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September 4, 2018

**ADVICE 3859-E  
(U 338-E)**

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA  
ENERGY DIVISION

**SUBJECT:** Southern California Edison Company's 2019 Energy Efficiency Program and Portfolio Annual Budget

In compliance with Decision (D.)18-05-041, Southern California Edison Company (SCE) hereby submits its 2019 Energy Efficiency (EE) and Integrated Demand Side Management (IDSM) Budget, forecast Total Resource Cost (TRC) and Program Administrator Cost (PAC) tests, and forecast energy savings for the program year 2019 for approval by the California Public Utilities Commission ("Commission" or "CPUC"). SCE also requests the Commission's approval to discontinue certain EE programs and sub-programs as detailed below.

**PURPOSE**

The purpose of this advice letter filing is to provide SCE's 2019 EE annual budget and associated forecasted energy savings and cost-effectiveness, summarized as follows:

- SCE proposed portfolio budget of \$229.8 million for 2019, which is \$23 million below SCE's EE Business Plan authorized amount.<sup>1</sup>
- SCE's 2019 Portfolio results in a forecasted TRC of 1.18 without Codes & Standards.
- Forecasted energy savings of 524 GWH, which is 119 percent of goal; and 93 MW of forecasted demand reduction, which is 102 percent of goal without Codes & Standards.
- Forecasted energy savings of 1,205 GWH, which is 118 percent of goal; and 248 MW demand reduction, which is 115 percent of goal including Codes & Standards.

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<sup>1</sup> D.18-05-041, OP 12 approves SCE's business plan budget of \$253.36 million for 2019.

In this Advice filing SCE is also requesting approval to discontinue the programs and sub-programs listed in Attachment E. SCE's rationale for seeking to discontinue each program or sub-program is also provided in Attachment E.

The supporting attachments to this filing are as follows:

1. Attachment A: Commission Developed ABAL Tables
2. Attachment B: CEDARS Filing Confirmation
3. Attachment C: Historical Annual Budget Advice Letter Tables
4. Attachment D: Sector Level Metrics
5. Attachment E: Description of Program Changes
6. Attachment F: Near Term EM&V Activities Identified

## **BACKGROUND**

In D.15-10-028, the Commission ordered each EE Program Administrator (PA) to file a Tier 2 advice letter in September of each year with the PA's annual EE budget for the following year.<sup>2</sup> Each Annual Budget Advice Letter (ABAL) must contain the following:

- Portfolio cost effectiveness statement; and
- Application summary tables with forecast budgets and savings by sector and program/intervention.

Beginning with the ABAL due on September 4, 2018, D.18-05-041 directed the PAs to provide the following information:

- A forecasted TRC that meets or exceeds 1.25, except during program years 2019-2022, when the forecasted TRC must meet or exceed 1.0;
- Forecasted energy savings goals that meet or exceed Commission established savings goals for each PA;
- A forecasted budget that does not exceed the PA's annual budget in the approved business plans, or (if applicable) the revised annual budget in the current ABAL;
- Sector-level metrics; and
- A description of program and portfolio information.<sup>3</sup>

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<sup>2</sup> See D.15-10-028, Ordering Paragraph (OP) 4.

<sup>3</sup> See D.18-05-041, p. 124-129, &133.

Additionally, D.18-05-041 directed Commission staff to develop templates and further guidance as needed for ABAL submissions.<sup>4</sup> On July 19, 2018, Energy Division issued its guidance for the PAs ABAL submission that had been discussed at the July 10, 2018 Project Coordination Group (PCG) meeting among the Energy Division and the PAs. Per Energy Division guidance, the filing should also include:

- PA's Program Year Budget and Forecasted Savings;
- A Narrative of Program and Portfolio Information;
  - Proposed program changes
  - Proposed portfolio changes
  - Additional explanations if the PAs TRC is between 1.0 and 1.25 or if the forecasted energy savings is below Commission established goals
- PA's Budget True-up;
- PA's Savings True-up; and
- Investor Owned Utilities (IOU's) allocation for IDSM, pursuant to OP 10 of D.18-05-041

Energy Division has also directed the PAs to include the information contained in Attachment A as part of the ABAL filing at the July 10, 2018 PCG meeting. In addition, on August 30, 2018, Energy Division directed SCE to only upload the Historical Annual Budget Advice Letter Tables (Attachment C) onto the CEDARS website.<sup>5</sup> As such, Attachment C has been uploaded onto the CEDARS website. Attachment B provides the confirmation of SCE's CEDARS filing.

### **2019 EE PORTFOLIO SUMMARY**

SCE's proposed portfolio and budget are designed to optimize each of the CPUC metrics, including but not limited to, cost-effectiveness, savings goals, budgets, and Commission-mandated budget caps and targets. To meet the Commission's requirements, SCE proposes significant modifications to its EE portfolio for 2019, as described herein. These modifications focus on delivering a cost-effective portfolio while beginning the transition to the new statewide and third-party model that the Commission has adopted for energy efficiency programs. SCE seeks to optimize its portfolio using three iterative strategies:

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<sup>4</sup> See D.18-05-041, OP 40.

<sup>5</sup> This direction was provided by Monda Dzvoza from the Commission's Energy Division to SCE on August 30, 2018 during a telephone conference.

1. **Shift** – Increase the quantity of high cost-effective measures and decrease the quantity of low cost-effective measures.
2. **Invest** – Add budget to high cost-effective measures and programs and to new third-party programs.
3. **Reduce** – Reduce overhead and other non-resource-related costs, as well as the number of cost-ineffective programs.

Using the three strategies described above, SCE has optimized its portfolio to achieve higher than a 1.0 forecasted TRC value for 2019. The result of SCE's optimization efforts, SCE's portfolio budget, savings, and cost-effectiveness are detailed below.

SCE is proposing a portfolio cost-effectiveness and budget based upon currently-approved energy savings and cost-effectiveness inputs to its measure and program mix. While SCE's target cost-effectiveness is above 1.0, this mix and resulting cost-effectiveness may change as the Commission releases measure dispositions, Database for Energy Efficient Resources (DEER) updates, and other key inputs which could reduce or improve portfolio savings and cost-effectiveness. Significant negative changes to measures in high-volume programs, such as Primary Lighting could have a significant impact on SCE's ability to achieve its cost-effectiveness and goals targets. Early notifications of such dispositions would assist SCE in responding to such changes. SCE is committed to working closely with the Commission and its staff so that its measure and program forecasts utilize the most recent information, while also providing customers, vendors, and SCE sufficient certainty in making energy efficiency investment decisions. As cost-effectiveness inputs change, SCE will continue to evaluate the available mix of measures and make portfolio adjustments as necessary to cost-effectively meet savings goals.

One significant challenge that SCE faces is that while EE goals are updated only at predetermined intervals, EE measure savings and cost effectiveness inputs on which those goals are based can change at any time. This creates a misalignment between the allowable savings claims and the goals developed based on a different set of inputs. SCE will utilize strategies such as fund shifting, measure and program elimination, and modifications to rebate levels to help adjust to these impactful changes that occur between goal updates, but SCE also suggests that the PAs work with the Energy Division and other stakeholders to develop a method to better align goals, claimable savings, and cost-effectiveness inputs.

### **2019 EE PORTFOLIO BUDGET**

Table 1 below provides SCE's forecast for 2019 EE portfolio budget. Please see Attachment A for SCE's 2019 EE Portfolio Budget in the Commission issued ABAL template.

**Table 1: 2019 EE Portfolio Budget**

<b>Sector</b>	<b>Program Year (PY) Budget</b>
Residential	\$96,819,285
Commercial	\$48,787,134
Industrial	\$20,352,822
Agriculture	\$2,943,042
Emerging Tech	\$10,579,964
Public	\$24,215,749
WE&T	\$5,571,814
Finance	\$1,968,842
OBF Loan Pool	\$-
Codes and Standards	\$8,939,320
IOU EM&V <sup>6</sup>	\$9,667,142
<b>Total</b>	<b>\$229,845,115</b>

SCE does not yet have authority to utilize unspent and uncommitted funds in the Energy Efficiency Finance Programs Balancing Account (EEFPBA) from the previous 2010-2016 EE program cycles, including On-Bill Financing (OBF) loan repayments, to fund the OBF loan program. To continue to fund the OBF loan program in 2018 and 2019, SCE will file a separate Advice Letter requesting authority to shift funding from prior cycles' unspent and uncommitted OBF loan pool funds to SCE's OBF program for 2018 and 2019. While SCE filed for approval of OBF program funding for 2018 in Advice Letter 3654-E, the Commission did not approve the AL in its Decision approving SCE's Business Plan.<sup>7</sup> SCE will also file a subsequent Advice Letter to convert its loan pool into a revolving fund for future years consistent with previous Commission direction for this program.<sup>8</sup>

Table 2 below provides SCE's 2019 EE Portfolio budget and Cost Recovery by Funding Source.

**Table 2 - Budget and Cost Recovery by Funding Source**

<b>2019</b>	
SCE's 2019 EE Portfolio Budget	\$ 229,845,115

<sup>6</sup> EM&V Budget reflects only the portion of EM&V funds that remain with SCE. \$287,822, \$34,196, and \$6,689 in EM&V funds have been respectively allocated to Southern California Regional Energy Network (SoCalREN), Tri-County Regional Energy Network (3CREN), and Lancaster Choice Energy (LCE).

<sup>7</sup> D.18-05-041, OP 12

<sup>8</sup> D.09-09-047, OP 40

SCE's Unspent/Uncommitted Program Carryover Funds from 2018	\$ (1,672,495)
Lancaster Choice Energy's (LCE) Funding Request for 2019 EE Portfolio	\$ 401,318
LCE's EM&V	\$ 6,689
Tri-County Regional Energy Network's (3CREN) Funding Request for 2019 EE Portfolio	\$ 2,051,754
3CREN's EM&V	\$ 34,196
Southern California Regional Energy Network's (SoCalREN) Funding Request for 2019 EE Portfolio	\$ 17,269,325
SoCalREN's EM&V	\$ 287,822
<b>Total PA's Funding Request for 2019 EE Portfolio</b>	<b>\$ 248,223,723</b>

In addition to the \$248.22 million requested for EE programs in 2019, SCE is requesting \$9.36 million for 2019 funding to continue IDSM activities directed in D.18-05-041.<sup>9</sup> In D.18-05-041, the Commission approved SCE's Business Plan Application which included funding for IDSM activities. Further, the 3CREN and SoCalREN will be submitting their own Advice Letters for each PA's 2019 budget. Per Resolution E-4917, LCE's budget comes from SCE's budget; however, LCE will submit its own budget via CEDARS.

SCE is requesting an increase in the percentage allocation for evaluation, measurement, and verification (EM&V) as authorized by Decision 16-08-019.<sup>10</sup> The EM&V budget is allocated between the Commission and SCE. SCE is requesting this increase in the EM&V budget allocation because timely, reliable and predictable studies are necessary to meet local customer and market needs and to enhance the energy efficiency value proposition. Cost-effective programs require high customer engagement that deliver the right impacts for the electric grid. This requires SCE's evaluations to go beyond their current state and examine what program elements are meaningful to electric consumers and to the grid that serves them. With increased EM&V budget allocation, SCE will identify market and customer behavior levers to engage customers to serve the local grid, clean the environment, and integrate energy efficiency with broader clean energy choices. The Commission has already acknowledged areas of embedded evaluation practices and new technology-based solutions to make energy efficiency reliably measured.<sup>11</sup> Please see Attachment E for the near-term categories of EM&V activities SCE has identified for the additional budget request.

<sup>9</sup> D.18-05-041, OP 10

<sup>10</sup> D.16-08-019, OP 16

<sup>11</sup> D.16-08-019, p.80-81

**2019 EE PORTFOLIO SAVINGS**

Table 3 and Table 4 below provides SCE’s forecast of energy savings and demand reduction for its 2019 EE portfolio. The energy savings from SCE’s low-income EE program, the Energy Savings Assistance (ESA) program, are included in the figures below. Energy savings from SCE’s Codes and Standards program are excluded in the figures below. Please see Attachment A for SCE’s 2019 EE Portfolio Savings in the Commission issued ABAL template.

**Table 3: 2019 EE Portfolio Savings (IOU Programs Only)**

	2019 Forecast		
	Total	CPUC Goal	% of 2019 Goal
Energy Savings (Net GWH)	524	442	119%
Demand Reduction (Net MW)	93	91	102%

**Table 4: 2019 EE Portfolio Savings (Including Codes & Standards)**

	2019 Forecast		
	Total	CPUC Goal	% of 2019 Goal
Energy Savings (Net GWH)	1,205	1,014	118%
Demand Reduction (Net MW)	248	216	115%

**2019 EE PORTFOLIO COST-EFFECTIVENESS**

Table 5 below sets forth the results of the Total Resource Cost (TRC) test and Program Administrator Cost (PAC) test for SCE’s 2019 EE portfolio. These estimates exclude impacts from SCE’s Codes and Standards programs, and SCE’s low-income EE program, the Energy Savings Assistance (ESA) program. Please see Attachment A for SCE’s 2019 EE Portfolio TRC and PAC in the Commission issued ABAL template.

**Table 5: 2019 EE Portfolio TRC and PAC (w/o Codes & Standards)**

	2019 Forecast
TRC	1.18
PAC	1.46

**METRICS**

Pursuant to D.18-05-041, SCE provides sector-level metrics and their associated targets for program year 2019 in Attachment D using the format developed by the Energy Division. SCE also provides the required 2017 data associated with the metrics and targets.

## **PROPOSED PROGRAM AND PORTFOLIO CHANGES**

Cost-effectiveness is a key consideration in SCE's development of its 2019 proposed EE portfolio and budget. As such, SCE's proposed portfolio is designed to maximize cost-effectiveness while also seeking to satisfy all other Commission metrics and working towards meeting a minimum forecasted cost-benefit ratio of 1.25 beginning no later than 2023.<sup>12</sup> For these reasons, SCE's proposed portfolio budget of \$229.8 million is significantly lower than its most recently approved budget advice letter<sup>13</sup> of \$333.3 million in 2017 and lower than the 2018 approved budget of \$250.3 million.<sup>14</sup> To help meet the Commission's goals for energy efficiency, SCE is proposing to reduce its non-resource program portfolio, eliminate low-performing programs, and maximize savings from cost-effective programs and measures.

