Savings} \end{aligned}$$

Target EUL values of 12 years for electric measures and 15 years for gas measures, and a target NTG of 0.8 for both electric and gas measures shall be utilized in calculating lifecycle goals to emphasize the importance of challenging the IOUs to stretch their capabilities to reach higher standards of performance over time (D.13-09-023, p 37).

4. **Ex Ante Review Performance Scoring.** Energy Savings Performance Incentive scores for deemed and custom activities shall be weighted for the utility program administrators based on the proportion of deemed savings and custom measures in each utility's portfolio. The annual scores for deemed and custom activities be weighted by the fraction of portfolio annual net lifetime savings kWh and therm claims, as reported in the utility annual advice letter filed in September of each year. Combined electric and gas utilities would additionally weight their electric and gas net lifetime claims by the total incentives paid for gas versus electricity.⁴⁵

5. **Uncertain Measures.** For custom projects and for specific "deemed" measures with ex ante parameters that are identified as highly uncertain, CPUC Staff shall require ex post evaluations as the basis for calculating savings incentive payments. The savings award for the remaining "deemed" measures will be calculated based on the locked down ex ante parameter values, and only the claimed measure count will be subject to ex post adjustment for these measures ([D.13-09-023](#), p. 50).

By October 31 of each year prior to the program year, CPUC Staff will identify deemed measures, in the DEER or in an IOU-submitted non-DEER workpaper, for which one or more savings parameters are sufficiently uncertain that the savings claim should be subject to ex post verification in order to be included in the incentive payment. For ESPI purposes, "sufficiently uncertain" measures are defined as those measures for which the CPUC believes the net lifetime savings of the current DEER or non-DEER savings estimate may be as much as 50 percent or more under- or over-estimated ([D.13-09-023](#), p. 51). The resulting list is called the 'Uncertain Measure list.'

⁴⁵ D.16-08-019, p, 113, OP 19. Adopts the weighting methodology provided in the June 8, 2016 Administrative Law Judge's ruling seeking comment on Evaluation, Measurement, & Verification and Energy Savings Performance Incentive issues, p. 12.

6. **Calculating Resource Savings Incentive Awards.** Efficiency Savings and Performance Incentive awards for resource savings shall be derived as the sum of the following components that increase as a linear function up to the earnings target for each respective savings type ([D.13-09-023](#), p. 96, OP 9):

--For savings of electric consumption:

(Units of kWh Savings) * (Earnings Rate Coefficient)

--For reduction of peak electric demand

(Units of mega-watt (MW) Reductions) * (Earnings Rate Coefficient)

--For savings of natural gas consumption:

(Units of MMTherm Savings) * (Earnings Rate Coefficient)

7. **Verification of Expenditure and Claims Data.** In order to verify Codes and Standards and non-resource program expenditures for the purposes of awarding these management fees, CPUC Staff will rely upon public versions of the CPUC's Utility Audit, Finance and Compliance Branch reports. Upon completion, the CPUC's Utility, Audit, Finance and Compliance Branch shall serve on the service list in this proceeding (or its successor) a notice of availability of the public copy of its audit report detailing its review of annual expenditures for the Energy Efficiency programmatic activity of the respective program year(s) ([D.13-09-023](#), p. 98, OP 17).

To avoid data discrepancy across various submissions, the IOUs must use their final official program year tracking data as the basis for all their submissions that include data associated with that specific program year. IOUs may not make any changes to the data after the final submission, save for the following provision: if an IOU discovers any errors in the data after the final tracking data is submitted, then the IOU must update its tracking data in CEDARS and notify the Energy Efficiency Branch Program Manager; the Utility Audit, Finance and Compliance Branch Program Manager; and all parties to the active energy efficiency proceeding (i.e., Proceeding R.13-11-005 or its successor) of any such changes ([D.18-05-041](#), pp. 131-132).

8. **Resource Savings Claim and Expenditure Eligibility.** IOUs should only include savings for measures installed (the year the measure has been physically installed and became

operational to deliver savings) in the same year they are claiming incentives for.⁴⁶ IOUs should indicate the measure installation date in their data submissions.

9. **Approval of Incentive Claims.** In accordance with the schedule set forth in Attachment 6 of [D.15-10-028](#), an annual Tier 3 advice letter shall be filed for approval of incentive claims in accordance with the schedule adopted in this decision. The first annual advice letter will occur beginning in 2014, and continuing annually thereafter, to claim recovery of Efficiency Savings and Performance Incentive (ESPI) incentive elements in the following sequence ([D.13-09-023](#), pp. 95-96, OP 4):

Claims for ESPI awards covering the first program year (PY) of each cycle shall be made during the first following year (PY +1) for the following ESPI elements:

- Non-Resource program management fee
- Codes and Standards program management fee
- Ex ante performance award
- Preliminary ex ante locked down deemed measure savings award

Claims covering the first program year of each cycle shall be made in the second following year (PY +2) for the following ESPI elements:

- Custom projects
- Ex post verified deemed measure savings
- True up of preliminary ex ante lockdown award based on verified counts.

10. **Dispute Resolution of Ex Post Evaluations.** If necessary to resolve disputes over ex post results, and only after other more informal efforts at resolution have been exhausted, parties may invoke the dispute resolution process established in [D.10-04-029](#), in accordance with the process set forth in Attachment 4 of [D.13-09-023](#).⁴⁷

⁴⁶ The annual installation date based claims requirement was introduced in D.04-09-060 (at 33 and Findings of Facts 14) , clarified and reiterated in D.05-04-051 (at 55, Findings of Fact 36-42, Conclusion of Law 3, Ordering Paragraph 17), D.05-09-043 (at 84) and again in Resolution G-3510 (at 13), Resolution E-4807 (OP.10), and Resolution E-4897 (at 15-16) .

⁴⁷ D.13-09-023, p. 96, OP 9.

11. **References.** See the following attachments and references below for further information on the ESPI process.

- a. <http://www.deeresources.com/index.php/espi>
- b. <http://www.cpuc.ca.gov/General.aspx?id=4137>

IX. **Third Party Solicitation Process**

Senate Bill (SB) 350 increased reliance on pay-for performance strategies and meter based energy savings evaluation for energy efficiency programs in California. These requirements increase the reliance on third party energy efficiency program and delivery which are inherently performance based. This legislation resulted in the following:

- The CPUC adopted [D.16-08-019](#) setting a minimum target of 60 percent of the utility's total budgeted portfolio, including administrative costs and EM&V, (up from the previously target of 20 percent) to be third-party designed and delivered by the end of 2022 via a stepped approach (see below). The rationale for this requirement reflects the CPUC's view that the utility role should focus more on the design and management of the energy efficiency portfolio overall, and less on individual program design and implementation.

[D.16-08-019](#) emphasized that third party design and implementation should become the default for much of the portfolio, unless the utilities can justify why use of utility personnel should continue. This same decision defined third-party as a program primarily designed and presented to the utility by a third party, in addition to delivered under contract to a utility (p. 69 – 70). Specifically the Decision stated; "A program must be proposed, designed, implemented, and delivered by non-utility personnel under contract to a utility program administrator." This direction requires clear solicitation protocols amid a likely increase in third-party IOU program administration contracts. Solicitation efforts aim to reach the 60 percent third-party target, using the new third-party definition adopted in [D.16-08-019](#). via a phased approach ([D.18-05-041](#)) of minimum percentages of 25 percent by December 19, 2019; 40 percent by December, 31, 2020; and 60 percent by December, 31, 2022.

- In January of 2018 the CPUC adopted [D.18-01-004](#). This decision addresses the required process for third party solicitations in the context of pre-existing rolling portfolio structure for energy efficiency programs overseen by the investor-owned utility (IOU) program administrators (PAs); The CPUC adopted [D.15-10-028](#) in October of 2015, which established a “Rolling Portfolio” process for regularly reviewing and revising energy efficiency program administrators’ portfolios.