SCE also is working towards the implementation of third-party proposed, designed, and implemented programs as directed in D.18-01-004, including third-party delivered statewide programs. Solicitations are scheduled to begin in late 2018 for program implementation as early as 2019. To prepare for the implementation of new third-party designed and delivered programs, SCE's 2019 budget accounts for ramp-up funding for new programs in 2019. In addition, SCE has budgeted funds for the continued implementation of third-party energy efficiency programs and projects from previous years. SCE also increased its investment in its Emerging Technologies Program.

Finally, SCE reduced its administrative costs by over 45 percent from its 2018 budgets. In order to maintain a cost-effective portfolio, SCE is committed to managing its administrative and other non-resource-related costs while making sure there is appropriate oversight of its portfolio during and after the transition to the statewide and third-party program implementation model.

### **Program and Sub-Program Cancellation**

SCE is requesting to discontinue the following programs that are not cost-effective as for reasons discussed in Attachment E.

#### Resource Programs

- Energy Upgrade California (Home Upgrade)
- IDEEA365 Program
- Cool Schools
- Commercial Utility Building Efficiency
- Energy Leader Partnership Program

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<sup>12</sup> See D.18-05-041, COL 36

<sup>13</sup> See SCE's Advice Letter 3465-E-B

<sup>14</sup> In D.18-05-041, the Commission did not adopt SCE's 2018 Budget Advice Letter Budget request of \$299.6 million and approved its 2018 Business Plan budget of \$250.3 million.



- American Reinvestment Recovery Act (ARRA)-Originated Financing. Also known “Empower Energy Efficiency Program.”

#### Non-Resource Programs

- Cool Planet
- Lighting Market Transformation
- Lighting Innovation Program
- WE&T Planning
- WE&T – Mobile Energy Unit
- WE&T – Community Language Efficiency Outreach
- Sustainable Communities Pilot Program
- Energy Efficiency Integrated Demand Side Management Program

#### Program Realignments

- Strategic Energy Management
- Commercial Continuous Energy Improvement
- Agricultural Continuous Energy Improvement
- Industrial Continuous Energy Improvement

SCE is proposing to eliminate one Workforce Education and Training (WE&T) program and two sub-programs to improve the overall cost-effectiveness of SCE’s overall energy efficiency portfolio. Pursuant to current Commission requirements on portfolio cost-effectiveness, the WE&T programs provide no claimable resource value due to the inability to directly link the results of such programs to energy efficiency resource impacts. As such, WE&T programs negatively impact SCE’s overall TRC as it can only be included as a “cost” in the TRC and PAC cost-effectiveness calculations. Therefore, SCE requests the Commission consider removing the costs of WE&T programs from the cost-effectiveness evaluations as part of the Market Transformation policy issues that will be resolved in Phase III of R.13-11-005. While SCE believes WE&T programs do not provide benefit in calculating portfolio cost effectiveness, SCE believes they are useful to customers and can transform the market over the longer term. As such, WE&T programs should be treated similar to Emerging Technology Program costs. The Commission approved removal of Emerging Technology Program costs from the cost-effectiveness evaluations in D.05-04-051.<sup>15</sup> In that Decision, in reference to Emerging Technology Program budgets, the Commission stated, “The usefulness of the TRC test as a primary indicator of cost-effectiveness is limited for certain programs which do not necessarily focus on the timing or type of resource needs of the utility.”<sup>16</sup> Similarly, SCE believes that while WE&T programs can provide value, it should not be considered in the TRC test. If the Commission were to remove WE&T costs from the TRC calculation in Phase III of R.13-11-005, SCE would plan to continue to offer the WE&T programs.

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<sup>15</sup> See D.05-04-051, Attachment 3, Rules II.8 and IV.9.

<sup>16</sup> See D.05-04-051, Attachment 3, Rule IV.9.

### **New Programs and Sub-Programs**

As discussed above, SCE is working towards the utilization of third-party proposed, designed, and delivered implemented programs as directed in D.18-01-004. Because the third-party programs have not yet been proposed, SCE has created placeholders for programs that SCE plans to award at the conclusion of the third-party solicitation process. SCE has allocated \$6.8 million in 2019 for ramp up costs for these future programs.

SCE anticipates performing solicitations for nearly all programs to meet the Commission's requirement that, at minimum, 60 percent of the EE program portfolio budget must eventually be used for programs proposed, designed, and implemented by third parties.<sup>17</sup> To accomplish this, SCE will conduct a multi-phased solicitation that will be implemented in stages beginning in the fourth quarter of 2018. In the interim, SCE is proposing the following new programs, in addition to the new third-party programs discussed above. Please see Attachment E for a description of the proposed programs.

- Midstream Point of Purchase
- Water Infrastructure and System Efficiency Program
- AB 793 Residential Pay for Performance
- Facilities Assessment Service Program
- National and International Standards (Codes & Standards sub-program)

### **Reduced and Expanded Programs**

To achieve the Commission's requirement to meet a cost benefit ratio of 1.0 for 2019 and meet its energy savings goals, SCE optimized its portfolio by expanding programs with high cost effectiveness and reducing or eliminating programs with low cost effectiveness in order to achieve a higher TRC value. Please see Attachment E for program change descriptions of programs that will be expanded and reduced by more than 40 percent in 2019.

#### Expanded Programs

- Residential Direct Install
- Enhanced Retro-commissioning
- Select Local Government Programs
- Statewide Codes and Standards
- WE&T Connections
- Statewide Emerging Technologies Program (ETP)

#### Reduced Programs

- Nonresidential HVAC Program

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<sup>17</sup> See. D.16-08-019, OP 12, p.111

- Industrial Deemed Energy Efficiency Program
- Agriculture Deemed Energy Efficiency Program
- Lodging Energy Efficiency Program
- Comprehensive Chemical Products
- Comprehensive Petroleum Refining
- Oil Production
- Select Local Government Programs

To support its 2018 and 2019 energy efficiency portfolios, SCE recently received approval to modify its Nonresidential HVAC program to eliminate non-cost-effective measures and to implement lower incentives on certain measures, thereby improving the cost-effectiveness of the program and the portfolio.<sup>18</sup> Note, however, that SCE kept some of the non-cost-effective measures in this program to help meet the overall savings goals of the portfolio.

SCE will also file an Advice Letter to add a revolving loan element to its On-Bill Financing program which will reduce the overall budget necessary in the portfolio.

SCE will also begin to ramp down existing third-party programs and transition to new third-party program designs as part of SCE's third-party solicitation effort. The programs listed below will stop accepting new enrollments for 2019 but will continue to be funded to complete committed projects in the pipeline as of the end of 2018.

- Healthcare EE
- Data Center EE
- Lodging EE
- Food & Kindred
- Primary and Fabricated Metals
- Non-Metallic Minerals & Products
- Residential HVAC
- Comprehensive Chemical Products
- Comprehensive Petroleum
- Oil Production
- Enhanced Retro-Commissioning
- Medium Size Industrial Customer

### **Continued Non Cost-Effective Programs**

SCE is proposing to continue multiple programs in 2019 that are not cost-effective in order to comply with various regulatory mandates, achieve 2019 goals, and support customer programs through the transition period. SCE will continue to evaluate its

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<sup>18</sup> Advice Letter 3831-E, Request for Approval to Change Incentives for Measures Offered in SCE's Statewide Commercial Quality Maintenance Energy Efficiency Program. Approved August 24, 2018.

portfolio of programs in response to competitive solicitations, cost-effectiveness, ability to achieve goals and metrics, as well as other factors, and SCE may propose eliminating these programs in the future.

Per D.18-05-041, PAs cannot opt out of statewide programs and are required to fund all statewide programs.<sup>19</sup> As such, SCE will continue three statewide programs, listed below, even though the programs are not cost-effective. SCE does not know if the cost effectiveness will improve over time, however, SCE is committed to working with statewide programs leads to maximize the cost-effectiveness of these programs. In addition, the three programs will be part of the upcoming third-party solicitation which may improve the cost-effectiveness of third-party programs.

- Plug Load and Appliance Program
- Nonresidential HVAC Program
- Savings by Design

SCE will continue to offer Savings by Design (SBD) even though it may no longer be cost effective.<sup>20</sup> The IOUs received a disposition for SBD that requires modification of the calculation method in the *EnergyPro* building energy simulation tool. SCE's preliminary analysis indicates that full implementation of the proposed modifications will reduce claimable savings by approximately 50 percent and will require significant program design modifications. Requiring the IOUs to continue non cost-effective programs reduces the cost-effectiveness of their portfolios. However, SCE will work collaboratively with the Commission and its statewide counterparts to develop plans to serve SBD customers while minimizing the negative impact to portfolio cost effectiveness.

As discussed above, many of SCE's third-party programs currently are not cost effective; however, SCE has allocated funding in 2019 to support commitments from previous years as SCE is required to continue these programs. SCE's upcoming third-party solicitations may improve the cost-effectiveness of third-party programs. Below is a list of programs SCE will continue funding to complete committed projects.

- Healthcare EE
- Data Center EE
- Lodging EE
- Food & Kindred
- Primary and Fabricated Metals
- Non-Metallic Minerals & Products
- Residential HVAC
- Comprehensive Chemical Products
- Comprehensive Petroleum

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<sup>19</sup> See D.18-05-041, OP 22

<sup>20</sup> IOU PAs are required to fund all statewide programs per D.18-05-041, p. 83.

- Oil Production
- Enhanced Retro-Commissioning
- Medium Size Industrial Customer

SCE is also continuing two low-TRC programs that provide direct installation services to small business and school markets. Commercial Direct Install and School Energy Efficiency will assist customers in these markets with energy savings and enable SCE to meet its 2019 energy savings and demand reduction metrics. Due to the implementation strategy of these direct installation programs, these programs do not result in long-term customer and utility commitments and can rapidly ramp down should SCE's third-party solicitations result in new program concepts that deliver savings in these markets.

None of SCE's Local Government Partnerships are cost-effective; however, SCE is proposing to continue all Local Government Partnerships. Pursuant to D.18-05-041, SCE must work with participating local governments to improve cost-effectiveness and to meet the local governments' needs.<sup>21</sup>

SCE is proposing to continue to offer its nonresidential customized and deemed programs even though the programs are not cost effective. These programs will continue to be offered to allow for participation in energy efficiency in the nonresidential customer segment while new programs are being solicited and ramped up. In addition, these programs provide a means to offer energy efficiency solutions to business customers not served by the third-party markets. Similar to previous years, SCE has offered nonresidential third-party programs along with SCE's nonresidential customized and deemed programs.

SCE's nonresidential customized and deemed programs have experienced declines in cost-effective savings for several reasons. First, CPUC dispositions as well as codes and standards have resulted in reductions of available measures. Second, SCE has shifted some of the remaining available measures to more cost-effective delivery channels, resulting in lower uptake for these programs. Finally, increased participation requirements and uncertainty in rules have caused a reduction in customer participation.

SCE requests the Commission to prioritize the need to stabilize the rules of participation and savings calculations in energy efficiency programs due to the negative impact on customers and California energy efficiency cost-effectiveness. While many of these rules and calculations were discussed in the Track 2 Working Group, little progress has been made to implement substantive changes.<sup>22</sup> The cost effectiveness of these programs will continue to be influenced by uncertainty in program rules and measure eligibility, such as the application of Industry Standard Practice baselines and changes in baseline determinations that can occur at any time. These challenges, coupled with

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<sup>21</sup> See D.18-05-041, Ordering Paragraph 30.

<sup>22</sup> Track 2 Working Group Final Report on Tasks 1-4, September 7, 2017.

unknown project review timing and changing data requirements, limit the effectiveness of these programs. SCE anticipates that better alignment between measure availability and increased guidance from the Commission on changes to allowable savings will increase program cost effectiveness. Program cost-effectiveness can increase if there is early Commission guidance regarding changes to allowable savings. Such guidance would allow SCE to better align its programs to measure availability, thereby, increasing cost-effectiveness. In addition, providing more certainty in program rules and measure eligibility will provide certainty for customers, third-party implementers, and program administrators; increase customer satisfaction; and foster greater program participation. SCE looks forward to working with the Commission and stakeholders to address these issues in the Custom Projects and Industrial Programs track of Phase III of R.13-10-005 as SCE continues to modernize energy efficiency.

## **DISCUSSION OF SCE's 2019 FORECASTED TRC RESULT**

### **WHY SCE IS FORECASTING A TRC BELOW 1.25**

SCE strives to update its EE portfolio to improve customer participation and optimize portfolio cost-effectiveness while addressing long-term planning and near-term impacts. While SCE forecast a TRC of at least 1.25, several factors make this challenging:

- For SCE's 2019 EE portfolio forecast, the avoided cost calculations effective in 2019 result in reduced energy efficiency benefits of nearly 25% compared to the avoided cost calculations effective in 2017. SCE estimates that the portfolio proposed in this Advice Letter would have achieved a TRC of 1.53 had it used the avoided costs effective in 2017. Avoided cost updates include decreasing natural gas prices, market peak shifting from daytime to evening, and a nearly carbon-free grid mid-day reducing the amount of GHG abated for mid-day kWh savings.
- SCE's 2019 EE Portfolio forecast includes \$17.05 million in incentive payments for streetlight measures that will result in no claimable energy savings. This is due to the direction provided by Commission staff on October 10, 2017 and October 31, 2017. Specifically, the Commission directed SCE to pay customers the 2015 rebate levels for Acquisition Customers and pay the rebate levels in effect at the time of the initial agreement for AB719 Customers. Meanwhile, SCE may only claim savings based on the workpaper in effect at the time of completed equipment installation, and in 2019, it is anticipated that there will be no workpaper available to support savings claims for streetlight measures for Acquisition and Option E customers. SCE is working in collaboration with Commission staff to develop a solution to this mismatch by either allowing SCE to claim the savings for the streetlight measures or remove the costs of providing these rebates from the cost-effectiveness calculations.

- Loss of cost-effective measures due to successful market transformation (code mandated), of transitioning cost-effective savings from incentive programs to building and appliance codes (i.e., CEC Title 24 and Title 20, respectively).
- Goals are created in two-year cycles based upon estimates of the cost-effective potential of measures. However, when significant measure dispositions or avoided cost updates occur within the cycle, these goals are not retrospectively updated. For example, in 2018 the Commission issued two significant lighting measure dispositions<sup>23</sup> that reduced the savings amount associated with the measures available in SCE's lighting programs. In addition, the avoided costs calculations used for 2019 generally reduced the cost-effective measure potential compared to the prior avoided costs calculations used in the 2018 EE Potential & Goal Study. This results in portfolio administrators having to make tradeoffs between the competing goals of cost effectiveness and meeting savings goals that may be outdated or more difficult to achieve based on later developments.