1. **Two-Stage Solicitation Process:** A two-stage process should be used unless there is a specific -schedule related- reason that a shortcut must be used where the first stage is a short request for abstract and the second stage is a full request for proposals. The first stage is the Request for Abstract (RFA) Stage. In this stage, third-party implementers would provide a short abstract summarizing their proposed program, approach, qualifications and experience, and indicative pricing. If there was a robust response, the IOUs would then issue a request for proposal (RFP) soliciting detailed offers from qualified bidder respondents. RFP responses would then be evaluated with qualitative and quantitative criteria and would also utilize inperson- interviews. The most competitive participants would then be notified that they are short-listed and would proceed to the contract negotiation phase. [D.18-01-004, p. 7](#)
2. **Scoring Solicitations:** Once participant submit their abstracts in the RFA phase described above, “[t]he IOUs would then select potentially qualified respondents following scoring and evaluation of the abstracts including the viability and usefulness of the programs proposed in the RFAs.” The RFA shortlist results are not required to be shared among PAs. Doing so may not only be impractical, but also may violate expectations of confidentiality on the part of bidders and it is not clear what benefits would override those considerations. Each PA is ultimately responsible for its own solicitation process, while as much informal communication and coordination among the PAs as possible is encouraged ([D.18-01-004, p. 48](#)). A separate scoring process will be developed and implemented in the Request for Proposal (RFP) phase of the solicitation process.

D.18-01-004 also established a stakeholder advisory groups known as a “Procurement Review Group” (PRG) comprised of Energy Division staff and eligible non-market participants to consult with the IOUs in the design of the RFP and the evaluation of bids on a quarterly basis (see Section X.2. below for more information on the PRG).

3. **Solicitation Schedule:** Implementation plans for third party programs will necessarily be developed and posted after solicitations have concluded. However, the timely and up--to-date- posting of those implementation plans as soon as practical, but no later than 60 days

after contract execution, is still required. For programs that will be bid out in later rounds of the solicitation schedule, posting of implementation plans is still required after the CPUC's decision on the business plans, to reflect programs available to customers in the interim before additional third-party solicitations are scheduled to take place.

4. **Energy Division Review of Solicitations:** Any contract that has a value of \$5 million or greater and/or a term of more than three years, must be submitted to the CPUC for approval via a Tier 2 advice letter. Contracts may be submitted in batches, at the discretion of the contracting utility. CPUC staff should ensure the contracts filed by advice letter comply with the utility's approved business plan, all CPUC decisions and direction, are not the result of a biased solicitation process, and do not thwart the intentions of successful program design, delivery, and realized savings, for some or all sectors and subsectors of customers. CPUC staff always can review any contract informally at any time, including those that do not meet the dollar or length thresholds identified above for required submittal by advice letter.

In addition to the advice letter process described above for contracts valued at \$5 million or greater and/or a term of more than 3-years, CPUC staff will also serve on the PRG utilized for general solicitation review..."Each utility will have at least one PRG, and at its discretion, may utilize more than one PRG, if the IOU prefers to tailor the PRGs for specific market segments or other purposes. The PRGs shall consist of non-financially interested- parties, representing diverse stakeholder interests, as well as CPUC staff, including ORA." [D.18-01-004, p. 35](#)

5. **Independent Evaluator's (IEs) Role in Solicitation Process:** In [D.18-01-004, p. 2, 9, 33, and 36-38](#) the CPUC requires the IOUs to utilize Independent Evaluators to support the solicitation process. More specifically, the Decision directs the IEs utilized by the utilities for these energy efficiency third party solicitations to be hired specifically for this purpose and to possess energy efficiency expertise. The role of the IEs is designed to lend arms length- expertise evaluating the fairness of the conduct and results of the solicitation process by the IOUs. In addition, IOUs should consult with Energy Division staff during the selection process and the Energy Division director should have final approval over the pool of IEs selected by each utility.

"...The IEs monitor the entire solicitation process and provide a written report at the end that is delivered formally to the CPUC as part of the contract evaluation and approval process." Because not all third party contracts will be submitted for formal approval by the CPUC, a formal IE report will accompany only those contracts required to be submitted via a

Tier 2 advice letter (i.e., those contracts valued at \$5 million or more and/or with terms of longer than three years), ([D.18-01-004, p. 37](#)).

The IEs provide recommendations on all solicitations which shall be submitted to the members of the PRGs. The IEs should also monitor the entire process from RFA design to contract execution for all solicitations and contracts, not only those required to be submitted to the CPUC for approval. For the entire solicitation process the IE will serve as a consultant to the PRGs by participating in PRG meetings and shall also provide assessments of the overall third party solicitation process and progress on at least a semi-annual basis to the CPUC via reports filed in the relevant energy efficiency rulemaking. The CPUC may, as this process progresses, see a need for a stronger IE function. The CPUC therefore reserves the right, at any point in the future, to hire an IE or multiple IEs itself, as part of our evaluation and oversight functions. ([D.18-01-004, p. 38](#))

6. **Workforce Standards:** The workforce standards are applied to non-residential HVAC and lighting projects for both existing utility programs and 3P solicitation starting July 1, 2019. These are intended as a starting point for potentially more far-reaching requirements in the future. Incentivized projects of \$3,000 for HVAC and \$2,000 for lighting will have specific criteria requirements of installation technicians⁴⁸. ([D.18-10-008, pg. 76-77](#))

With respect to third party contracts for the workforce, the utilities will propose a set of requirements for the contract among the modifiable terms with specific recommendations for each market or sector to identify the applicable workforce installer standards that would reduce the risk of lost energy savings from poor installation of energy efficiency measures including any specific skills certification requirements and/or broader occupational training and experience requirements (such as journeymen and apprenticeship requirements). [D.18-01-004, p. 40 - 41](#), in OP 9, all EE program administrators shall define "disadvantaged worker," for purposes of their

⁴⁸ Requirements of installation technician doing work onsite. For Lighting: California Advanced Lighting Controls Training Program (CALCTP) certification. For HVAC: Completed or enrolled in a California or federal accredited HVAC apprenticeship; Completed at least five years of work experience at the journey level as defined by the California Department of Industrial Relations and passed a practical and written HVAC system installation competency test and received credentialed training specific to the installation of the technology being installed; or Has a C-20 HVAC contractor license from the California State Contractor's Licensing Board.

EE portfolios and tracking metrics or indicators associated with them, as an individual that meets certain criteria⁴⁹ ([D.18-10-008, pg. 79](#)).

X. Advisory Groups

The CPUC's approach to policy making and practicing administrative law relies on a combination of formal and informal public input that support the development of a record in an administrative proceeding.

For energy efficiency proceedings, the CPUCs continues to promote informal advisory group opportunities for obtaining stakeholder input:

1. **California Energy Efficiency (EE) Coordinating Committee (CAEECC):** In [D.15-10-026, \(p. 71 - 72\)](#) the CPUC established a statewide coordinating committee. Per this decision, "There is no need for Program Administrator (PA)-specific Program Advisory Groups (PAGs), as the PAs all deal with a similar set of issues. The focus now can be on how the PAs incorporate the ideas and concepts developed by the coordinating committee into their specific portfolios.

A single coordinating committee should facilitate greater statewide coordination and harmonization of statewide programs across PAs. As we said in [D.05-01-055](#), "we expect the PAs to ensure that statewide residential and nonresidential program offerings take advantage of best practices and avoid customer confusion by being as uniform and consistent as possible...Subcommittees should be along sector lines, not separated by PA.

- a. Scope of Work for CAEECC:
 - i. Provide input into development of business plans prior to and throughout the drafting process (see notes below re scope of input and timing);
 - ii. Provide input into development of implementation plans, again, prior to and throughout the drafting process;

⁴⁹ Disadvantaged Workforce Criteria: Total household income is below 50 percent of AMI; is a recipient of public assistance; lacks a high school diploma or GED; has history of incarceration of more than one year; is a custodial single parent; is chronically unemployed; was in the foster care system; has limited English proficiency; or lives in a high unemployment ZIP code that is in the top 25 percent of only the unemployment indicator of the CalEnviroScreen Tool.

- iii. Provide input into development of annual budget advice letters, again, prior to and throughout the drafting process; and,
- iv. Provide input into development and revision of metrics for inclusion in business plans and implementation plans as part of i and ii.
- v. Provide a clearinghouse for discussion of the scope and schedule of other stakeholder processes.

In this same decision, the CPUC acknowledged, “the Coordinating Committee will obviate the need for some current stakeholder processes. From a practical perspective, some current processes will have to give way, as stakeholders and CPUC Staff have time for only so many processes... (We) repeat here the admonition we gave in D.05-01-055: we provide general guidance and expectations for the [stakeholder] group structure, but purposefully do not specify every implementation detail.”

[D.18-05-041](#) directed the PA’s Annual Budget Advice Letter (ABAL) proposals be shared with CAEECC. Additionally, this same decision stipulated, “...the program administrators shall host a forum for stakeholder input on implementation plan development for new programs either through the California Energy Efficiency Coordinating Committee or another workshop hosted by the program administrators following the issuance of this decision.”

[D.18-10-008](#) which established EE related workforce requirements and third-party contract terms and conditions also directed the CAEECC to convene a stakeholder process, no later than July 1, 2020, to consider further application of workforce standards beyond those adopted in this decision including any additional lighting controls certification. This will allow time for consideration of experience with the standards required herein.

For more detailed information about the CAEECC including role of the PAs vs. the Coordinating Committee, Energy Division Staff participation on the Committee, sub-committee guidance, and meeting schedule / agenda development, etc. please see: [D.15-10-028](#). For more information about the CAEECC’s roll in reviewing PA Rolling Portfolio submissions please see: [D.18-05-041](#)

2. **Procurement Review Group (PRG):** In [D.02-08-071, p. 24](#), the CPUC established stakeholder advisory groups known as “Procurement Review Groups (PRGs) comprised of eligible non-market participants to consult with the IOUs in the design of the RFP and the evaluation of bids on a quarterly basis; “In order to ensure that interim procurement contracts entered into by the utilities are subject to sufficient and expedited review and pre-approval, we will require each utility

to establish a PUC-authorized “Procurement Review Group” whose members, subject to an appropriate non-disclosure agreement, would have the right to consult with and review the details of, and assess proposed contracts and provide written comments to the IOUs before they submit contract(s) to the CPUC.”

Over the years the usefulness and purpose of these stakeholder groups became questionable given the changing regulatory landscape and competition for stakeholder engagement resulted in limited stakeholders for these purposes. In [D.18-01-004, Section 3.4](#) the concept of the PRG was resurrected again, “We agree there is value in continuing the PRGs, which have existed in some form for some time. The PRGs are a useful vehicle for following the solicitation processes and providing feedback to the PAs. Continuing the PRGs balances the goals of oversight and transparency, as well as timely feedback, with the desire to have an expeditious solicitation process.”

Each utility has at least one PRG, and at its discretion, may utilize more than one PRG if the IOU prefers to tailor the PRGs for specific market segments or other purposes. The PRGs shall consist of non--financially interested- parties, representing diverse stakeholder interests, as well as CPUC staff, including ORA. In terms of the PRG’s ultimate responsibilities, we expect the PRGs to be involved at all levels in the solicitation process, including:

- Draft RFA review
- Review of RFA bids and shortlist
- Draft RFP review
- Review of RFP bid selection criteria
- RFP shortlist and selected contractor review
- Review IE evaluations of all solicitations.

[D.18-05-041](#) requires PAs to “...consult the new energy efficiency PRG and present its proposal to meet the Annual Budget Advice Letter (ABAL) review criteria in future program. For more information about PRGs including direction related to PRG composition, meeting, the PRG Handbook and meeting minutes please see:

<https://www.caeccc.org/third-party-solicitation-process>

XI. Affiliate and Disclosure Rules

1. **Transactions with IOU Affiliates.** To avoid anti-competitive behavior and cross- subsidies between IOUs and their affiliates, all transactions between the IOU administrator and any implementer that is an affiliate of PG&E, SCE, SDG&E or SoCalGas are banned ([D.05-01-055](#)).
2. **Treatment of Energy Efficiency Service Providers.** The IOUs, RENs and CCAs will not provide preferential treatment to any provider of an energy efficiency service that uses energy efficiency program funds.
3. **Conflict of Interest.** Bidders for EM&V contracts, including program design evaluation and market assessment studies, shall provide full disclosure of any potential conflicts of interest, including all current non-energy efficiency related contracts with IOUs, RENs, CCAs and program implementers. Each utility should have at least one PRG, with members who are not financially interested in solicitation results and represent diverse stakeholder interests, to provide feedback during the third party solicitation process. The PRGs should be involved at all stages of the solicitation process participants should be eligible for intervenor compensation ([D.18-01-004](#), pg. 57).

XII. Process and Procedural Issues

1. **Energy Efficiency Policy Manual Disclaimer.** This Policy Manual is a summary of CPUC rules for energy efficiency. It does not supersede any CPUC Decision. IOUs, RENs and CCAs are required to meet the orders of previous CPUC decisions regardless of whether or not they are included in this policy manual. If there is any conflict between this Policy Manual and a CPUC decision, the CPUC's decision controls.
2. **Modifications to Policy Manual and Related Rules.** Energy Division will update this manual as needed based on significant changes related to Energy Efficiency policy. Due to the unknown frequency of policy changes, and potential lag time in updating this manual, interested parties are encouraged to use other sources to receive the most up to date information keeping in mind that some references to older decisions in this manual may have been superseded by more recent CPUC guidance. It is the responsibility of the reader to ensure the most recent policies, pertinent to their policy related questions, are referred to.

3. Complaints and Dispute Resolution. Any program proposal for energy efficiency funding must describe a dispute resolution process to be used in dealing with complaints from end-use gas or electric consumers participating or attempting to participate in the program. In programs where the IOUs, RENs, and CCAs hold contracts with third parties, those contracts will also be required to include dispute resolution provisions.

APPENDIX A: ADOPTED FUND SHIFTING RULES

As modified by D.12-11-015, 12/22/2011 ACR (R.09-11-014), D.09-09-047, D.09-05-037, D.07-10-032, D.06-12-013, and D.05-09-043

Fund Shifting Category	Shifts Among Budget Categories, Within Program	Shifts Among Programs, Within Category	Shifts Among Categories
Statewide Program (except ET, ME&O, and C&S)	No formal Commission review/approval required	No formal Commission review/approval required	Advice letter required for shifts >15% between statewide program categories in either direction (based on each category funding level) per annum. See rules below for shifting away from ET, ME&O, and C&S.
Third Party Programs (competitively bid) (See Notes Below)	No formal Commission review/approval required	No formal Commission review/approval required	Advice Letter required for shifts >15% between statewide and Third Party (competitively bid) program categories in either direction (based on total category funding level) per annum. Advice Letter is required if allocation to competitively bid programs falls below 20% of total portfolio funding.
Local Government and Institutional Partnerships (See Notes Below)	No formal Commission review/approval required	No formal Commission review/approval required	Advice Letter required for shifts >15% between statewide and Local Government and Institutional Partnership program categories in either direction (based on category funding level) per annum.

Notes

- a) Any fund shifting will be shown on the quarterly fund shifting report which will be provided to the Energy Division beginning 7/1/13 (and every 90 days thereafter).

- b) No program or sub-program shall be eliminated except through the Advice Letter process.
- c) For adding new programs, except those chosen during a competitive process, an Advice Letter must be filed.
- d) “Third Party Programs” include any third-party programs that are competitively bid and count towards the percentage competitive bidding requirement. In aggregate, these programs constitute a twelfth category (in addition to the 11 statewide program categories), subject to the 15 percent fund-shifting rule requiring an Advice Letter if the amount transferred from this category is greater than 15 percent in either direction. Fund-shifting of any amount within this twelfth program category is allowed without an Advice Letter.
- e) “Local Government and Institutional Partnerships.” In aggregate, these programs constitute a thirteenth category (in addition to the 11 statewide program categories, and third-party programs), subject to the 15 percent fund-shifting rule requiring an Advice Letter if the amount transferred from this category is greater than 15 percent in either direction. Fund-shifting of any amount within this thirteenth program category is allowed without an Advice Letter.
- f) “Other Programs” include local programs and any other programs not capture in the aforementioned categories. In aggregate, these programs constitute a fourteenth category (in addition to the 11 statewide program categories, third-party programs, and local government and institutional partnerships), subject to the 15 percent fund- shifting rule requiring an Advice Letter if the amount transferred from this category is greater than 15 percent in either direction. Fund-shifting of any amount within this fourteenth program category is allowed without an Advice Letter.
- g) The 15 percent fund-shifting rule, requiring an Advice Letter if the amount transferred from this category is greater than 15 percent in either direction, is applied to the category funding level in the authorized budget adopted in the compliance filing pursuant to the most recent authorizing decision (or the decision itself, if there is no compliance filing).
- h) Utility program administrator may carryover/carryback funding during the current program cycle without triggering a review/approval process.
- i) Changes to incentive levels or modifications to program design (such as changes to customer eligibility requirements) will not trigger Energy Division or formal CPUC review. Program administrators will notify the CPUC of all incentive level changes that take place through the Program Implementation Plan Addendum process.
- j) Advice letters are subject to General Order (GO) 96B.
- k) Marketing Education & Outreach and EM&V programs are subject to overall caps adopted in D.09-09-047 OP 13. Program administrators may request fund shifting augmentations if they wish to increase budget caps. In addition, the fund shifting changes adopted in D.09-09-047 are not intended to change Rule II.2 of the Energy Efficiency Policy Manual V.5 as applied to EM&V and ME&O spending below the adopted caps, nor to change the fund shifting rules for C&S or Emerging Technologies programs.