### **ABILITY TO ACHIEVE AN EVALUATED TRC OF 1.0**

Although SCE is not proposing a portfolio that meets a cost benefit ratio of 1.25, SCE is confident it will meet an evaluated TRC of 1.0 for 2019 because SCE will continue to optimize its portfolio throughout the year to lower costs by improving, reducing, or eliminating non-resource programs and non-cost-effective programs and measures. SCE will follow the appropriate regulatory channels to accomplish this outcome.

In addition to increasing cost-effectiveness going forward, SCE will maximize savings from cost-effective measures and programs, encourage statewide programs not led by SCE to also maximize cost-effectiveness, and require new programs to meet a high cost-effectiveness threshold and maximize pay-for-performance.

Furthermore, SCE has included a budget of approximately \$6.8 million for the ramp-up of new third-party programs in 2019 but did not allocate any attributable energy savings to these programs; therefore, the cost burden has been estimated, but only positive savings and cost-effectiveness results are expected to occur. These third-party programs are expected to contribute positively to overall cost-effectiveness of the portfolio once operational and may contribute to the energy savings delivered in 2019.

SCE will continue to improve the cost-effectiveness of both cost-effective and non-cost-effective programs. As required by the Commission in D.18-05-041, SCE will work with Local Government Partnership participants to improve the cost-effectiveness of these programs in 2019. SCE will also be developing programs specifically marketed to Disadvantaged Communities (DAC) and Hard-to-Reach (HTR) customers and refocus existing programs to target DAC and HTR customers where possible. Programs that

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<sup>23</sup> 2018 Screw-In Lamp Savings Methods Disposition; 2018 Outdoor Lighting Phase 1 Disposition

meet the DAC and HTR criteria are currently eligible to claim at least a 0.85 net-to-gross ratio. SCE will work collaboratively with the Commission to identify the correct documentation requirements and to properly indicate projects installed for DAC and HTR customers.<sup>24</sup>

SCE anticipates improved ex post results from its nonresidential energy efficiency programs, including third-party and customized projects as well as deemed rebates. This expected improvement is due to the significant efforts by SCE and its implementers in response to the Commission's previous ex post and ex ante recommendations. Since 2015 and ongoing today, SCE has implemented numerous initiatives and EE program policies to address Commission concerns with programs. These efforts include, but are not limited to: requiring increased documentation of EE program influence on customer actions; establishing SCE internal processes to communicate ongoing Commission staff guidance; increased SCE review of large projects; standardization of technical and influence documentation into a Project Feasibility Study (PFS) template; and, detailed guidance of EE program influence via a matrix developed to provide details in alignment with known Preponderance of Evidence guidance from CPUC staff. In 2018, SCE enacted an Early Screening process to provide immediate feedback to customers and project implementers on projects and their likelihood of receiving EE incentives which may improve ex-post results.

SCE's portfolio excludes the cost-effectiveness of its codes and standards advocacy programs which provides a significant buffer to maintain cost-effectiveness above 1.0. Such programs can provide significant, cost-effective energy savings to California which are not captured in the cost-effectiveness metrics.

In addition, SCE is evaluating several measures for reinstatement in 2019. In January 2018, SCE suspended several lighting measures due to guidance received from Commission dispositions, market studies, and industry standard practice (ISP) studies.<sup>25</sup> As SCE receives clarifying direction, SCE will determine if and when the measures will be reinstated and available for new project applications. The

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<sup>24</sup> On August 28, 2018, the Commission issued Draft Resolution E-4952, which addresses DAC and HTR net-to-gross values. SCE is in the process of reviewing the recent guidance and look forward to working with Energy Division as necessary.

<sup>25</sup> Key elements of the following dispositions and guidance memos are the drivers for SCE suspending high risk measures:

- 2017\_Workpaper\_Guidance\_Memo\_OUT
- 2017ExteriorLEDFixturesDisposition-Revised2June2017-FINAL
- PGECOLTG178r3\_DetailedReview\_29Sep2017-final1
- SCE\_FinalVersion\_2016ESPI\_2017-08-21
- 2017ExteriorLEDFixturesDisposition-BaselineClarifications-12Apr2017-Draft
- SCE-16-C-C-0073\_0500804246\_Ext. LED Lighting
- 2018 Screw-In LED Methods Disposition
- Commission Staff email clarification of the 2018 Screw-in LED Methods Disposition, January 31, 2018



reinstatement of these measures should have a positive impact on the portfolio TRC and savings values.

**PROGRESS TOWARDS ACHIEVING A FORECASTED TRC OF 1.25**

As noted above, SCE will continue to optimize its portfolio in response to competitive solicitations, cost-effectiveness challenges, changes in the marketplace, and other factors to maximize the TRC of its portfolio and strive to achieve a forecasted TRC of 1.25 no later than 2023 while also striving to achieve energy savings goals and other portfolio targets.

**Program Administrator's 2019-2025 Budget True-Up**

Per D.18-05-041, SCE is providing an update to its budget to support the goals established in D.17-09-025 and D.17-08-022 in Table 6 below.<sup>26</sup> See Attachment A for SCE’s Annual Rolling Portfolio Budget and Savings Forecast in the Commission issued ABAL template.

For subsequent annual budget advice letters, SCE will continue to revise annual funding levels to reflect more accurate assumptions as business plan implementation progresses. As directed by the Commission, SCE’s overall funding amount will not exceed the overall funding amount in its 2018-2025 business plan.<sup>27</sup>

**Table 6: Annual Rolling Portfolio Budget and Savings Forecast – True-Up**

	<b>Budget<sup>28</sup></b>	<b>Energy Savings (kWh)<sup>29</sup></b>	<b>Demand Reduction (kW)<sup>30</sup></b>
<b>2018</b>	\$233,027,000	487,525,392	79,325
<b>2019</b>	\$230,575,139	524,864,249	93,003
<b>2020</b>	\$275,649,883	601,576,898	156,666
<b>2021</b>	\$270,600,813	581,128,328	153,353
<b>2022</b>	\$278,583,316	595,155,753	157,553

<sup>26</sup> D.18-05-041, p. 132

<sup>27</sup> D.18-05-041, p. 130

<sup>28</sup> Budget amounts equal IOU only subtotal + IOU EM&V + Lancaster CCA, per Resolution E-4917 from the attached ABAL template

<sup>29</sup> Energy Savings (kWh) equals IOU only subtotal + ESA savings. See Attachment A for additional details.

<sup>30</sup> Demand Reduction (kW) equals IOU only subtotal + ESA savings. See Attachment A for additional details.

<b>2023</b>	\$286,805,293	609,014,812	161,886
<b>2024</b>	\$295,273,930	625,362,865	166,440
<b>2025</b>	\$303,996,626	643,879,191	171,367

**IOU IDSM Budget Allocation**

Per guidance provided to the IOU PAs, below is SCE's IDSM Budget Allocation.

**Table 6: SCE's IDSM Budget Allocation (\$000)**

<b>Funding Source</b>	<b>Sector</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
DR	Non-Residential	\$7,780	\$8,360	\$8,871	\$8,678	\$8,961	\$9,253	\$9,554	\$9,864
DR	Residential	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
EE	Non-Residential (Energy Advisor Program)	\$ 220	NA	NA	NA	NA	NA	NA	NA
EE	Residential	\$	NA	NA	NA	NA	NA	NA	NA
<b>Total*</b>		<b>\$9,000</b>	<b>\$9,360</b>	<b>\$9,871</b>	<b>\$9,678</b>	<b>\$9,961</b>	<b>\$10,253</b>	<b>\$10,554</b>	<b>\$10,864</b>

**PROPOSED TARIFF CHANGES**

This advice filing will not cause the withdrawal of service nor conflict with any other schedule or rule.

**TIER DESIGNATION**

Pursuant to General Order (GO) 96-B, Energy Industry Rule 5.2, this advice letter is submitted with a Tier 2 designation.

**EFFECTIVE DATE**

This advice filing will become effective on October 4, 2018, the 30<sup>th</sup> calendar day after the date submitted.

**NOTICE**

Anyone wishing to protest this advice filing may do so by letter via U.S. Mail, facsimile, or electronically, any of which must be received no later than 20 days after the date of this advice filing. Protests should be submitted to:

CPUC, Energy Division  
Attention: Tariff Unit  
505 Van Ness Avenue  
San Francisco, California 94102  
E-mail: [EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004 (same address above).

In addition, protests and all other correspondence regarding this advice letter should also be sent by letter and transmitted via facsimile or electronically to the attention of:

Gary A. Stern, Ph.D.  
Managing Director, State Regulatory Operations  
Southern California Edison Company  
8631 Rush Street  
Rosemead, California 91770  
Telephone (626) 302-9645  
Facsimile: (626) 302-6396  
E-mail: [AdviceTariffManager@sce.com](mailto:AdviceTariffManager@sce.com)

Laura Genao  
Managing Director, State Regulatory Affairs  
c/o Karyn Gansecki  
Southern California Edison Company  
601 Van Ness Avenue, Suite 2030  
San Francisco, California 94102  
Facsimile: (415) 929-5544  
E-mail: [Karyn.Gansecki@sce.com](mailto:Karyn.Gansecki@sce.com)

There are no restrictions on who may file a protest, but the protest shall set forth specifically the grounds upon which it is based and must be received by the deadline shown above.

In accordance with General Rule 4 of GO 96-B, SCE is serving copies of this advice filing to the interested parties shown on the attached GO 96-B, A.17-01-013 et al and R.13-11-005 service lists. Address change requests to the GO 96-B service list should be directed by electronic mail to [AdviceTariffManager@sce.com](mailto:AdviceTariffManager@sce.com) or at (626) 302-4039. For changes to all other service lists, please contact the Commission's Process Office at (415) 703-2021 or by electronic mail at [Process\\_Office@cpuc.ca.gov](mailto:Process_Office@cpuc.ca.gov).

Further, in accordance with Public Utilities Code Section 491, notice to the public is hereby given by filing and keeping the advice filing at SCE's corporate headquarters. To view other SCE advice letters filed with the Commission, log on to SCE's web site at <https://www.sce.com/wps/portal/home/regulatory/advice-letters>.

For questions, please contact Lisa Mau at (626) 302-3684 or by electronic mail at [lisa.mau@sce.com](mailto:lisa.mau@sce.com)

**Southern California Edison Company**

/s/ Gary A. Stern, Ph.D.  
Gary A. Stern, Ph.D.

RGW:lm:jm  
Enclosures



# ADVICE LETTER SUMMARY

## ENERGY UTILITY



MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.:

Utility type:

ELC       GAS       WATER  
 PLC       HEAT

Contact Person:

Phone #:  
E-mail:  
E-mail Disposition Notice to:

EXPLANATION OF UTILITY TYPE

ELC = Electric      GAS = Gas      WATER = Water  
PLC = Pipeline      HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #:

Tier Designation:

Subject of AL:

Keywords (choose from CPUC listing):

AL Type:  Monthly     Quarterly     Annual     One-Time     Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL:

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested?  Yes     No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required?  Yes     No

Requested effective date:

No. of tariff sheets:

Estimated system annual revenue effect (%):

Estimated system average rate effect (%):

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected:

Service affected and changes proposed<sup>1</sup>:

Pending advice letters that revise the same tariff sheets:

<sup>1</sup>Discuss in AL if more space is needed.

**Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:**

CPUC, Energy Division  
Attention: Tariff Unit  
505 Van Ness Avenue  
San Francisco, CA 94102  
Email: [EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Name:  
Title:  
Utility Name:  
Address:  
City:  
State: Zip:  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

Name:  
Title:  
Utility Name:  
Address:  
City:  
State: Zip:  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

## ENERGY Advice Letter Keywords

Affiliate	Direct Access	Preliminary Statement
Agreements	Disconnect Service	Procurement
Agriculture	ECAC / Energy Cost Adjustment	Qualifying Facility
Avoided Cost	EOR / Enhanced Oil Recovery	Rebates
Balancing Account	Energy Charge	Refunds
Baseline	Energy Efficiency	Reliability
Bilingual	Establish Service	Re-MAT/Bio-MAT
Billings	Expand Service Area	Revenue Allocation
Bioenergy	Forms	Rule 21
Brokerage Fees	Franchise Fee / User Tax	Rules
CARE	G.O. 131-D	Section 851
CPUC Reimbursement Fee	GRC / General Rate Case	Self Generation
Capacity	Hazardous Waste	Service Area Map
Cogeneration	Increase Rates	Service Outage
Compliance	Interruptible Service	Solar
Conditions of Service	Interutility Transportation	Standby Service
Connection	LIEE / Low-Income Energy Efficiency	Storage
Conservation	LIRA / Low-Income Ratepayer Assistance	Street Lights
Consolidate Tariffs	Late Payment Charge	Surcharges
Contracts	Line Extensions	Tariffs
Core	Memorandum Account	Taxes
Credit	Metered Energy Efficiency	Text Changes
Curtable Service	Metering	Transformer
Customer Charge	Mobile Home Parks	Transition Cost
Customer Owned Generation	Name Change	Transmission Lines
Decrease Rates	Non-Core	Transportation Electrification
Demand Charge	Non-firm Service Contracts	Transportation Rates
Demand Side Fund	Nuclear	Undergrounding
Demand Side Management	Oil Pipelines	Voltage Discount
Demand Side Response	PBR / Performance Based Ratemaking	Wind Power
Deposits	Portfolio	Withdrawal of Service
Depreciation	Power Lines	