APPENDIX B: GLOSSARY

COMMON ENERGY EFFICIENCY TERMS AND DEFINITIONS

Adopted Program Budget

The program budget as it is adopted by the CPUC. Inclusive of costs (+/-) recovered from other sources.

Advanced Technologies

Measures or processes which exceed the efficiency or thermodynamic performance of standard energy using equipment or processes.

Affiliate

Any person, corporation, utility, partnership, or other entity 5 percent or more of whose outstanding securities are owned, controlled, or held with power to vote, directly or indirectly either by an administrator or any of its subsidiaries, or by that administrator's controlling corporation and/or any of its subsidiaries as well as any company in which the administrator, its controlling corporation, or any of the administrator's affiliates exert substantial control over the operation of the company and/or indirectly have substantial financial interests in the company exercised through means other than ownership. For purposes of these Rules, "substantial control" includes, but is not limited to, the possession, directly and indirectly and whether acting alone or in conjunction with others, of the authority to direct or cause the direction of the management of policies of a company. A direct or indirect voting interest of five percent (5 percent) or more by the administrator, its subsidiaries, or its affiliates in an entity's company creates a presumption of control.

Avoided Costs

Avoided costs refers to the incremental costs avoided by the investor-owned utility when it purchases power from qualifying facilities, implements demand-side management, such as energy efficiency or demand-response programs, or other wise defers or avoids generation from existing/new utility supply-side investments or energy purchases in the market. Avoided costs also encompass the deferral or avoidance of transmission and distribution-related costs. (D.08-01-006, Footnote 2)

Baseline Data

The state of performance and/or equipment that what would have happened in the absence of the program induced energy efficiency.

California Energy Efficiency (EE) Coordinating Committee (CAEECC)

In [D.15-10-026, \(p. 71 - 72\)](#) the CPUC established a statewide coordinating committee whose role is to facilitate greater statewide coordination and harmonization of statewide EE programs across program administrators (PAs).

Coincident Peak Demand

The metered or estimated demand of a device, circuit, or building that occurs at exactly the same time as the system peak for a given year and weather condition.

Community Choice Aggregators

Organizations created by local governments pursuant to Assembly Bill 117 for the purpose of procuring power and administering energy efficiency programs on behalf of local citizens.

Competitive Solicitation

The process whereby parties are requested to submit bids offering innovative approaches to energy savings or improved program performance.

Conservation

Reduction of a customer's energy use achieved by relying on changes to the customer's behavior which may result in a lower level of end use service.

Conservation Measures

Activities and/or behaviors aimed at reducing energy consumption.

Conservation Programs

Programs which are intended to influence customer behavior as a means to reduce energy use.

Cost Effectiveness

An indicator of the relative performance or economic attractiveness of any energy efficiency investment or practice when compared to the costs of energy produced and delivered in the absence of such an investment.

Cost-Effectiveness Tool

[Avoided Cost Calculator Tool](#)

Cream Skimming

Cream skimming results in the pursuit of a limited set of the most cost-effective measures, leaving behind other cost-effective opportunities. Cream skimming becomes a problem when lost opportunities are created in the process.

Cross Subsidization

Benefits enjoyed by one group, such as a customer class, which are funded by another group.

Custom Measures/projects

Energy efficiency efforts where the customer financial incentive and the ex ante energy savings are determined using a site-specific analysis of the customer's facility (D.11-07- 030 page 31).

Customer

Any person or entity that pays an electric and/or gas bill to an IOU or CCA and that is the ultimate consumer of goods and services including energy efficiency products, services, or practices.

Cumulative Savings

As clarified in D.07-10-032, cumulative savings represent the savings in that year from all previous measure installations (and reflecting any persistence decay that has occurred since the measures were installed) plus the first-year savings of the measures installed in that program year.

Deemed Measure

A prescriptive energy efficiency measure.

Delayed Installation

Products which are claimed as installed in a specific quarter but are likely to be installed at a later date (D.11-07-030, page 21).

Dual Test

The requirement that an energy efficiency activity pass both the TRC and the PAC cost-effectiveness test.

Effective Useful Life (EUL)

An estimate of the median number of years that the measures installed under the program are still in place and operable.

Electricity Savings

Reduced electricity use (or savings) produced by either energy efficiency investments which maintain the same level of end use service or conservation actions which usually reduce energy use by reducing the quantity or quality of the baseline energy services demanded.

Emerging Technologies

New energy efficiency technologies, systems, or practices that have significant energy savings potential but have not yet achieved sufficient market share (for a variety of reasons) to be considered self sustaining or commercially viable. Emerging technologies include late stage prototypes or under-utilized but commercially available hardware, software, design tools or energy services that if implemented appropriately should result in energy savings.

Emissions Reductions

The CPUC requires annual reporting of reduced emissions of carbon dioxide (CO₂), sulfur oxides (SO_x), nitrous oxides (NO_x), and particulate matter (PM₁₀) as a result of energy efficiency savings. The IOUs use the E3 calculator to compute the annual electric and natural gas emissions reductions, which are the units implemented in the year times the annual emission reduction for a

particular measure. The E3 calculator calculates values of CO2 in tons per kWh or therms; NOx and PM10 are in pounds per kWh or therms.

The following equations are from the “E3 Calculator Tech Memo” found at the following web link:

https://www.ethree.com/wp-content/uploads/2017/02/E3_Calculator_TechMemo_6d.docx

Electric Reductions: CO2 tons per year ($Emission[E][CO2]$)

$$Emission[E][CO2]_y = \sum_{Q=1+(y-1)*4}^{y*4} (IN_{M,Q} * kWh_wtd_A_M * NTG_M * ER[CO2]_M) * IR_M * GRR_M$$

Where

- y = year of consideration. First year of program cycle = 1.
Q = Quarter of the year.
INM,Q = # of incremental of measures implemented in quarter Q.
NTGM = Net-to-Gross ratio for energy for measure M, adjusted for market effects.
ER[CO2]M = Emission rate of CO2 in tons per kWh of measure M.

NOX and PM-10 equations are the same. Just replace [CO2] with the appropriate indicator. Note that CO2 emission rate is in tons per kWh. NOX and PM-10 are in pounds per kWh.

Gas Reductions: CO2 tons per year (*Emission[G][CO2]*)

$$Emission[G][CO2]_y = \sum_{Q=1+(y-1)*4}^{y*4} (IN_{M,Q} * Th_wtd_A_M * NTG_M * ER[CO2]_{GCT}) * IR_M * GRR_M$$

Where

- y = year of consideration.
Q = Quarter of the year.
INM,Q = # of incremental of measures implemented in quarter Q.
NTGM = Net-to-Gross ratio for energy for measure M, adjusted for market effects.
ER[CO2]GCT = Emission rate of CO2 in tons per therm, based on the gas combustion type (GCT) specified on the input sheet for the measure.

NOX and PM-10 equations are the same. Just replace [CO2] with the appropriate indicator. Note that CO2 emission rate is in tons per Therm. NOX and PM-10 are in pounds per Therm.

Energy Efficiency Groupware Application (EEGA)

The IOUs post reports to the EEGA webpage, which is accessible to the public:
<http://eeга.cpuc.ca.gov>.

End Use

- 1) The purpose for which energy is used (e.g. heating, cooling, lighting).

- 2) A class of energy use that an energy efficiency program is concentrating efforts upon. Typically categorized by equipment purpose, equipment energy use intensity, and/or building type.

Energy Efficiency

Activities or programs that stimulate customers to reduce customer energy use by making investments in more efficient equipment or controls that reduce energy use while maintaining a comparable level of service as perceived by the customer.

Energy Efficiency Measure

An energy using appliance, equipment, control system, or practice whose installation or implementation results in reduced energy use (purchased from the distribution utility) while maintaining a comparable or higher level of energy service as perceived by the customer. In all cases energy efficiency measures decrease the amount of energy used to provide a specific service or to accomplish a specific amount of work (e.g., kWh per cubic foot of a refrigerator held at a specific temperature, therms per gallon of hot water at a specific temperature, etc). For the purpose of these Rules, solar-powered, non- generating technologies are eligible energy efficiency measures (D.09-12-022, OP 1).

Energy Efficiency Programs

Programs that reduce customer energy use by promoting energy efficiency investments or the adoption of conservation practices or changes in operation which maintain or increase the level of energy services provided to the customer.