Attachment A  
Commission Developed ABAL Tables



## PA PY FORECAST ENERGY SAVINGS (Net)

Sector	Program Year (PY) Budget	PA forecast		
		kWh	kW	therms (MM)
Residential	\$ 96,819,285	396,765,517	72,991	-
Commercial	\$ 48,787,134	50,825,314	10,778	-
Industrial	\$ 20,352,822	32,424,346	3,417	-
Agriculture	\$ 2,943,042	804,930	92	-
Emerging Tech	\$ 10,579,964	na	na	na
Public	\$ 24,215,749	10,087,142	1,315	-
WE&T	\$ 5,571,814	na	na	na
Finance	\$ 1,968,842	-	-	-
OBF Loan Pool	\$ -	na	na	na
<b>IOU Subtotal</b>	<b>\$ 211,238,652</b>	<b>490,907,249</b>	<b>88,593</b>	<b>-</b>
<b>ESA Savings</b>		33,957,000	4,410	
<b>IOU Total Program Savings (w/out C&amp;S)</b>		524,864,249	93,003	-
	<b>CPUC Program Savings Goal</b>	442,000,000	91,000	-
	<b>Forecast savings as % of CPUC Program Savings Goal</b>	119%	102%	0%
Codes and Standards	\$ 8,939,320	680,472,783	155,536	
<b>IOU EM&amp;V</b>	\$ 9,995,849			
<b>IOU PY Spending Budget Request<sup>1</sup></b>	\$ 230,173,822			
<b>(LESS) IOU Uncommitted and Unspent Carryover Balance<sup>2</sup></b>	\$ 1,672,495			
<b>IOU PY Budget Recovery Request<sup>3</sup></b>	\$ 228,501,327			
<b>IOU Authorized PY Budget Cap (D.18-05-041)</b>	\$ 253,364,000			
<b>Lancaster CCA PY Budget Recovery Request (excl. CCA Uncommitted/Unspent Carryover)<sup>4</sup></b>	\$ 401,318			
<b>3CREN PY Budget Recovery Request (excl. REN Uncommitted/Unspent Carryover)<sup>4</sup></b>	\$ 2,051,754			
<b>SoCalREN PY Budget Recovery Request (excl. REN Uncommitted/Unspent Carryover)<sup>4</sup></b>	\$ 17,269,325			
<b>Total PA (IOU+CCAs+RENs ) PY Recovery Budget<sup>5</sup></b>	\$ 248,223,723			
<b>IOU Forecast PY TRC<sup>6</sup></b>		1.18		
<b>IOU Forecast PY PAC<sup>6</sup></b>		1.46		
<b>For reference only</b>				
<b>SoCalREN EM&amp;V Budget</b>	\$ 287,822			
<b>3CREN EM&amp;V Budget</b>	\$ 34,196			
<b>LCE EM&amp;V Budget</b>	\$ 6,689			
<b>SCE EM&amp;V Budget</b>	\$ 9,667,142			

<sup>1</sup> This is amount by which Statewide 25% requirement will be measured, and what the IOU intends to spend in the PY, including carryovers. Includes EM&V funds allocated to SoCalREN, 3CREN, and LCE.

<sup>2</sup> The balance of unspent uncommitted must reflect the total unspent uncommitted starting Jan 1 2018 through Dec 31 of current year (PY-1). Because each ABAL is filed in Q3, this unspent uncommitted amount will be an estimate for the year in which the ABAL is filed.

<sup>3</sup> The amount of funds to be collected (budget recovery) for the Program Year - Line 21 less line 22

<sup>4</sup> Add a separate row for each REN or CCA

<sup>5</sup> Line 28 is a mix of budget spending and budget recovery for all PAs in the IOU service area

<sup>6</sup> Cost effectiveness excludes Codes and Standards

Sector	Annual Rolling Portfolio Budget Forecast - True-up									
	2018 <sup>1</sup>	2019	2020	2021	2022	2023	2024	2025	Total	
Residential	\$ 86,729,073	\$ 96,819,285	\$ 99,167,981	\$ 97,200,134	\$ 100,069,314	\$ 103,024,578	\$ 106,068,906	\$ 109,204,557	\$ 798,283,830	
Commercial	\$ 66,759,793	\$ 48,787,134	\$ 90,536,375	\$ 89,138,580	\$ 91,769,796	\$ 94,479,958	\$ 97,271,796	\$ 100,147,384	\$ 678,890,816	
Industrial	\$ 23,443,501	\$ 20,352,822	\$ 29,433,552	\$ 28,849,495	\$ 29,701,082	\$ 30,578,220	\$ 31,481,792	\$ 32,412,469	\$ 226,252,932	
Agriculture	\$ 4,112,448	\$ 2,943,042	\$ 3,289,198	\$ 3,223,930	\$ 3,319,095	\$ 3,417,115	\$ 3,518,089	\$ 3,622,092	\$ 27,445,008	
Emerging Tech	\$ 5,638,909	\$ 10,579,964	\$ 7,961,948	\$ 7,803,958	\$ 8,034,317	\$ 8,271,588	\$ 8,516,009	\$ 8,767,763	\$ 65,574,456	
Public	\$ 22,973,406	\$ 24,215,749	\$ 20,186,685	\$ 20,149,735	\$ 20,744,521	\$ 21,357,151	\$ 21,988,245	\$ 22,638,270	\$ 174,253,763	
Codes and Standards	\$ 5,662,538	\$ 8,939,320	\$ 6,028,843	\$ 5,909,211	\$ 6,083,641	\$ 6,263,304	\$ 6,448,381	\$ 6,639,011	\$ 51,974,249	
WE&T	\$ 6,020,788	\$ 5,571,814	\$ 5,159,707	\$ 5,057,322	\$ 5,206,606	\$ 5,360,368	\$ 5,518,764	\$ 5,681,912	\$ 43,577,282	
Finance	\$ 1,302,632	\$ 1,968,842	\$ 1,666,795	\$ 1,633,720	\$ 1,681,945	\$ 1,731,616	\$ 1,782,785	\$ 1,835,488	\$ 13,603,825	
OBF Loan Pool	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Subtotal<sup>2</sup></b>	\$ 222,643,089	\$ 220,177,973	\$ 263,431,085	\$ 258,966,085	\$ 266,610,316	\$ 274,483,898	\$ 282,594,768	\$ 290,948,947	\$ 2,079,856,160	
<b>IOU EM&amp;V<sup>6</sup></b>	\$ 10,011,570	\$ 9,995,849	\$ 11,817,461	\$ 11,634,728	\$ 11,973,000	\$ 12,321,395	\$ 12,679,162	\$ 13,047,679	\$ 93,480,844	
<b>LCE Programs</b>	\$ 372,341	\$ 401,318	\$ 401,338	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,174,996	
<b>SoCalREN Program</b>	\$ 15,536,447	\$ 17,269,325	\$ 17,632,329	\$ 18,005,324	\$ 18,389,142	\$ 18,782,951	\$ 19,185,086	\$ 19,599,710	\$ 144,400,313	
<b>3CREN Program</b>	\$ -	\$ 2,051,754	\$ 2,154,341	\$ 2,262,059	\$ 2,352,541	\$ 2,446,641	\$ 2,520,041	\$ 2,595,643	\$ 16,383,021	
<b>Total Portfolio Program Year PA Budget<sup>3</sup></b>	\$ 248,563,447	\$ 249,896,218	\$ 295,436,553	\$ 290,868,196	\$ 299,324,998	\$ 308,034,885	\$ 316,979,058	\$ 326,191,979	\$ 2,335,295,333	
<b>Total Authorized Portfolio PY Budget Cap<sup>3</sup></b>	\$ 248,673,631	\$ 272,684,179	\$ 291,638,971	\$ 287,071,205	\$ 295,526,649	\$ 304,235,713	\$ 313,181,388	\$ 322,393,219	\$ 2,335,404,955	
<b>IOU Portfolio PY Budget Request<sup>4</sup></b>	\$ 233,027,000	\$ 230,575,139	\$ 275,649,883	\$ 270,600,813	\$ 278,583,316	\$ 286,805,293	\$ 295,273,930	\$ 303,996,626	\$ 2,174,512,000	
<b>IOU Authorized PY Budget Cap<sup>4</sup></b>	\$ 233,027,000	\$ 253,364,000	\$ 271,852,000	\$ 266,803,000	\$ 274,785,000	\$ 283,007,000	\$ 291,476,000	\$ 300,198,000	\$ 2,174,512,000	
<b>Forecast Portfolio PY TRC (through 2022)<sup>5</sup></b>	1.00	1.18	1.20	1.22	1.24	1.25+	1.25+	1.25+		
<b>Forecast Portfolio PY PAC (through 2022)<sup>5</sup></b>	1.23	1.46	1.48	1.51	1.53	1.25+	1.25+	1.25+		

<sup>1</sup> "Reset" 2018 budget at or below 2018 annual budget approved in Business plan Decision. "True-up" years 2019-2025.

<sup>2</sup> Subtotal equals the denominator by which portfolio 3P bid % will be measured

<sup>3</sup> Sum of all PA budgets in IOU Service Area

<sup>4</sup> IOU only Subtotal (Line 14) + IOU EM&V (Line 15) + Lancaster CCA (Line 16), Per Resolution E-4917

<sup>5</sup> Cost effectiveness calculation excludes Codes and Standards

<sup>6</sup> Includes EM&V funds allocated for CCA and RENS.

<b>Annual Rolling Portfolio Savings Forecast - True-up (kWh)</b>								
<b>Sector</b>	2018	2019	2020 <sup>1</sup>	2021 <sup>1</sup>	2022 <sup>1</sup>	2023 <sup>1</sup>	2024 <sup>1</sup>	2025 <sup>1</sup>
Residential	251,209,773	396,765,517	246,306,274	241,440,660	248,577,759	255,928,970	263,500,717	271,299,617
Commercial	81,841,827	50,825,314	202,284,395	198,288,404	204,149,902	210,187,244	216,405,707	222,810,723
Industrial	50,689,409	32,424,346	96,886,842	94,972,908	97,780,352	100,672,018	103,650,435	106,718,204
Agriculture	14,326,336	804,930	1,319,149	1,293,090	1,331,315	1,370,686	1,411,238	1,453,007
Emerging Tech	-	-	-	-	-	-	-	-
Public	48,847,643	10,087,142	20,823,238	20,411,889	21,015,274	21,636,760	22,276,891	22,936,226
WE&T	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-
OBF Loan Pool	-	-	-	-	-	-	-	-
<b>IOU - Subtotal</b>	<b>446,914,989</b>	<b>490,907,249</b>	<b>567,619,898</b>	<b>556,406,952</b>	<b>572,854,601</b>	<b>589,795,678</b>	<b>607,244,988</b>	<b>625,217,777</b>
<b>ESA Savings</b>	<b>40,610,404</b>	<b>33,957,000</b>	<b>33,957,000</b>	<b>24,721,375</b>	<b>22,301,153</b>	<b>19,219,133</b>	<b>18,117,877</b>	<b>18,661,413</b>
<b>LCE Programs</b>	<b>-</b>	<b>437,487</b>	<b>458,405</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>SoCalREN Program</b>	<b>2,881,748</b>	<b>4,367,008</b>	<b>4,420,937</b>	<b>4,509,304</b>	<b>4,599,620</b>	<b>4,691,885</b>	<b>4,785,450</b>	<b>4,880,964</b>
<b>3CREN Program</b>	<b>-</b>	<b>173,927</b>	<b>232,916</b>	<b>325,184</b>	<b>472,780</b>	<b>653,591</b>	<b>691,405</b>	<b>74,302,065</b>
<b>Total Forecast Portfolio Savings</b>	<b>490,407,140</b>	<b>529,842,671</b>	<b>606,689,156</b>	<b>585,962,816</b>	<b>600,228,154</b>	<b>614,360,288</b>	<b>630,839,720</b>	<b>723,062,220</b>
CPUC Goal	409,000,000	442,000,000	451,000,000	477,000,000	494,000,000	517,000,000	562,000,000	583,000,000
% of Goal	120%	120%	135%	123%	122%	119%	112%	124%
Codes and Standards	885,157,836	680,472,783	577,000,000	594,000,000	578,000,000	640,000,000	613,000,000	591,000,000

<sup>1</sup> Savings data calculated using gross savings submitted in SCE's 2018-2025 Business Plan. Will be subject to change due to 3P solicitations and optimization of portfolio.

Sector	Annual Rolling Portfolio Savings Forecast - True-up (kW)							
	2018	2019	2020 <sup>1</sup>	2021 <sup>1</sup>	2022 <sup>1</sup>	2023 <sup>1</sup>	2024 <sup>1</sup>	2025 <sup>1</sup>
Residential	49,113	72,991	108,050	105,915	109,046	112,271	115,593	119,014
Commercial	14,830	10,778	34,895	34,206	35,217	36,259	37,331	38,436
Industrial	442	3,417	6,366	6,241	6,425	6,615	6,811	7,012
Agriculture	4,015	92	300	294	302	311	321	330
Emerging Tech	-	-	-	-	-	-	-	-
Public	5,160	1,315	2,644	2,592	2,669	2,748	2,829	2,913
WE&T	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-
OBF Loan Pool	-	-	-	-	-	-	-	-
<b>IOU - Subtotal</b>	<b>73,560</b>	<b>88,593</b>	<b>152,256</b>	<b>149,248</b>	<b>153,660</b>	<b>158,204</b>	<b>162,884</b>	<b>167,705</b>
<b>ESA Savings</b>	<b>5,764</b>	<b>4,410</b>	<b>4,410</b>	<b>4,105</b>	<b>3,894</b>	<b>3,682</b>	<b>3,555</b>	<b>3,662</b>
<b>Lancaster CCA</b>	<b>-</b>	<b>115</b>	<b>122</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>SoCalREN Program</b>	<b>685</b>	<b>586</b>	<b>593</b>	<b>605</b>	<b>617</b>	<b>630</b>	<b>642</b>	<b>655</b>
<b>3CREN Program</b>	<b>-</b>	<b>121</b>	<b>163</b>	<b>235</b>	<b>336</b>	<b>461</b>	<b>499</b>	<b>538</b>
<b>Total Forecast Portfolio Savings (w/out C&amp;S)</b>	<b>80,010</b>	<b>93,825</b>	<b>157,544</b>	<b>154,193</b>	<b>158,506</b>	<b>162,977</b>	<b>167,581</b>	<b>172,560</b>
CPUC Goal	82,000	91,000	92,000	100,000	104,000	110,000	118,000	124,000
% of Goal	98%	103%	171%	154%	152%	148%	142%	139%
Codes and Standards	170,700	155,536	142,000	168,000	163,000	200,000	192,000	186,000

<sup>1</sup> Savings data calculated using gross savings submitted in SCE's 2018-2025 Business Plan. Will be subject to change due to 3P solicitations and optimization of portfolio.

Attachment B  
CEDARS Filing Confirmation

## CEDARS FILING SUBMISSION RECEIPT

The SCE portfolio filing has been submitted and is now under review. A summary of the filing is provided below.