Energy Efficiency Savings

The level of reduced energy use (or savings) resulting from the installation of an energy efficiency measure or the adoption of an energy efficiency practice, subject to the condition that the level of service after the investment is made is comparable to the baseline level of service. The level of service may be expressed in such ways as the volume of a refrigerator, temperature levels, production output of a manufacturing facility, or lighting level per square foot.

Evaluation, Measurement and Verification (EM&V)

Activities that evaluate, monitor, measure and verify performance or other aspects of energy efficiency programs or their market environment.

Evaluation Project Budget

The project level evaluation budget as it is defined by the program administrators or Energy Division for internal program budgeting and management purposes. Inclusive of direct and allocated overhead and costs (+/-) recovered from other sources.

Ex Ante (Forecast) Values

Estimated savings values calculated based on assumptions prior to the evaluation of the portfolio cycle. These savings reflect the IOU reported savings, which are trued up with final evaluation.

Ex Ante (Forecast) Review

The review process that occurs before savings for a measure or project savings claim is “frozen” to verify that the ex ante values used to calculate the reported savings are reasonable and based on best available information.

Financial Incentive

Financial support (e.g., rebates, low interest loans, free technical advice) provided to customers as an attempt to motivate the customers to install energy efficient measures or undertake energy efficiency projects. (See Rebate)

Free Drivers

A free driver is a non-participant who adopted a particular efficiency measure or practice as a result of a utility program. (From April 2006 EM&V Protocols)

Free riders (Free Ridership)

Program participants who would have installed the program measure or equipment in the absence of the program.

Fuel Substitution

Programs which are intended to substitute energy using equipment of one energy source with a competing energy source (e.g. switch from gas furnaces to electric resistance heating).

Funding Cycle

Period of time for which funding of energy efficiency programs have been approved by the CPUC.

Gas Savings

Reduced natural gas usage (or savings) produced by either energy efficiency investments which maintain the same level of end use service or conservation actions which can reduce energy use by reducing the quantity or quality of the baseline services provided.

Gross Savings

Gross savings count the energy savings from installed energy efficiency measures

Irrespective of whether or not those savings are from free riders, i.e., those customers who would have installed the measure(s) even without the financial incentives offered under the program. Gross savings are adjusted by a net-to-gross ratio to produce net savings, that is, to remove the savings associated with free riders.

Gross Realization Rate

Gross Realization Rate (GRR) is the ratio of achieved energy savings to predicted energy savings; as a multiplier on Unit Energy Savings, the GRR takes into account the likelihood that not all CPUC-approved projects undertaken by IOUs will come to fruition.

Hard to Reach, Residential

Those customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a language, income, housing type, geographic, or home ownership (split incentives) barrier. These barriers are defined as:

Language – Primary language spoken is other than English, and/or

Income – Those customers who fall into the moderate income level (income levels less than 400 percent of the federal poverty guidelines and/or

Housing Type – Multi-family and Mobile Home Tenants, and/or Geographic – Businesses in areas other than the San Francisco Bay Area, San

Diego area, Greater Los Angeles Area (Los Angeles, Orange, San Bernardino, Riverside and Ventura counties) or Sacramento, and/or

Home Ownership – Renters

Incremental Measure Cost

The additional cost of installing a more efficient measure calculated from the price differential between energy-efficient equipment and services and standard or baseline state. These costs include any direct or indirect incremental cost that is attributable to the energy efficiency activity. This may include design assistance, surveys, materials and labor, commissioning costs, etc.

Independent Evaluator (IE)

A consultant selected by the IOUs to serve as an independent advisor to the IOUs and the PRG members involved in overseeing the third-party solicitation process as described in [D.18-01-004, p. 2, 9, 33, and 36-38](#).

Information & Education

Information and education programs can provide a wide range of activities designed to inform or educate a customer or customer group. Generally these range from in-depth, one-on-one, on-site or centrally located classroom style instruction in topics related to energy efficiency, to programs that target information to specific types of customers, to general information provided to a wide range of customers, to short inexpensive public service announcements on FCC approved communication frequencies. Programs intended to provide customers with information regarding generic (not customer-specific) conservation and energy efficiency opportunities. For these programs, the information may be unsolicited by the customer.

Innovation Incubator

A low-cost, stand-alone program designed to grow innovative energy saving programs and processes for the larger portfolio over the long term. The incubator funds new program ideas that meet reasonable scientific scrutiny for potentially cost-effective energy savings and peak reduction.

Installation Rate

Installation Rate is the ratio of the number of verified installations of a measure divided by the number of claimed installations rebated by the utility during a claim period. Typically Installation Rates used on an ex ante basis will be based upon previous ex post evaluations.

Institutional Barriers

A type of market barrier: In this case, the internal organizational hurdles that inhibit the evaluation and or choice to take energy efficiency actions.

Least Cost/Best Fit

The procurement of cost-effective supply and demand-side resources that, regardless of ownership, meet capacity and energy deliverability requirements. Energy efficiency resources are constructed from the bottoms up approach that aggregates the demand and energy savings from various energy-saving measures and activities into applicable end-use categories such as space cooling, space heating, lighting, and refrigeration, in order to provide near- and long-term peaking, intermediate, and baseload requirements.

Levelized Cost

An estimate of the annualized cost of installing an energy efficiency measures divided by the annual energy savings. Typically calculated by multiplying the incremental cost of the measure by capital recovery factor (function of discount rate and expected useful life of the measure) and then dividing by annual energy savings.

Load Management

Programs which reduce or shift electric peak demand away from periods of high cost electricity to non-peak or lower cost time periods, with a neutral effect on or negligible increase in electric use.

Lost Opportunities

Energy efficiency measures that offer long-lived, cost-effective savings that are fleeting in nature. A lost opportunity occurs when a customer does not install an energy efficiency measure that is cost-effective at the time, but whose installation is unlikely to be cost-effective if the customer attempts to install the same measure later.

Market Effect

A market effect is a change in the structure or functioning of a market or the behavior of participants in a market that result from one or more program efforts. Typically these efforts are designed to increase in the adoption of energy-efficient products, services or practices and are causally related to market interventions. Market effects include reductions in energy consumption and/or demand in a utility's service area caused by the presence of the DSM program, beyond program related gross or net savings of participants. These effects could result from: (a) additional energy efficiency actions that program participants take outside the program as a result of having participated;

(b) changes in the array of energy-using equipment that manufacturers, dealers and contractors offer all customers as a result of program availability; and (c) changes in the energy use of non-participants

as a result of utility programs, whether direct (e.g., utility program advertising) or indirect (e.g., stocking practices such as (b) above or changes in consumer buying habits)." Participant spillover is described by (a), and non-participant spillover, by (b) and (c). Some parties refer to non-participant spillover as "free-drivers." (From EM&V Protocols, April 2006)

Market Transformation

Decision (D.)09-09-047, defines market transformation as "long-lasting, sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies until they are adopted into codes and standards (or otherwise adopted by the market), while also moving forward to bring the next generation of even more efficient technologies to the market."⁵⁰

Marketing, Education and Outreach (ME&O)

Communications activities designed to identify, reach and motivate potential customers to take actions to either learn more about or invest in energy efficiency opportunities.

Measures

- 1) Specific customer actions which reduce or otherwise modify energy end use patterns.
- 2) A product whose installation and operation at a customer's premises results in a reduction in the customer's on-site energy use, compared to what would have happened otherwise.

Net savings

The savings realized when free ridership is accounted for. The savings is calculated by multiplying the gross savings by the net to gross ratio.

Net to Gross Ratio

⁵⁰ D.09-09-047 at p.354, OP 10

A ratio or percentage of net program savings divided by gross or total impacts. Net to gross ratios are used to estimate and describe the free-ridership that may be occurring within energy efficiency programs.

Non-price Factors

Those factors included in cost effectiveness tests, other than commodity prices and transportation and distribution costs, e.g., environmental factors.

Non-Resource Program

Energy efficiency programs that do not directly procure energy resources that can be counted, such as marketing, outreach and education, workforce education and training, and emerging technologies.

Participant Test

The Participant Test is the measure of the quantifiable benefits and costs to the customer due to participation in a program. Since many customers do not base their decision to participate in a program entirely on quantifiable variables, this test cannot be a complete measure of the benefits and costs of a program to a customer. (See SPM link under Attachment A.)

Partnership

Coordinated efforts of a utility and a local government or other entity to use the strengths of both parties to achieve energy savings goals.