PA: Southern California Edison (SCE)

Filing Year: 2019

Submitted: 06:43:48 on 31 Aug 2018

By: Gary Golden

Advice Letter Number: 3859-E

### \* Portfolio Filing Summary \*

- TRC: 1.3204
- PAC: 3.7379
- TRC (no admin): 1.6232
- PAC (no admin): 7.921
- RIM: 3.7379
- Budget: \$229,845,115.02

### \* Programs Included in the Filing \*

- SCE-13-ESA: Energy Savings Assistance Program
- SCE-13-ESPI: Energy Savings Performance Incentive
- SCE-13-L-002B: City of Long Beach Energy Leader Partnership
- SCE-13-L-002F: Gateway Cities Energy Leader Partnership
- SCE-13-L-002H: Eastern Sierra Energy Leader Partnership
- SCE-13-L-002I: Energy Leader Partnership Strategic Support
- SCE-13-L-002J: Desert Cities Energy Leader Partnership
- SCE-13-L-002K: Kern County Energy Leader Partnership
- SCE-13-L-002L: Orange County Cities Energy Leader Partnership
- SCE-13-L-002M: San Gabriel Valley Energy Leader Partnership
- SCE-13-L-002N: San Joaquin Valley Energy Leader Partnership
- SCE-13-L-002O: South Bay Energy Leader Partnership
- SCE-13-L-002P: South Santa Barbara County Energy Leader Partnership
- SCE-13-L-002Q: Ventura County Energy Leader Partnership
- SCE-13-L-002R: Western Riverside Energy Leader Partnership
- SCE-13-L-002S: High Desert Regional Energy Leader Partnership
- SCE-13-L-002T: West Side Community Energy Leader Partnership

- SCE-13-L-002U: Local Government Strategic Planning Pilot Program
- SCE-13-L-002V: North Orange County Cities
- SCE-13-L-002W: San Bernardino Association of Governments
- SCE-13-L-003A: California Community Colleges Energy Efficiency Partnership
- SCE-13-L-003B: California Dept. of Corrections and Rehabilitation EE Partnership
- SCE-13-L-003C: County of Los Angeles Energy Efficiency Partnership
- SCE-13-L-003D: County of Riverside Energy Efficiency Partnership
- SCE-13-L-003E: County of San Bernardino Energy Efficiency Partnership
- SCE-13-L-003F: State of California Energy Efficiency Partnership
- SCE-13-L-003G: UC/CSU Energy Efficiency Partnership
- SCE-13-L-003I: Public Sector Performance-Based Retrofit High Opportunity Program
- SCE-13-PB: Pension and Benefits
- SCE-13-SW-001A: Energy Advisor Program
- SCE-13-SW-001B: Plug Load and Appliances Program
- SCE-13-SW-001C: Multifamily Energy Efficiency Rebate Program
- SCE-13-SW-001F: Residential New Construction Program
- SCE-13-SW-001G: Residential Direct Install Program
- SCE-13-SW-002A: Commercial Energy Advisor Program
- SCE-13-SW-002B: Commercial Calculated Program
- SCE-13-SW-002C: Commercial Deemed Incentives Program
- SCE-13-SW-002D: Commercial Direct Install Program
- SCE-13-SW-002F: Nonresidential HVAC Program
- SCE-13-SW-002G: Savings By Design
- SCE-13-SW-002H: Midstream Point of Purchase Program
- SCE-13-SW-003A: Industrial Energy Advisor Program
- SCE-13-SW-003B: Industrial Calculated Energy Efficiency Program
- SCE-13-SW-003C: Industrial Deemed Energy Efficiency Program
- SCE-13-SW-003D: Strategic Energy Management Program
- SCE-13-SW-004A: Agriculture Energy Advisor Program
- SCE-13-SW-004B: Agriculture Calculated Energy Efficiency Program
- SCE-13-SW-004C: Agriculture Deemed Energy Efficiency Program
- SCE-13-SW-005C: Primary Lighting Program
- SCE-13-SW-007A: On-Bill Financing
- SCE-13-SW-007C: New Finance Offerings
- SCE-13-SW-008A: Building Codes and Compliance Advocacy
- SCE-13-SW-008B: Appliance Standards Advocacy
- SCE-13-SW-008C: Compliance Improvement
- SCE-13-SW-008D: Reach Codes
- SCE-13-SW-008E: Planning and Coordination
- SCE-13-SW-008F: National and International Standards
- SCE-13-SW-009A: Technology Development Support
- SCE-13-SW-009B: Technology Assessments

- SCE-13-SW-009C: Technology Introduction Support
- SCE-13-SW-010A: WE&T; Centergies
- SCE-13-SW-010B: WE&T; Connections
- SCE-13-SW-MEO: Statewide Marketing, Education & Outreach
- SCE-13-TP-001: Comprehensive Manufactured Homes
- SCE-13-TP-003: Healthcare EE Program
- SCE-13-TP-004: Data Center Energy Efficiency
- SCE-13-TP-005: Lodging EE Program
- SCE-13-TP-006: Food & Kindred Products
- SCE-13-TP-007: Primary and Fabricated Metals
- SCE-13-TP-008: Nonmetallic Minerals and Products
- SCE-13-TP-009: Comprehensive Chemical Products
- SCE-13-TP-010: Comprehensive Petroleum Refining
- SCE-13-TP-011: Oil Production
- SCE-13-TP-018: School Energy Efficiency Program
- SCE-13-TP-021: Enhanced Retrocommissioning
- SCE-13-TP-022: Water Infrastructure Systems Energy Efficiency Program
- SCE-13-TP-023: Midsize Industrial Customer Program
- SCE-13-TP-024: AB793 Residential Pay for Performance
- SCE-13-TP-025: Facility Assessment Program
- SCE-13-TP-026: Residential 3P Solicitation
- SCE-13-TP-027: Commercial 3P Solicitation
- SCE-13-TP-028: Industrial 3P Solicitation
- SCE-13-TP-029: Local Government 3P Solicitation
- SCE-3OV0100: SCE EM&V;
- SCE-3OV0200: CPUC EM&V;



Attachment C  
Historical Annual Budget Advice Letter  
Tables

<b>Table 1 -Bill Payer Impacts - Rates by Customer Class</b>				
	<b>Electric Average Rate (Res and Non-Res) \$/kwh</b>	<b>Gas Average Rate (Res and Non-Res) \$/therm</b>	<b>Total Average Bill Savings by Year (\$)</b>	<b>Total Average Lifecycle Bill Savings (\$)</b>
<b>Present Rates - System Average</b>				
2013	\$0.16	N/A	\$ 87,209,070	\$ 981,191,659
2014	\$0.17	N/A	\$ 103,251,635	\$ 1,090,731,032
2015	\$0.16	N/A	\$ 93,081,321	\$ 885,855,957
2016	\$0.15	N/A	\$ 65,492,695	\$ 704,523,862
2017	\$0.15	N/A	\$ 83,570,931	\$ 726,322,498
2018	\$0.16	N/A	\$ 88,065,105	\$ 840,561,019
2019	\$0.16	N/A	\$ 78,054,253	\$ 750,127,247

Consistent with SPM TRC/PAC/RIM tests, all savings used from actuals and forecasts in this table are NET.

- Average first year electric bill savings is calculated by multiplying an average electric rate with first year net kWh energy savings.
- Average first year gas bill savings is calculated by multiplying an average gas rate with first year net therm energy savings.
- Total average first year bill savings is the sum of Notes 1 and 2.
- Average lifecycle electric bill savings is calculated by multiplying an average electric rate with lifecycle net kWh energy savings.
- Average lifecycle gas bill savings is calculated by multiplying an average gas rate with lifecycle net therm energy savings.
- Total average lifecycle bill savings is the sum of Notes 4 and 5.
- Total Annual and Lifecycle Bill Savings excluded savings from Codes & Standards and ESA Programs

Table 2a - Electric Bill Payer Impacts - Current and Proposed Revenues and Rates, Total and Energy Efficiency, by Customer Class with the return of unspent/uncommitted PY 2018 funds

Customer Classes	2017 Total Electric Annual Revenue \$000	2017 Energy Efficiency Portion of Total Electric Annual Revenue \$000	2018 Energy Efficiency Portion of Total Electric Annual Revenue \$000	2019 Proposed Energy Efficiency Electric Annual Revenue Change \$000	2019 Proposed Percentage Change In Electric Revenue and Rates	2017 Electric Average Rate \$/kwh	2017 Energy Efficiency Portion of Electric Average Rate \$/kwh	2018 Electric Average Rate \$/kwh	2018 Energy Efficiency Portion of Electric Average Rate \$/kwh	2019 Proposed Electric Average Rate Change \$/kwh	2019 Proposed Percentage Change In Electric Revenue and Rates
<u>Bundled</u>											
Domestic	\$ 4,889,673	\$ 125,447	\$ 98,417	\$ (1,519)	-1.5%	\$ 0.1780	\$ 0.0048	\$ 0.1820	\$ 0.0037	\$ 0.0037	-1.5%
Lighting SM Med Power	\$ 4,104,737	\$ 105,310	\$ 82,592	\$ (1,275)	-1.5%	\$ 0.1690	\$ 0.0045	\$ 0.1730	\$ 0.0035	\$ 0.0035	-1.5%
Large Power	\$ 1,887,365	\$ 48,421	\$ 39,396	\$ (608)	-1.5%	\$ 0.1160	\$ 0.0031	\$ 0.1200	\$ 0.0024	\$ 0.0024	-1.5%
Agricultural & Pumping	\$ 408,437	\$ 10,479	\$ 8,898	\$ (137)	-1.5%	\$ 0.1270	\$ 0.0034	\$ 0.1350	\$ 0.0028	\$ 0.0027	-1.5%
Street & Area Lighting	\$ 128,959	\$ 3,309	\$ 2,506	\$ (39)	-1.5%	\$ 0.1810	\$ 0.0051	\$ 0.1860	\$ 0.0038	\$ 0.0037	-1.5%
<u>Direct Access Service</u>											
Residential	\$ 39,890	\$ 1,023	\$ 1,108	\$ (17)	-1.5%	\$ 0.1050	\$ 0.0031	\$ 0.1090	\$ 0.0022	\$ 0.0022	-1.5%
Commercial - Small	\$ 326,864	\$ 8,386	\$ 7,298	\$ (113)	-1.5%	\$ 0.0790	\$ 0.0023	\$ 0.0850	\$ 0.0017	\$ 0.0017	-1.5%
Commercial - Medium	\$ 375,757	\$ 9,640	\$ 8,139	\$ (126)	-1.5%	\$ 0.0550	\$ 0.0016	\$ 0.0570	\$ 0.0012	\$ 0.0011	-1.5%
Commercial - Large	\$ 5,579	\$ 143	\$ 125	\$ (2)	-1.5%	\$ 0.0670	\$ 0.0019	\$ 0.0660	\$ 0.0013	\$ 0.0013	-1.5%
Agricultural	\$ 4,311	\$ 111	\$ 84	\$ (1)	-1.5%	\$ 0.1210	\$ 0.0025	\$ 0.1020	\$ 0.0021	\$ 0.0020	-1.5%

Table 2b - Gas Bill Payer Impacts - Current and Proposed Revenues and Rates, Total and Energy Efficiency, by Customer Class

Customer Classes	[1] 2019 EE Portfolio Budget less Unspent/Uncommitted Program Carryover Funds from PY 2018	2017 Energy Efficiency Portion of Total Electric Annual Revenue \$000	2018 Energy Efficiency Portion of Total Electric Annual Revenue \$000	2019 Proposed Energy Efficiency Electric Annual Revenue Change \$000	2019 Proposed Percentage Change In Electric Revenue and Rates	2017 Electric Average Rate \$/kwh	2017 Energy Efficiency Portion of Electric Average Rate \$/kwh	2018 Electric Average Rate \$/kwh	2018 Energy Efficiency Portion of Electric Average Rate \$/kwh	2019 Proposed Electric Average Rate Change \$/kwh	2019 Proposed Percentage Change In Electric Revenue and Rates
<u>Bundled</u>											
Domestic											
Lighting SM Med Power											
Large Power											
Agricultural & Pumping											
Street & Area Lighting											
<u>Direct Access Service</u>											
Residential											
Commercial - Small											
Commercial - Medium											
Commercial - Large											
Agricultural											

Table 3 - Budget and Cost Recovery by Funding Source

	2019
2019 EE Portfolio Budget	\$ 249,896,218
Unspent/Uncommitted EM&V Carryover Funds from 2018	\$ -
Unspent/Uncommitted Program Carryover Funds from 2018	\$ 5,169,321
Unspent/Uncommitted EM&V Carryover Funds from 2017	\$ -
Unspent/Uncommitted Program Carryover Funds from 2017	\$ 60,401,347
Unspent/Uncommitted EM&V Carryover Funds from 2016	\$ -
Unspent/Uncommitted Program Carryover Funds from 2016	\$ 54,508,557
Unspent/Uncommitted EM&V Carryover Funds from 2013-2015	\$ -
Unspent/Uncommitted Program Carryover Funds from 2013-2015	\$ 29,801,403
Unspent/Uncommitted EM&V Carryover Funds from 2010-2012	\$ 4,187,764
Unspent/Uncommitted Program Carryover Funds from 2010-2012	\$ 5,519,164
Unspent/Uncommitted EM&V Carryover Funds from Pre 2010	\$ 913,672
Unspent/Uncommitted Program Carryover Funds from Pre 2010	\$ -
<b>Total Funding Request for 2019 EE Portfolio [1]</b>	<b>\$ 244,726,897</b>

[1] 2019 EE Portfolio Budget less Unspent/Uncommitted Program Carryover Funds from PY 2018

## Budget by Funding Source

2019 Authorized (Before Carryover)	2019 Budget	Allocation
Electric Procurement EE Funds	\$ 249,896,218	100%
Gas PPP Surcharge Funds	\$ -	
<b>Total Funds</b>	<b>\$ 249,896,218</b>	

## Revenue Requirement for Cost Recovery by Funding Source

	2019 Revenue Requirement	Allocation after Carryover adjustment
<b>2019 Authorized Funding in Rates (including carryover) [1]</b>		
Electric Procurement EE Funds	\$ 244,726,897	100%
Gas PPP Surcharge Funds	\$ -	
<b>Total Funds</b>	<b>\$ 244,726,897</b>	

[1] 2019 EE Portfolio Budget less Unspent/Uncommitted Program Carryover Funds from PY 2018