Peak Demand, Reported (per OP 1 of D.06-06-063 as modified by D.12-05-015)

The peak megawatt load reduction contained in the most recently adopted DEER used to estimate and verify peak demand savings values. The DEER method utilizes an estimated average grid level impact for a measure between 2 PM and 5 PM during a “heat wave” defined by a three consecutive weekdays for weather conditions that are expected to produce a regional grid peak event. DEER utilizes a 3-day “heat wave” that occurs on consecutive days in June through September such that the three consecutive days do not include weekends or holidays, and where the heat wave is ranked by giving equal weight to the peak temperature during the 72-hour period, the average temperature during the 72-hour period and the average temperature from noon – 6 PM over the three days.

Peak Demand-General (kW)

- 1) The maximum level of metered demand during a specified period, such as a billing month, or during a specified peak demand period.
- 2) Extremely high energy use, usually with reference to a particular time period.

Peak Savings- Coincident (kW)

The estimated peak (e.g. highest) demand savings (MW or kW) from a program for a specific time, date, and location coincident with the forecasted system peak for a given area and a given set of weather conditions. This estimate must also include consideration of the likelihood that the equipment is actually on at the time of coincident peak. Usage of this definition: Resource planning- for making adjustments to forecasts of peak usage for understanding reserve margins and reliability purposes.

Peak Savings- Daily Average (kW)

The average peak demand savings (kWh impacts/ # of hours in the peak rate period) for a given utility during their peak season. Example for SCE-Peak period is for summer weekdays from 12-6 PM. So - daily average savings would be the number of kWh saved/ # of kWhs saved for all weekday peak periods (= kWh/5 days/week * 12 weeks/ summer* 6 hours/day = kW average. Usage: Cost effectiveness analysis, primarily for valuing energy savings that occur during the peak period using “peak” average avoided costs.

Peak Savings –Non coincident (kW)

Estimated highest level of peak savings (kW or MW) for a given program during the peak time period for a given utility on the hottest day of a “normal” weather year. Thus if a group of measures saved 1MW at 2PM, 1.7 MW at 3PM, 1.6 MW at 4PM, 1.0 MW at 5 PM and 1.2 MW at 6 PM, the peak non coincident savings would be 1.7 MW. This savings estimate does not take into account how many of the affected devices or equipment will be operating during the peak time period. Usage: Cost effectiveness analysis and procurement.

Peer Review Group (PRG)

A subset of the Program Advisory Group consisting of non-financially interested members who will review utility submittals to the CPUC, assess overall portfolio plans, plans for bidding out pieces of the portfolio, and the bid evaluation criteria for selecting third-party programs.

Performance Uncertainties

A market barrier: refers to new technologies or systems whose efficiency or system performance levels are uncertain due to lack of experience.

Portfolio

All IOU and non-IOU energy efficiency programs funded by ratepayers that are implemented during a program year or cycle. May also refer to a group of programs sponsored, managed, and contracted for by a particular IOU.

Portfolio Reporting

Regularly scheduled reporting by the portfolio administrators directly to the CPUC. Metrics reported are: portfolio budgets and expenditures, measures installed, services rendered, and other program activity deemed relevant to Energy Division's responsibility to support the CPUC's responsibilities of quality assurance, policy oversight, and EM&V.

Pre-commercialization

A phase in the life of a product before it is readily available on the market.

Program

A collection of defined activities and measures that

- are carried out by the administrator and/or their subcontractors and implementers,
- target a specific market segment, customer class, a defined end use, or a defined set of market actors (e.g. designers, architects, homeowners),
- are designed to achieve specific efficiency related changes in behavior, investment practices or maintenance practice in the energy market,
- and are guided by a specific budget and implementation plan.

Program Activities

Any action taken by the program administrator or program implementer in the course of implementing the program.

Program Administrator

An entity tasked with the functions of portfolio management of energy efficiency programs and program choice.

Program Administrator Cost (PAC) Test

Under portfolio evaluation of cost effectiveness, the PAC test contains the program benefits of the TRC test, but costs are defined differently to include the costs incurred by the program administrator but not the costs incurred by the participating customer. (See the SPM link under Attachment A.)

Program Advisory Group (PAG)

Advisory groups for each utility service area composed of energy efficiency experts representing customer groups, academic organizations, environmental organizations, agency staff and trade allies in the energy market.

Program Cycle

The period of time over which a program is funded and implemented.

Program Implementation Plan

A detailed description of a program that includes program theory, planned program processes, expected program activities, program budget, projected energy savings and demand reduction and other program plan details as required by the CPUC, assigned ALJ, or Energy Division.

Program Implementers

An entity or person that puts a program or part of a program into practice based on contracts or agreements with the portfolio manager.

Program Strategy

The set of activities deployed by the program in order to achieve the program's objectives.

Program Year(s)

The calendar year(s) during which the program operates.

Ratepayer

Those customers who pay for gas or electric service under regulated rates and conditions of service.

Rebate

A financial incentive paid to the customer in order to obtain a specific act, typically the installation of energy efficiency equipment.

Remaining Useful Life (RUL)

An estimate of the median number of years that an measure being replaced under the program would remain in place and operable had the program intervention not caused the replacement.

Report Month

The month for which a particular monthly report is providing data and information. For example, the report month for a report covering the month of July 2006, but prepared and delivered later than July 2006, would be July 2006.

Resource Programs

Energy Efficiency programs that generate energy savings that are quantified and tracked by program administrators.

Resource Value

An estimate of the net value of reliable energy (e.g., kWh, therms) and capacity (e.g., kW, Mcfd) reductions resulting from an energy efficiency program. This includes the net present value of all of the costs associated with a program and all of the estimated benefits (both energy and capacity). The calculation of resource value and associated benefits should be consistent with the avoided costs adopted in the most recent CPUC proceeding or otherwise provided for by the CPUC.

Ratepayer Impact Measure (RIM) Test

The Ratepayer Impact Measure (RIM) test measures what happens to customer bills or rates due to changes in utility revenues and operating costs caused by the program. Rates will go down if the change in revenues from the program is greater than the change in utility costs. Conversely, rates or bills will go up if revenues collected after program implementation are less than the total costs

incurred by the utility in implementing the program. This test indicates the direction and magnitude of the expected change in customer bills or rate levels.

Savings Decay

The reduction of cumulative savings due to previous measure installations passing their Remaining Useful Life or Effective Useful Life. Per D.09-09-047 and until EM&V results inform better metrics, IOUs may apply a conservative deemed assumption that 50 percent of savings persist following the expiration of a given measure's life.⁵¹

Service Area

The geographical area served by a utility.

Short Term/Long Term

Planning terms referring to the timing or expected timing of program activities, program impacts, or program funding. Short term indicates program activities, program impacts, or program funding that occurs during the current program cycle. Long term indicates program activities, program impacts, or program funding that occurs beyond the current program cycle.

Source-BTU Consumption

Conversion of retail energy forms (kWh, therms) into the BTU required to generate and deliver the energy to the site. This conversion is used to compare the relative impacts of switching between fuel sources at the source or BTU level for the fuel substitution test required for fuel-substitution programs.

Standard Practice Manual (SPM)

The California Standard Practice Manual: Economic Analysis of Demand-side Programs and Projects is jointly issued by the California Public Utilities Commission and the California Energy Commission. The SPM provides the definitions for the standard cost effectiveness tests and their components used for energy efficiency programs. SPM tests are further clarified in CPUC Decisions as cited in the Cost-Effectiveness Rules in this Policy Manual.

⁵¹ D.09-09-047 at p.334

Statewide

Energy efficiency programs or activities that are essentially similar in design and available in all CPUC regulated utility service areas in California.

Third Party/Non-IOU

Non-regulated implementers of ratepayer funded energy efficiency activities.

Total Resource Cost Test (TRC)

The TRC test measures the net resource benefits from the perspective of all ratepayers by combining the net benefits of the program to participants and non-participants. The benefits are the avoided costs of the supply-side resources avoided or deferred. The TRC costs encompass the cost of the measures/equipment installed and the costs incurred by the program administrator. (See SPM link under Attachment A.)

Two-Stage Solicitation Process

A solicitation process that includes two stages; an initial Request for Abstract and a follow-up Request for Proposal phase as described in [D.18-01-004, p. 7](#)

Unit Energy Consumption

Unit Energy Consumption (UEC) is the expected annual energy consumption of a technology, group of technologies, or process.

Unit Energy Savings

Unit Energy Savings (UES) is the estimated difference in annual energy consumption between a measure, group of technologies or processes and baseline, expressed as kWh for electric technologies and therms for gas technologies

Upstream Incentives

Incentives provided to manufacturers or retailers of high efficiency products in order to encourage their production and sales, in contrast to the more common downstream incentives, which are provided directly to customers as rebates.