## Unspent/Uncommitted Carryover Funds (in positive \$ amounts)

Total Unspent/Uncommitted Funds	Electric PGC	Electric Procurement	Total Electric	Gas
2018	\$ -	\$ 5,169,321	\$ 5,169,321	\$ -
2017	\$ -	\$ 60,401,347	\$ 60,401,347	\$ -
2016	\$ -	\$ 54,508,557	\$ 54,508,557	\$ -
2013-2015	\$ -	\$ 29,801,403	\$ 29,801,403	\$ -
2010-2012	\$ -	\$ 9,706,928	\$ 9,706,928	\$ -
Pre 2010	\$ -	\$ 913,672	\$ 913,672	\$ -
<b>Total Unspent/Uncommitted Funds</b>	<b>\$ -</b>	<b>\$ 160,501,228</b>	<b>\$ 160,501,228</b>	<b>\$ -</b>

EM&V Unspent/Uncommitted Funds	Electric PGC	Electric Procurement	Total Electric	Gas
2018	\$ -	\$ -	\$ -	\$ -
2017	\$ -	\$ -	\$ -	\$ -
2016	\$ -	\$ -	\$ -	\$ -
2013-2015	\$ -	\$ -	\$ -	\$ -
2010-2012	\$ -	\$ 4,187,764	\$ 4,187,764	\$ -
Pre 2010	\$ -	\$ 913,672	\$ 913,672	\$ -
<b>Total EM&amp;V Unspent/Uncommitted Funds</b>	<b>\$ -</b>	<b>\$ 5,101,436</b>	<b>\$ 5,101,436</b>	<b>\$ -</b>

Program Unspent/Uncommitted Funds	Electric PGC	Electric Procurement	Total Electric	Gas
2018	\$ -	\$ 5,169,321	\$ 5,169,321	\$ -
2017	\$ -	\$ 60,401,347	\$ 60,401,347	\$ -
2016	\$ -	\$ 54,508,557	\$ 54,508,557	\$ -
2013-2015	\$ -	\$ 29,801,403	\$ 29,801,403	\$ -
2010-2012	\$ -	\$ 5,519,164	\$ 5,519,164	\$ -
Pre 2010	\$ -	\$ -	\$ -	\$ -
<b>Total Program Unspent/Uncommitted Funds</b>	<b>\$ -</b>	<b>\$ 155,399,792</b>	<b>\$ 155,399,792</b>	<b>\$ -</b>

Table 4 -- Budget, Spent, Unspent, Carryover Details

Table with multiple columns: New/Existing Program #, Main Program Name / Sub-Program Name, 2013-2015 Budget, Spent, Unspent, Carryover, 2016 Budget, Spent, Unspent, Carryover, 2017 Budget, Spent, Unspent, Carryover, 2018 Budget, Spent, Unspent, Carryover, 2019 Proposed Budget. Rows include various energy efficiency and conservation programs across different regions.

(1) D. 12-11-015 and D. 10-01-002

(2) Advice Letter 3405-B approved to return \$21,051,000 2013-2015 unspent/uncommitted fund to offset revenue for 2017 Energy Efficiency Program

(3) Assumed the same authorized budget level as 2015, D. 15-01-002

(4) Advice Letter 3577-E to shift fund from Commercial Energy Advisor Program and Commercial Deemed Incentive Program to Primary Lighting Program

**Table 5 - Total 2019 Requested and 2013-2018 Authorized Budgets (\$000).**

Category (2013-17 Authorized [1] and 2018 Authorized [2])	Electric Demand Response Funds	Electric Energy Efficiency Funds	Natural Gas Public Purpose Funds	Total Energy Efficiency Funds
2013-2015 Annualized Program Funds - Utility	\$ 11,746	\$ 310,823		\$ 322,569
2013-2015 Annualized Program Funds - REN		\$ 17,687		\$ 17,687
2013-2015 Annualized Program Funds - CCA				\$ -
2013-2015 Annualized EM&V		\$ 13,999		\$ 13,999
<b>2013-2015 Total Annualized Portfolio</b>	\$ 11,746	\$ 342,510	\$ -	\$ 354,256
2016 Program Funds - Utility	\$ 11,746	\$ 302,673		\$ 314,419
2016 Program Funds - REN		\$ 17,314		\$ 17,314
2016 Program Funds - CCA				\$ -
2016 EM&V		\$ 13,333		\$ 13,333
<b>2016 Annualized Total</b>	\$ 11,746	\$ 333,320	\$ -	\$ 345,066
2017 Program Funds - Utility	\$ 10,137	\$ 302,725		\$ 312,862
2017 Program Funds - REN		\$ 17,262		\$ 17,262
2017 Program Funds - CCA				\$ -
2017 EM&V		\$ 13,333		\$ 13,333
<b>2017 Annualized Total</b>	Portfolio Budget	\$ 333,320	\$ -	\$ 343,457
2018 Program Funds - Utility	\$ 8,780	\$ 222,643		\$ 231,423
2018 Program Funds - REN		\$ 15,536		\$ 15,536
2018 Program Funds - CCA		\$ -		\$ -
2018 Program Funds - LCE		\$ 372		\$ 372
2018 EM&V		\$ 10,012		\$ 10,012
<b>2018 Annualized Total</b>	\$ 8,780	\$ 248,563	\$ -	\$ 257,343
2019 Requested Program Funds - Utility	\$ 9,360	\$ 220,178	\$ -	\$ 229,538
2019 Requested Program Funds - SCaREN	\$ -	\$ 17,269	\$ -	\$ 17,269
2019 Requested Program Funds - 3CREN	\$ -	\$ 2,052	\$ -	\$ 2,052
2019 Requested Program Funds - LCE	\$ -	\$ 401	\$ -	\$ 401
2019 Requested Funds -ScalREN EM&V	\$ -	\$ 288	\$ -	\$ 288
2019 Requested Funds - 3CREN EM&V	\$ -	\$ 34	\$ -	\$ 34
2020 Requested Funds - LCE EM&V	\$ -	\$ 7	\$ -	\$ 7
2021 Requested Funds - PA EM&V	\$ -	\$ 3,670	\$ -	\$ 3,670
2019 Requested Funds -CPUC EM&V	\$ -	\$ 5,998	\$ -	\$ 5,998
<b>2019 Total Portfolio Request</b>	Portfolio Budget	\$ 249,896	\$ -	\$ 259,256

[1] Authorized budget excludes reductions from past unspent funds, carryover and is consistent with funding approved in D. 12-11-015, D.14-10-046 and D.15-10-028

[2] 2018 Authorized ABAL Budget, D, 18-05-041

## Attachment C

**Table 6 - Accrued Energy Efficiency Program Funding Not Yet Spent [1]**

<b>Accrued funds not yet spent (\$000).</b>	<b>Electric</b>	<b>Natural Gas Public</b>	
<b>Category</b>	<b>Procurement Funds</b>	<b>Purpose Funds</b>	<b>Total</b>
2013-2015 EM&V Funds	\$3,954	\$0	\$3,954
2013-2015 Program Funds - Utility	\$19,666	\$0	\$19,666
2013-2015 Program Funds - REN	\$2,191	\$0	\$2,191
2013-2015 Program Funds - CCA	\$0	\$0	\$0
2016 EM&V Funds	\$12,555	\$0	\$12,555
2016 Program Funds - Utility	\$11,634	\$0	\$11,634
2016 Program Funds - REN	\$1,854	\$0	\$1,854
2016 Program Funds - CCA	\$0	\$0	\$0
2017 EM&V Funds	\$12,027	\$0	\$12,027
2017 Program Funds - Utility	\$21,215	\$0	\$21,215
2017 Program Funds - REN	\$2,518	\$0	\$2,518
2017 Program Funds - CCA	\$0	\$0	\$0
2018 to date EM&V Funds [2]	\$9,468	\$0	\$9,468
2018 to date Program Funds - Utility [2]	\$147,082	\$0	\$147,082
2018 to date Program Funds - REN [2]	\$6,762	\$0	\$6,762
2018 to date Program Funds - LCE [2]	\$0	\$0	\$0
2018 to date Program Funds - CCA [2]	\$0	\$0	\$0
<b>Total</b>	<b>\$250,924</b>	<b>\$0</b>	<b>\$250,924</b>

[1] As of June 30, 2018

[2] July to December 2018 forecast to spend and commitments

**Table 7 - 2018 Authorized and Spent/Unspent Detail**

<b>Authorized, spent and unspent program funds (excludes EM&amp;V) (\$000)</b>	<b>Electric Procurement Funds</b>	<b>Natural Gas Public Purpose Funds</b>	<b>Total</b>
<b>Category</b>			
2018 Annualized Authorized Program Budget	\$ 238,552	\$0	\$238,552
2018 Actual Spent [1]	\$ 79,539	\$0	\$79,539
2018 Unspent			
2018 Committed funds [2]	\$ 153,843	\$0	\$153,843
2018 Unspent/uncommitted - estimated available for 2019 [3]	\$ 5,169	\$0	\$5,169

[1] Actual spent through June 30, 2018

[2] July to December 2018 forecast to spend and commitments

[3] Included REN PY 2018 unspent/uncommitted fund, \$3,496,826

	2018	Budget	Spent	July to December Forecast to spend	Remaining
SCE	\$	222,643,089	\$ 73,888,832	\$ 147,081,762	\$ 1,672,495
EM&V	\$	10,011,570	\$ 543,870	\$ 9,467,700	\$ -
REN	\$	15,536,447	\$ 5,278,078	\$ 6,761,543	\$ 3,496,826
LCE	\$	372,341	\$ 372,341	\$ -	\$ -
<b>Total</b>	<b>\$</b>	<b>248,563,447</b>	<b>\$ 80,083,121</b>	<b>\$ 163,311,005</b>	<b>\$ 5,169,321</b>
 Excludes EM&V	 \$	 238,551,877	 \$ 79,539,251	 \$ 153,843,305	 \$ 5,169,321

Table 7 2018 Spent-Unspent



Attachment D  
Sector Level Metrics

# Southern California Edison - Energy Efficiency Sector Metrics with Targets

Attachment D

# Southern California Edison - Energy Efficiency Sector Metrics with Targets

## Attachment D - Table of Contents

	Page #
<b>A. Metrics/Indicators in Energy Division Defined Template</b>	3
<b>B. Template Column Index</b>	14
<b>C. Definitions</b>	16

# Energy Division Template





Spreadsheet Index	PA	ATA Page	ATA Order	Method Code	Units of Measurement	Metric Type	Metric/Indicator	Business Plan A Description	Metric	Sector	Baseline		Short Term Target				Mid Term Target (2021-2023)		Long Term Target (2024-2025)		Methodology	Key Definitions	Proxy Explanation	
											Baseline Year	Baseline Numerator	Baseline Denominator	Baseline Number	2017 Number	2018	2019	2020	2021	2022				2023
86	SCE	A03	RMF1	S1-IU	Lifecycle ex-ante kWh gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kWh gross - In Unit	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	70,121,871	83,623,851	42,669,408	49,145,795	55,401,424	55,938,485	60,217,777	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
87	SCE	A03	RMF1	S1-IU	Lifecycle ex-ante kWh net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kWh net - In Unit	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	43,823,638	60,754,041	26,666,840	30,714,348	34,623,890	34,959,534	37,633,937	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
88	SCE	A03	RMF1	S1-IU	Lifecycle ex-ante Therm gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante Therm gross - In Unit	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
89	SCE	A03	RMF1	S1-IU	Lifecycle ex-ante Therm net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante Therm net - In Unit	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
90	SCE	A03	RMF1	S1-MM	First year annual kW gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual kW gross - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	14.4	10.5	18.7	21.5	24.2	24.4	26.3	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
91	SCE	A03	RMF1	S1-MM	First year annual kW net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual kW net - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	9.5	7.5	12.4	14.2	16.0	16.1	17.4	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
92	SCE	A03	RMF1	S1-MM	First year annual kWh gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual kWh gross - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	83,983	43,013	51,104	58,861	66,353	66,996	72,122	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
93	SCE	A03	RMF1	S1-MM	First year annual kWh net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual kWh net - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	52,421	31,388	31,898	36,740	41,416	41,818	45,017	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
94	SCE	A03	RMF1	S1-MM	First year annual Therm gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual Therm gross - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
95	SCE	A03	RMF1	S1-MM	First year annual Therm net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual Therm net - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
96	SCE	A03	RMF1	S1-MM	Lifecycle ex-ante kW gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kW gross - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	138	64	180	207	232	235	253	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
97	SCE	A03	RMF1	S1-MM	Lifecycle ex-ante kW net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kW net - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	90	46	118	135	152	154	165	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
98	SCE	A03	RMF1	S1-MM	Lifecycle ex-ante kWh gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kWh gross - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	830,001	441,593	505,058	581,716	655,761	662,118	712,770	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
99	SCE	A03	RMF1	S1-MM	Lifecycle ex-ante kWh net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kWh net - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	518,720	320,825	315,643	363,552	409,827	413,800	445,456	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
100	SCE	A03	RMF1	S1-MM	Lifecycle ex-ante Therm gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante Therm gross - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
101	SCE	A03	RMF1	S1-MM	Lifecycle ex-ante Therm net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante Therm net - Master Metered	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
102	SCE	A03	RMF1	SI-CA	First year annual kW gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual kW gross - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	1,855	5,531	2,417	2,778	3,125	3,156	3,397	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
103	SCE	A03	RMF1	SI-CA	First year annual kW net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual kW net - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	1,223	3,961	1,595	1,832	2,062	2,082	2,241	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
104	SCE	A03	RMF1	SI-CA	First year annual kWh gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual kWh gross - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	10,840,480	22,637,155	6,596,470	7,597,686	8,564,774	8,647,801	9,309,358	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
105	SCE	A03	RMF1	SI-CA	First year annual kWh net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual kWh net - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	6,766,403	16,519,211	4,117,380	4,742,319	5,345,955	5,397,779	5,810,708	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
106	SCE	A03	RMF1	SI-CA	First year annual Therm gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual Therm gross - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
107	SCE	A03	RMF1	SI-CA	First year annual Therm net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	First year annual Therm net - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
108	SCE	A03	RMF1	SI-CA	Lifecycle ex-ante kW gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kW gross - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	17,800	33,830	23,202	26,660	29,997	30,288	32,605	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
109	SCE	A03	RMF1	SI-CA	Lifecycle ex-ante kW net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kW net - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	11,649	24,122	15,184	17,447	19,631	19,821	21,337	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
110	SCE	A03	RMF1	SI-CA	Lifecycle ex-ante kWh gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kWh gross - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	107,135,425	232,404,327	65,192,287	75,087,209	84,644,848	85,465,395	92,003,494	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
111	SCE	A03	RMF1	SI-CA	Lifecycle ex-ante kWh net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante kWh net - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	66,955,773	168,845,392	40,742,826	46,926,795	52,899,974	53,412,787	57,498,863	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.		
112	SCE	A03	RMF1	SI-CA	Lifecycle ex-ante Therm gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante Therm gross - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
113	SCE	A03	RMF1	SI-CA	Lifecycle ex-ante Therm net	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)**	Lifecycle ex-ante Therm net - Common Area	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any building or property with at least two residential housing units.	
114	SCE	A03	RMF2	G	MT CO2eq	GHG	Metric	RMF-G Greenhouse gases (MT CO2eq) Net kWh savings, reported on an annual basis**	CO2 equivalent of net annual kWh savings	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	4,947	8,724	1,185	1,365	1,539	1,554	1,673	Per CEDARS	Definition: Multi-family refers to any building or property with at least two residential housing units.		
115	SCE	A04	RMF3	D3a	Lifecycle NET kW	D3: Depth of interventions per building	Metric	RMF-D3 - Energy savings (kWh, kw, therms) per project (building)**	Lifecycle ex-ante kW net per project (building)	Residential Sector - Multi-family (RMF)	2016	19,363	5,018	3.9	2.0	7.0	6.6	6.3	6.3	6.3	**D3 Methodology:** Numerator: Total Savings claimed for MF building retrofits** Denominator: Number of buildings that have been retrofitted, per application (assumed 7.4 units per building (CALMAC <a href="http://www.calmac.org/publications/MFEER_Process_Evaluation_FINAL_130415.pdf">http://www.calmac.org/publications/MFEER_Process_Evaluation_FINAL_130415.pdf</a> ))	D3 Key Definitions: Project applications are made at the property level (premise ID and service account number) not the building level; building information will be used as is available on project applications** "Energy savings" = Lifecycle NET savings		
116	SCE	A04	RMF3	D3a	Lifecycle NET kWh	D3: Depth of interventions per building	Metric	RMF-D3 - Energy savings (kWh, kw, therms) per project (building)**	Lifecycle ex-ante kWh net per project (building)	Residential Sector - Multi-family (RMF)	2016	111,298,132	5,018	22,178	13,755	18,802	17,785	17,064	17,064	17,064	17,064	**D3 Methodology:** Numerator: Total Savings claimed for MF building retrofits** Denominator: Number of buildings that have been retrofitted, per application (assumed 7.4 units per building (CALMAC <a href="http://www.calmac.org/publications/MFEER_Process_Evaluation_FINAL_130415.pdf">http://www.calmac.org/publications/MFEER_Process_Evaluation_FINAL_130415.pdf</a> ))	D3 Key Definitions: Project applications are made at the property level (premise ID and service account number) not the building level; building information will be used as is available on project applications** "Energy savings" = Lifecycle NET savings	
117	SCE	A04	RMF3	D3a	Lifecycle NET Therms	D3: Depth of interventions per building	Metric	RMF-D3 - Energy savings (kWh, kw, therms) per project (building)**	Lifecycle ex-ante Therm net per project (building)	Residential Sector - Multi-family (RMF)	2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**D3 Methodology:** Numerator: Total Savings claimed for MF building retrofits** Denominator: Number of buildings that have been retrofitted, per application (assumed 7.4 units per building (CALMAC <a href="http://www.calmac.org/publications/MFEER_Process_Evaluation_FINAL_130415.pdf">http://www.calmac.org/publications/MFEER_Process_Evaluation_FINAL_130415.pdf</a> ))	D3 Key Definitions: Project applications are made at the property level (premise ID and service account number) not the building level; building information will be used as is available on project applications** "Energy savings" = Lifecycle NET savings	