Workpapers

Documentation prepared by the program administrators or program implementers that documents the data, methodologies, and rationale used to develop ex-ante estimates that are not in already fully contained in the Database for Energy Efficiency Resources (DEER) (D.10-04-029, footnote page 20).

Zero Net Energy

Zero Net Energy is defined as the implementation of a combination of building energy efficiency design features and on-site clean distributed generation such that the amount of energy provided by on-site renewable energy sources is equal to the energy consumed by the building annually, at the level of a single “project” seeking development entitlements and building code permits. Definition of zero net energy at this scale enables a wider range of technologies to be considered and deployed, including district heating and cooling systems and/or small-scale renewable energy projects that serve more than one home or business. (D.07-10-032, Footnote 42.)

(END OF APPENDIX B)

APPENDIX C: Cost Categories and Related Cap and Targets

IOU shall reflect all costs associated with the delivery of their energy-efficiency programs in their filings in the energy-efficiency portfolio applications and shall note, where applicable, when the costs are recovered in other proceedings.

The CPUC has established various (hard) caps and (soft) targets as summarized in the table below:

Budget Categories	Cap	Target
Utility program administrative costs ⁵²	10%	
Third-party / Gov't partnership administrative costs ⁵³		10%
Marketing & outreach costs ⁵⁴		6%
Direct implementation non-incentive (DINI) costs ⁵⁵		20%
Evaluation, measurement & verification (EM&V) costs ⁵⁶	4%	

The IOUs will forecast and report total Administrative, Marketing, Direct Implementation costs by program and subprogram in the cost categories and sub-categories. A detailed characterization of the specific types of costs that are allocated to each of these categories is provided below.

⁵² D.09-09-047, OP 13a and p. 62

⁵³ D.09-09-047 at p. 63

⁵⁴ D.09-09-047, OP 13b and at p. 73

⁵⁵ D.09-09-047 OP 13c and at p. 74; D.12-11-015 at p. 101

⁵⁶ D.12-11-015 at p. 59; D.09-09-047, COL 6

Utility Administrative Costs

Administrative costs for utility energy efficiency programs (excluding third party and/or local government partnership budgets) are limited to 10 percent of total energy efficiency budgets.

Administrative costs shall not be shifted into any other costs category.

Administrative costs are necessary to support energy efficiency programs but costs must be reasonable and limited to overhead, labor and other costs discussed below needed to implement quality programs with ratepayer funds.

All IOUs shall reflect all labor-related costs associated with the delivery of energy-efficiency programs, as defined at page 49 of D.09-09-047, in their energy-efficiency portfolio filings, and shall clearly delineate where any expenses or costs have been or will be recovered in proceedings

other than energy efficiency applications.⁵⁷ Administrative costs include the following:⁵⁸⁵⁹

Overhead (G&A Labor/Materials): administrative labor, accounting support, IT services and support, reporting databases, data request responses, CPUC financial audits, regulatory filings support and other ad-hoc support required across all programs.

Labor (Managerial & Clerical): This category includes utility labor costs related to either management or clerical positions directly related to program administration. SDG&E and SoCalGas also add payroll taxes.

Human Resource Support and Development: This includes payroll taxes, payroll support, as well as pensions.⁶⁰

⁵⁷ D.12-11-015 OP 39

⁵⁸ D.09-09-047, OP 13a and at p. 50; with additional detail from Attachment A to PG&E AL. 3065-G/3562-E

⁵⁹D.09-09-047 at 50 states that these Administrative Cost categories do not include EM&V or Marketing Outreach

⁶⁰ D.09-09-047 at p. 56 says “Attachment 5-A of the December 2008 ruling [the Allowable Costs Attachment] lists payroll tax and pensions as included in the Human resources Support Category.”

Travel and Conference fees: This includes labor, travel and fees for conferences.⁶¹ This category includes utility sponsorships for energy efficiency program-specific events or activities such as including membership-based, issue-specific trade organizations that include as a component of membership benefits entry into conferences. However, utility sponsorship fees for major national energy efficiency conferences that provide company recognition or status are prohibited as energy efficiency allowable costs. Such costs shall not be funded with energy efficiency program funding.⁶²

CPUC Division of Water and Audits allows travel costs, such as meeting with customers, can to be charged to the applicable program area (i.e., to DINI or to Marketing and Outreach).

Travel costs by IOU staff should be limited, but this will be achieved via the cost targets for marketing. Travel costs to EE conferences and other activities shall be charged to administrative costs with the following exceptions:

Travel costs for DINI activities and marketing can be charged to those respective cost categories

IOU sponsorships of EE conferences (i.e. “platinum” “gold” level donations) be explicitly prohibited from inclusion in energy efficient budgets as administrative costs. IOUs may join membership-benefit issue specific (i.e. HVAC) trade organizations that include as a component of membership benefits entry into conferences. Other staff travel costs to participate in energy efficiency conferences are also allowable administrative costs.

Additional activities charged to the utility administrative cost category include:⁶³

Membership dues (i.e., trade organizations)

Reporting database (e.g., CRM, Track It Fast, Program Builder, SMART, etc.)

Facility-related costs

⁶¹ D.09-09-047 at 50

⁶²D.11-04-005 at 20, OP 2

⁶³Unless otherwise noted, these details were provided in Attachment A to PG&E AL 3065- G/3562-E (2010-12 EE portfolio compliance filing).

- Supply management function activities to ensure oversight of contractors
- Administering contractor payments for services which are non-incentive related
- Utility administrative cost associated with Local Government Partnerships & Third Party Programs
- Administrative and logistical costs related to workshops on Strategic Planning issues⁶⁴
- Utility administrative costs do not include the following:⁶⁵
 - Direct implementation (incentive costs and DINI)
 - Marketing and outreach
 - Evaluation, measurement and verification
 - Administrative costs for third party programs / government partnerships⁶⁶
 - Program-specific IT costs charged to the DINI and M&O cost categories (e.g., on-line audit tools).⁶⁷

Direct Implementation Non-Incentive (DINI) Costs

Direct implementation non-incentive (DINI) costs (excluding non-resource and other exempt programs and subprograms) are targeted at 20 percent of the total adopted energy efficiency budgets.⁶⁸

As depicted in the figure below, direct implementation non-incentive (DINI) costs are a subset of direct implementation costs. Direct implementation costs are defined as “costs associated with activities that are a direct interface with the customer or program participant or recipient (e.g., contractor receiving training).”⁶⁹ Direct implementation includes two subcategories: (a) rebate and incentive costs and (b) DINI.⁷⁰

⁶⁴ D.09-09-047, OP 14

⁶⁵ D.09-09-047 at 50, unless otherwise noted

⁶⁶ D.09-09-047 at 63

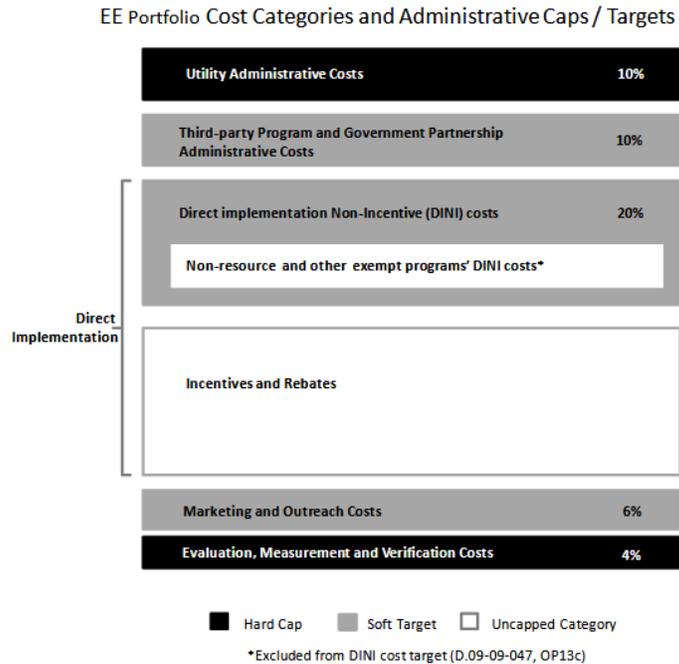
⁶⁷ Attachment A to PG&E AL 3065-G/3562-E