Spreadsheet Index	PA	ATA Page	ATA Order	Method Code	Units of Measurement	Metric Type	Metric/Indicator	Business Plan ATA Description	Metric	Sector	Baseline					Short Term Target			Mid Term Target (2021-2023)	Long Term Target (2024-2025)	Methodology	Key Definitions	Proxy Explanation
											Baseline Year	Numerator	Baseline Denominator	Baseline Number	2017 Number	2018	2019	2020	TBD	TBD			
289	SCE	A10	CS4	1	Count	Advocacy-Federal	Metric	Number of federal standards adopted for which a utility advocated (IOUs to list advocated activities)	Number of federal standards adopted for which a utility advocated (IOUs to list advocated activities)	Codes & Standards (CS)	2016	N/A	N/A	22	7	21	20	20	TBD	TBD	Standards adopted	Baselines and targets are annual. Any federal standards based upon Title 20 that were adopted will still be included in the federal count.	
290	SCE	A10	CS4	2	Count	Advocacy-Federal	Metric	Percent of federal standards adopted for which a utility advocated (#IOU supported / # DOE adopted)	Percent of federal standards adopted for which a utility advocated (#IOU supported / # DOE adopted)	Codes & Standards (CS)	2016	N/A	N/A	100%	100%	100%	100%	100%	TBD	TBD	# IOUs supported + # DOE adopted	Baselines and targets are annual.	
291	SCE	A10	CS5	1	Count	Reach Codes	Metric	The number of local government Reach Codes implemented (this is a joint IOU and REN effort)	The number of local government Reach Codes implemented (this is a joint IOU and REN effort)	Codes & Standards (CS)	2016	N/A	N/A	6	12	25 total	25 total	25 total	TBD	TBD	Reach Code ordinances implemented	Targets are total for a three-year Title 24 code cycle. Jurisdictions having multiple reach codes will be counted by reach code rather than by jurisdiction. Accomplishments will be reported from the CEC Reach Codes website ( <a href="http://www.energy.ca.gov/title24/2013standards/ordinances/">http://www.energy.ca.gov/title24/2013standards/ordinances/</a> ).	
292	SCE	A11	CS6	1	Count	Compliance Improvement	Metric	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the total size (number of the target audience) by sector. (M) Number of training activities	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the total size (number of the target audience) by sector. (M) Number of training activities	Codes & Standards (CS)	2017	N/A	N/A	138	118	138	138	138	TBD	TBD	Number of training activities	118 live training sessions and 20 webinars in 2017; short, mid, and long-term targets are annual	
293	SCE	A11	CS6	2	Count	Compliance Improvement	Metric	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the total size (number of the target audience) by sector. (M) Number of participants	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the total size (number of the target audience) by sector. (M) Number of participants	Codes & Standards (CS)	2017	N/A	N/A	3,600	3,000	3,600	3,600	3,600	TBD	TBD	Number of participants	3000 attendees for live training and 600 attendees for webinars in 2017; short, mid, and long-term targets are annual. Attendees will be shown by major segment (i.e., building officials, builders, architects, HERS raters) and target size of each segment will be provided during first metrics reporting.	
294	SCE	A11	CS6	3	Score	Compliance Improvement	Metric	Increase in code compliance knowledge pre/post training	Increase in code compliance knowledge pre/post training	Codes & Standards (CS)	2017	N/A	N/A	20%	20%	20%	20%	20%	TBD	TBD	Knowledge score	Code compliance knowledge increase will be tested via pre and post training questionnaires. Surveys will be conducted for training that lasts longer than three hours (in order to preserve time for instruction in shorter training sessions). Questionnaires will be made available during the first metrics reporting.	
295	SCE	A11	CS6R	1	Percent	Compliance Improvement	Metric	The percentage increase in closed permits for building projects triggering energy code compliance within participating jurisdictions	The percentage increase in closed permits for building projects triggering energy code compliance within participating jurisdictions	Codes & Standards (CS)	2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
296	SCE	A11	CS6R1	1	Count	Compliance Improvement	Indicator	Number and percent of jurisdictions with staff participating in an Energy Policy Forum	Number and percent of jurisdictions with staff participating in an Energy Policy Forum	Codes & Standards (CS)	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator
297	SCE	A11	CS6R1	1	Percent	Compliance Improvement	Indicator	Number and percent of jurisdictions with staff participating in an Energy Policy Forum	Number and percent of jurisdictions with staff participating in an Energy Policy Forum	Codes & Standards (CS)	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator
298	SCE	A11	CS6R1	2	Count	Compliance Improvement	Indicator	Number and percent of jurisdictions receiving Energy Policy technical assistance.	Number and percent of jurisdictions receiving Energy Policy technical assistance.	Codes & Standards (CS)	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator
299	SCE	A11	CS6R1	2	Percent	Compliance Improvement	Indicator	Number and percent of jurisdictions receiving Energy Policy technical assistance.	Number and percent of jurisdictions receiving Energy Policy technical assistance.	Codes & Standards (CS)	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator
300	SCE	A11	CS6R1	3	Count	Compliance Improvement	Indicator	Buildings receiving enhanced code compliance support and delivering compliance data to program evaluators	Buildings receiving enhanced code compliance support and delivering compliance data to program evaluators	Codes & Standards (CS)	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator	N/A - Indicator
301	SCE	A12	WET-1	1	Count	Collaborations	Metric	Number of collaborations by Business Plan sector to jointly develop or share training materials or resources.	Number of collaborations by Business Plan sector to jointly develop or share training materials or resources.	Workforce Education and Training (WET)	N/A	N/A	N/A	N/A	0	2	4	4	4	4	Collaboration agreements are not required.	"Collaborations" mean sharing mutually-beneficial resources such as training materials, expertise, and marketing/outreach tactics that help achieve W&ET goals and outcomes and that support the collaborating organizations' goals and objectives.	
302	SCE	A12	WET-2	1	Count	Penetration	Metric	Number of participants by sector	Number of participants by sector	Workforce Education and Training (WET)	N/A	N/A	N/A	12,141	12,134	14,216	14,216	14,216	17,401	17,574	Report from class registration database.	"Sector" refers to: a. Residential versus non-residential b. Energy efficiency training topic area (e.g., Lighting, HVAC, Agriculture) "Participants" means aggregate class attendance, meaning that one person attending two classes throughout the year would qualify as two participants. This is an accurate measurement of audience interest per topic / sector. Please note that the IOUs will begin using a standard categorization of training topic areas in 2018.	
303	SCE	A12	WET-2	1	Percentage	Penetration	Metric	Percent of participation relative to eligible target population for curriculum	Percent of participation relative to eligible target population for curriculum	Workforce Education and Training (WET)	2016	12,141	139,375	9%	9%	10%	10%	10%	12%	12%	Numerator: Report from class registration database. Denominator: Advanced Energy Economy Institute (AEE) report finding: "Energy Efficiency accounts for the largest share of advanced energy jobs in California. About six in 10 advanced energy workers are employed in the Energy Efficiency sector; these firms support over 321,000 jobs." Assume advanced Energy Efficiency jobs are commensurate with population for each PA territory. PG&E's share of 321,000 jobs is approximately 132,380.	"Participation" means unique participants, meaning that one person attending two classes throughout the year would be counted as one participant. "Curriculum" refers to the portfolio of training programs and training materials offered by W&ET "Eligible target population" refers to the energy efficiency labor workforce within each PA's service territory based on the proportion of the IOU's territory population compared to that of California's population.	
304	SCE	A12	WET-3	1	Percentage	Diversity	Metric	Percent of total W&ET training program participants that meet the definition of disadvantaged worker.	Percent of total W&ET training program participants that meet the definition of disadvantaged worker.	Workforce Education and Training (WET)	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	TBD	Report of provided zip codes from class registration database cross-referenced with the list of "disadvantaged worker" zip codes. Please note that these zip codes are a mixture of home and work addresses. By the end of 2018, IOUs will specifically request participants' home zip codes.	"Disadvantaged Worker" means a worker that (1) has a referral from a collaborating community-based organization (CBO), state agency, or workforce investment board; or (2) lives in a ZIP code that is in the top 25% in one or more of the five socioeconomic indicators as defined in the California Office of Environmental Health Hazard Assessment's CalEnviroScreen Tool. These socioeconomic indicators are educational attainment, housing burden, linguistic isolation, poverty, and unemployment.	
305	SCE	A12	WET-3	1	Percentage	Diversity	Metric	Percent of incentive dollars spent on contracts* with a demonstrated commitment to provide career pathways to disadvantaged workers	Percent of incentive dollars spent on contracts* with a demonstrated commitment to provide career pathways to disadvantaged workers	Workforce Education and Training (WET)	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	TBD	Disadvantaged worker tracking is currently not required by PA contract terms and conditions.	"Participant" means a unique participant, meaning that one person attending two classes throughout the year would be counted as one attendee. *Applies only to programs that install, modify, repair, or maintain EE equipment where the incentive is paid to an entity other than a manufacturer, distributor, or retailer of equipment. This applicability standard is adopted from the language the July 9th ruling on workforce standards. It excludes contracts such as those for upstream incentives, Codes and Standards, and mid-stream distributor programs.  "Demonstrated commitment" means that the vendor submits a plan describing how the program will provide disadvantaged workers with improved access to career opportunities in the energy efficiency industry, that they regularly report the percentage of their workforce qualifying as "disadvantaged", and that they have long-term targets for the percentage of their workforce qualifying as "disadvantaged".	
306	SCE	A12	WET-3i	1	Count	Diversity	Indicator	Number Career & Workforce Readiness (CWR) participants who have been employed for 12 months after receiving the training	Number Career & Workforce Readiness (CWR) participants who have been employed for 12 months after receiving the training	Workforce Education and Training (WET)	N/A	N/A	N/A	N/A	TBD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CWR program does not yet exist.
307	SCE	A13	ETP-M1	1	Count	Research Prioritization	Metric	ETP-M1 Number of TPMs initiated (gas and electric combined), including one technology-focused pilot (TFP) TPM *This number will be updated once all third party contracts have been awarded.	ETP-M1 Number of TPMs initiated (gas and electric combined), including one technology-focused pilot (TFP) TPM	Emerging Technologies (ET)	N/A	N/A	N/A	N/A	N/A	tdb TPMs*	tdb TPMs*	6 TPMs total**	TBD	TBD	Data for this metric will be gathered from 3P TPM Implementers annually.	1) Technology priority maps (TPMs) are defined in the Business Plan 2) Technology-focused pilot: See ETP-M7	
308	SCE	A13	ETP-M2	1	Count of TPMs	Research Prioritization	Metric	ETP-M2 Number of TPMs updated *This number will be updated once all third party contracts have been awarded.	ETP-M2 Number of TPMs updated	Emerging Technologies (ET)	N/A	N/A	N/A	N/A	N/A	tdb TPMs*	tdb TPMs*	3 TPMs total**	TBD	TBD	Data for this metric will be gathered from 3P TPM Implementers annually.	1) Technology priority maps (TPMs) are defined in the Business Plan	
309	SCE	A13	ETP-M3	1	Count of Projects	Projects	Metric	ETP-M3 Number of projects initiated *This number will be updated once all third party contracts have been awarded.	ETP-M3 Number of projects initiated	Emerging Technologies (ET)	2017* To be updated with ED/IOU Coordination	N/A	N/A	N/A	61 projects	53	tdb projects*	tdb projects*	61 projects total**	TBD	TBD	Data for this metric will be gathered from 3P TPM Implementers annually.	1) Technology priority maps (TPMs) are defined in the Business Plan 2) Projects are considered "initiated" when project budget has been approved and funding allocated.
310	SCE	A13	ETP-M4	1	Count of Events	Outreach	Metric	ETP-M4: Number of outreach events with technology developers with products <1 year from commercialization, including new technology vendors, manufacturers, and entrepreneurs. *This number will be updated once all third party contracts have been awarded.	ETP-M4: Number of outreach events with technology developers with products <1 year from commercialization, including new technology vendors, manufacturers, and entrepreneurs	Emerging Technologies (ET)	2017	N/A	N/A	N/A	5	5	tdb events*	tdb events*	5 events total**	TBD	TBD	Each ETP event will provide data for ETP-M4 and ETP-M5 simultaneously.**Data for this metric will be gathered from TPM implementers annually based on methodology to be determined.	1) "Technology developers" - Any organization or company that develops energy efficiency and demand response technology suitable for inclusion in PA incentive programs 2) "Events" - ET Summit, webinars, and in-person meetings, as proposed by ETP implementers.
311	SCE	A13	ETP-M5	1	Count of Events	Outreach	Metric	ETP-M5: Number of outreach events with technology developers with products <5 years from commercialization, including new technology vendors, manufacturers, and entrepreneurs. *This number will be updated once all third party contracts have been awarded.	ETP-M5: Number of outreach events with technology developers with products <5 years from commercialization, including new technology vendors, manufacturers, and entrepreneurs	Emerging Technologies (ET)	See ETP-M4	N/A	N/A	N/A	See ETP-M4	See ETP-M4	See ETP-M4	See ETP-M4	See ETP-M4	TBD	TBD	Each ETP event will provide data for ETP-M4 and ETP-M5 simultaneously.**Data for this metric will be gathered from 3P TPM implementers annually based on methodology to be determined.	1) "Technology developers" - Any organization or company that develops energy efficiency and demand response technology suitable for inclusion in PA incentive programs. 2) "Events" - ET Summit, webinars, and in-person meetings, as proposed by ETP implementers.
312	SCE	A14	ETP-M6	1	Count of TFPs	Pilots	Metric	ETP-M6: Number of projects initiated with cooperation from other internal IOU programs associated with each Technology-focused Pilot *This number will be updated once all third party contracts have been awarded.	ETP-M6: Number of projects initiated with cooperation from other internal IOU programs associated with each Technology-focused Pilot	Emerging Technologies (ET)	N/A	N/A	N/A	N/A	N/A	tdb*	tdb*	2 total**	TBD	TBD	ETP-M6 metric is a subset of ETP-M7 and counted towards ETP-M7 targets. All targets will be determined by 3P TPM implementers.	1) "Cooperation" is defined as a process by which all parties work towards a mutual objective.	
313	SCE	A14	ETP-M7	1	Count of TFPs	Pilots	Metric	ETP-M7 Number of Technology-Focused Pilot (TFP) initiated as part of the TFP TPM. *This number will be updated once all third party contracts have been awarded.	ETP-M7 Number of Technology-Focused Pilot (TFP) initiated as part of the TFP TPM	Emerging Technologies (ET)	N/A	N/A	N/A	N/A	N/A	tdb*	tdb*	3 total**	TBD	TBD	Data for this metric will be gathered from 3P TPM Implementers annually.	1) A technology-focused pilot (TFP) will identify market barriers for a diverse range of high-impact technologies through studies, and subsequently breaking down identified barriers in collaboration with other relevant programs. 2) "Technology-focused Pilot" - Pilots that have been proposed by 3Ps in response to PA needs and that have been approved through the existing ED Ideation Process. This includes TFPs conducted in cooperation with other programs.	
314	SCE	A15	ETP-T1	1	Percent of New Measures	Measure Tracing	Metric	ETP-T1: Prior year: % of new measures added to the portfolio that were previously ETP technologies *The PAs believe this is not suited for a metric with targets because ETP does not make decisions about new measures.	ETP-T1: Prior year: % of new measures added to the portfolio that were previously ETP technologies	Emerging Technologies (ET)	Per ED, to be determined by an ED study*	Per ED, to be determined by an ED study*	Per ED, to be determined by an ED study*	Per ED, to be determined by an ED study*	TBD	Per ED, to be determined by an ED study*	Per ED, to be determined by an ED study*	Per ED, to be determined by an ED study*	TBD	TBD	Per ED: Baseline, methodology, and targets need to be determined by ED evaluation contractors. ED evaluators can make recommendations on what suitable targets would be. ETP Tracking Metrics 1 - 5 need to be determined at the same time as part of calculating savings (ETP-T5), and because ETP impact and savings are involved, ED evaluators need to make these determinations. Baselines will not be available until then.	ETP-T1 through ETP -T8 are in a table titled "Emerging Technologies Tracking (Reporting)" and are separate from the metrics ETP-M1 through ETP-M7 in the table titled "Emerging Technologies Metrics" in Attachment A of D.18-05-041. PAs had proposed that tracking metrics have no targets in the July 14, 2017 metrics filing, however the commission ruled that these tracking metrics must have targets.	