⁶⁸ D.09-09-047 OP 13c and at p. 74; D.12-11-015 at p. 101

⁶⁹ D.09-09-047 at p. 50

⁷⁰ D.09-09-047, Table 3, at p. 54, see notes regarding lines C1 and C2

Note: DINI costs have been referred to by the IOUs and the CPUC with various terms such as “non-resource costs,”⁷¹ “direct implementation (non-incentives and rebates),”⁷² “program delivery (non-rebates and incentives),”⁷³ and “implementation – customer services costs.”⁷⁴



Activities charged to cost category subject to the DINI target include:⁷⁵

- Employees who have a direct interface with the customer (i.e. Account Executives, Auditors, Engineers, Processors, Inspectors, call center representatives)
- Processing rebate applications
- Inspecting rebated/incentive measures
- Engineering related activities
- Measurement development
- Education and training of contractors/partners/customers

⁷¹ D.09-09-047 OP13

⁷² D.09-09-047, Table 3 at p. 54

⁷³ D.09-09-047 Tables 5, 6 and 7 at pages 75, 77, 80, respectively

⁷⁴ D.12-11-015 at p. 101

⁷⁵ Unless otherwise noted these details were provided in Attachment A to PG&E AL 3065- G/3562-E

- Project management activities (i.e. Planning Scope of Work, working with contractors and customers, setting goals, reviewing goals, reacting to market conditions, and responding to customer inquiries (i.e. calls, emails, letters)).
- Program planning, development and design
- Customer support
- Energy audits and Continuous Energy Improvement
- Market transformation and long-term strategic plan support
- Compiling and maintaining information (i.e, data, customer records) for projects
- Licensing fees or IT development cost for program specific applications for implementation (e.g., benchmarking tool or project management tool);
- Vacation and sick leave-related to direct implementation labor
- Direct-implementation specific IT costs (e.g., licensing fees or IT development cost for program-specific applications)
- Staff travel to undertake direct implementation-specific work activities (excluding conference participation)
- Program planning/design/project management and information gathering costs related to specific Strategic Plan related non-resource and resource programs⁷⁶
- Programs or subprograms that are exempt from the DINI target include:⁷⁷
- Non-resource programs or subprograms (e.g., Emerging Technologies, Workforce Education and Training, Lighting Market Transformation, Zero Net Energy pilots, Integrated Demand Side Management).⁷⁸
- Codes and Standards Program⁷⁹
- Financing programs, including On-Bill Financing Program⁸⁰ (excluding revolving loan amounts)

⁷⁶ D.09-09-047, OP 14

⁷⁷ See exclusion of these costs in D.09-09-47 OP 13c

⁷⁸ D.09-09-047 at p. 50

⁷⁹ D.09-09-047 Table 3, at p. 54, see notes regarding C2

⁸⁰ Ibid.

- The formula for calculating the DINI cost percentage subject to the target is as follows:

$$\frac{[\text{Total DINI cost, excluding REN and CCA programs}] - [\text{Exempt DINI program costs}]}{[\text{Total IOU budget, excluding REN and CCA programs}]}$$

Notes:

- REN and CCA programs are excluded because the IOUs do not manage and/or administer them.
- For exempt programs and subprograms, see examples above.
- Government partnership and third-party programs budgets are included in both the numerator and denominator.
- Statewide ME&O (a non-resource DINI target exempt program) budgets are included in the denominator, whether approved by separate application or not.

Marketing and Outreach Costs

Marketing and outreach costs are targeted at 6 percent of total adopted energy efficiency budgets, subject to the fund-shifting rules specified in this manual.⁸¹ This is not a hard cap, as with administrative costs, but a budget target.⁸² Activities charged to this category include:⁸³

- Preparing collateral
- Distributing collateral
- Support related to outreach events
- Participating in outreach events
- Advertising, media, newspaper, website, and magazine related marketing activities
- Local government partnership marketing and outreach related to long-term Strategic planning support
- Vacation and sick leave related to marketing labor

⁸¹ D.09-09-047, OP 13c

⁸² D.09-09-047 at p. 73

⁸³ Attachment A to PG&E AL 3065-G/3562-E

- Marketing-specific IT costs
- Staff travel to undertake marketing-specific work activities (excluding conference participation.)

Third Party Program and Government Partnership Administrative Costs:⁸⁴

The IOUs shall seek to achieve a 10 percent administrative cost target for third party and local government partnership direct costs (i.e., separate from utility costs to administer these programs).⁸⁵ The cost target is 10 percent of third party and government partnership budget, rather than 10 percent of the total energy efficiency portfolio (as with the utility administrative cost cap). The IOUs should not be permitted to unduly shift administrative cost cuts onto local government partnerships and third party implementers. Local government partnership and third party program M&O and DINI costs are subject to the 6 percent and 20 percent portfolio cost targets.⁸⁶

Evaluation Measurement and Verification

The adopted EM&V budget is 4 percent of the total portfolio budget, consistent with budgets from prior portfolios.⁸⁷ Activities charged to the EM&V budget category include:

- Staff travel to participate in Strategic Plan workshops⁸⁸
- Market, cost assessment and other studies as called for or suggested by the Strategic Plan⁸⁹
- Benefits, payroll tax, and pensions for EM&V labor.⁹⁰

⁸⁴ Attachment A to PG&E AL 3065-G/3562-E

⁸⁵ D.09-09-047 at p. 63.

⁸⁶ Attachment A to PG&E AL 3065-G/3562-E

⁸⁷ D.12-11-015 at p. 59; D.09-09-047, COL 6

⁸⁸ Attachment A to PG&E AL 3065-G/3562-E

⁸⁹ D.09-09-047, OP 14

⁹⁰ Allowable Costs Attachment, Attachment 5-A to December 2008 ACR in A.08-07-021 et al.. Also referenced in Attachment A to PG&E AL 3065-G/3562

APPENDIX D: Phase 2 Workpaper Review

Development, review and approval of Non-DEER workpapers has evolved through several decisions:

1. D.09-09-047 gave Energy Division authority to review and approve Non-DEER workpapers and required ED to develop a process for submittal, review and freezing of non-DEER measures.
2. A.08-07-021 provided a standardized review and approval process for Phase 2 Non-DEER workpapers including
 - a. Requirements for utilizing DEER values and methods in the development of Non-DEER measures
 - b. A timeline for detailed review that required CPUC staff to perform a preliminary review for additional information within 15 days and the final review within 25 days of receiving the additional review.
 - c. A requirement for consideration of the latest evaluation, measurement and verification published studies in the development of ex ante values including energy impacts, cost data, EUL/RUL and NTGR.

The following paragraphs, covering Phase 2 workpaper review are from D.12-05-015⁹¹:

- a. *If Commission Staff agrees with the parameters included in a non-DEER workpaper for a new measure provided by an IOU, Commission Staff will communicate this to the IOU via email and upload it to the Workpaper Project Area on the <http://www.deeresources.info> website, and the workpaper will become effective on that date.*
- b. *If Commission Staff disagrees with or needs more information regarding parameters included in a non-DEER workpaper, Commission Staff will recommend revised parameter values (or request additional information) within 15 days of receipt of a work paper with all necessary information provided by the utility.*

On-line Submission: Workpapers shall be submitted to <http://www.deeresources.info> at in the Workpaper Project Archive under the Current Workpaper Project Archive project tree. A single file shall be submitted for each workpaper submission. If the workpaper includes additional supporting files, all files shall be archived into a single .zip or

.7z file so that they can be submitted as a single file. The file name shall include the entity's unique ID and title of the workpaper.

If staff does not take any action on a submitted workpaper, it achieves interim approval after 25 days. Staff has 15 days to do a preliminary review of a submitted workpaper and if they require additional information or clarification, they can stop the clock until the information is provided. The clock is then reset, and the staff has 25 days to issue a disposition before a workpaper achieves interim approval.

Posting of Approved Workpapers: Workpapers are posted by the program administrators to the Workpaper Project Archive (WPA). After they are approved, they are posted to www.deeresources.net. Disputes over Staff Recommendations: Submitting entities may not agree with the final staff requirement for workpaper revisions. [D.12-05-015](#) includes a dispute resolution process to address cases where a submitting entity finds staff requirement unacceptable. If the utility finds the revised parameter values unacceptable (and/or any subsequent information exchange does not resolve the disagreements in parameter values), CPUC Staff and the IOU will hold one or more meetings to come to an agreement. If agreement on workpaper parameters is reached through this process, CPUC Staff will upload the workpaper to the Workpaper Project Area on the <http://www.deeresources.info> website and the workpaper will become effective on that date.

APPENDIX F: Rolling Portfolio Timeline