Spreadsheet Index	PA	Page	Order	Method Code	Units of Measurement	Metric Type	Metric/Indicator	Business Plan Alt A Description	Metric	Sector	Baseline		Baseline Denominator	Baseline Number	2017 Number	Short Term Target			Mid Term Target	Long Term Target	Methodology	Key Definitions	Proxy Explanation
											Baseline Year	Numerator				2018	2019	2020	(2021-2023)	(2024-2025)			
327	SCE	A15	ETP-T7c	1	Count of project ideas by manufacturers	Project Idea Tracing	Metric	ETP-T7c Number and source (as reported by submitter) of project ideas submitted AS PART OF the annual TPM research planning process, for these categories of sources: PA, national lab, <b>manufacturer</b> , entrepreneur, etc. *The PAs believe this is not suited for a metric with targets because ETP does not control the number of submissions nor their sources. Targets are set in a way to avoid forcing ETP to arbitrarily change existing processes in a way that may negatively impact the effectiveness of the program. Targets and sources may be updated in collaboration with ED after all 3P contracts are awarded.	ETP-T7c Number and source (as reported by submitter) of project ideas submitted AS PART OF the annual TPM research planning process by Manufacturer	Emerging Technologies (ET)	N/A	N/A	N/A	N/A	TBD	tbd*	tbd*	2 cumulative <sup>1</sup>	TBD	TBD	Data for this metric will be gathered from 3P TPM Implementers. If ideas are submitted both outside and as part of the TPM-aligned research planning process, it can be reported under both ETP-T6 and ETP-T7. Ideas may be submitted by more than one source and will be counted under each.	ETP-T1 through ETP-T8 are in a table titled "Emerging Technologies Tracking (Reporting)" and are separate from the metrics ETP-M1 through ETP-M7 in the table titled "Emerging Technologies Metrics" in Attachment A of D.18-05-041. PAs had proposed that tracking metrics have no targets in the July 14, 2017 metrics filing, however the commission ruled that these tracking metrics must have targets. "Submitted" refers to an idea submitted through a formal submission process.	
328	SCE	A15	ETP-T7d	1	Count of project ideas by entrepreneurs	Project Idea Tracing	Metric	ETP-T7d Number and source (as reported by submitter) of project ideas submitted AS PART OF the annual TPM research planning process, for these categories of sources: PA, national lab, manufacturer, <b>entrepreneur</b> , etc. *The PAs believe this is not suited for a metric with targets because ETP does not control the number of submissions nor their sources. Targets are set in a way to avoid forcing ETP to arbitrarily change existing processes in a way that may negatively impact the effectiveness of the program. Targets and sources may be updated in collaboration with ED after all 3P contracts are awarded.	ETP-T7d Number and source (as reported by submitter) of project ideas submitted AS PART OF the annual TPM research planning process by Entrepreneur	Emerging Technologies (ET)	N/A	N/A	N/A	N/A	TBD	tbd*	tbd*	1 cumulative <sup>1</sup>	TBD	TBD	Data for this metric will be gathered from 3P TPM Implementers. If ideas are submitted both outside and as part of the TPM-aligned research planning process, it can be reported under both ETP-T6 and ETP-T7. Ideas may be submitted by more than one source and will be counted under each.	ETP-T1 through ETP-T8 are in a table titled "Emerging Technologies Tracking (Reporting)" and are separate from the metrics ETP-M1 through ETP-M7 in the table titled "Emerging Technologies Metrics" in Attachment A of D.18-05-041. PAs had proposed that tracking metrics have no targets in the July 14, 2017 metrics filing, however the commission ruled that these tracking metrics must have targets. "Submitted" refers to an idea submitted through a formal submission process.	
329	SW	A16	ETP-T8	1	Number of lists	Statewide Goal Alignment	Metric	ETP-T8: List of ETP projects aligned with statewide goals that were initiated in the reporting year with specificity as to what aspect of each goal it is fulfilling. Goals will also be labeled in the ETP database. A list of eligible goals will be developed collaboratively with ED.	ETP-T8: List of ETP projects aligned with statewide goals that were initiated in the reporting year with specificity as to what aspect of each goal it is fulfilling	Emerging Technologies (ET)	N/A	N/A	N/A	N/A	N/A	3 lists cumulative	3 lists cumulative	2 lists cumulative	TBD	TBD	Data for this metric will be gathered from 3P TPM Implementers. An ETP project may align with multiple statewide goals and will be listed under each goal. **	ETP-T1 through ETP-T8 are in a table titled "Emerging Technologies Tracking (Reporting)" and are separate from the metrics ETP-M1 through ETP-M7 in the table titled "Emerging Technologies Metrics" in Attachment A of D.18-05-041. PAs had proposed that tracking metrics have no targets in the July 14, 2017 metrics filing, however the commission ruled that these tracking metrics must have targets. The "statewide goals" will be tracked will be developed and updated in collaboration with ED as needed. Projects are considered "initiated" when project budget has been approved and funding allocated.	

<sup>1</sup>In the August 6, 2018 metrics compliance filing, SCE inadvertently reported these targets for 2018 when in fact, they should have been reported as targets for 2020.

# Column Index

## Southern California Edison

### EE Sector Metrics with Targets - ED Template Column Index

Each metric in this workbook can be mapped to the Final Business Plan Decision Attachment A metric using page number (AttA Page) and the order of the metric within the table of sector-level metrics (AttA Order). Because there are some collinear metrics in Attachment A and some multi-part metrics, we have further coded the metric with Metric Type (Method Code is a shorthand for Metric Type) to make distinctions between the multiple parts of the metric. Note that (net vs gross), (kW vs kWh vs Therm) and (PAC vs TRC) have not been coded separately, but instead can be distinguished by looking at the "Units of Measurement" column.

Each unique metric, including each part of a multi-part metric, is a separate row. Baselines, 2018, 2019, 2020, Mid-, and Long-Term targets for each metric is reported on the same row.

Column Name	Column Description
PA	Program Administrator
AttA Page	Attachment A Page
AttA Order	Attachment A order of metric in the sector metrics table in Attachment A
Method Code	(PA use) Code indicating a unique metric calculation methodology or definition was used
Metric Type	(PA Use) Metric type
Metric Language	Language of the metric from D.18-05-041 Attachment A
Sector	Sector
Baseline Year	Baseline year is 2016, unless there was no activity in 2016, in which case the baseline was set for a year in which there was activity
Baseline Number	Data from PA
2018 Target	Data from PA
2019 Target	Data from PA
2020 Target	Data from PA
Mid Term Target (2021-2023)	Data from PA
Long Term Target (2024-2025)	Data from PA
Units of Measurement	Units of measurement
Methodology	Short description of metric calculation
Key Definitions	Key definitions for metric
Was Proxy Used? Y/N	Flag for use of proxy in calculation of metric
Proxy Explanation	Explanation of how proxy was calculated, what secondary data sources were used, and when PA plans to be able to use primary data for metric.



# Definitions

## Southern California Edison

### EE Sector Metrics with Targets - Definitions

	<b>Term</b>	<b>Definition</b>
1	Service Account	A service account is a system generated number that uniquely identifies a billable entity
2	Eligible Population	Total number of service accounts in sector/segment
3	Disadvantaged Communities	Service account address located in zip codes that contain CalEnviroScreen 3.0 census tracts.
4	Hard-to-Reach	D p. 43 - Resolution G-3497, modified to "include disadvantaged communities (as designated by CalEPA) in the geographic criteria for hard to reach customers." Hard-to-reach zipcodes determined by 2014 Aspen Research study.
5	MT CO2eq	Conversion of kWh and Therms to MTCO2eq as reported by CEDARS
6	Levelized Cost	PAC and TRC cost (excluding C&S), as output from the CET Tool
7	Residential Single Family	Service account on residential rates, with dwelling code of single family home or single family dwelling.
8	Participant	A unique person or entity identified through a service account and who participates in a ratepayer funded energy efficiency intervention
9	Household	Residential service account
10	Opt-In/Opt-Out Program	Opt-in programs are voluntary and participation is at the discretion of the individual and/or entity. Opt-out programs are those where individuals and/or entities are defaulted into with their option to opt-out. Opower/HER is the only Opt-Out program.
11	Residential Multifamily	MF/SF designation based on dwelling codes in service accounts. Number of units = 2 or more.
12	Project	Energy efficiency efforts where the customer financial incentives and energy savings are determined using a site-specific analysis of the customer's existing and proposed equipment and/or building components
13	Building	Any structure used or intended to support or shelter any use or occupancy, that receives energy from a utility
14	Property	A property is a collection of buildings and/or structures within a defined proximity and is intended to support or shelter any use or occupancy, that receives energy from a utility
15	Energy Savings per Square Foot (depth of intervention)	Sq footage of EE-addressed space, as defined by individual implementation plans
16	Square feet of eligible population participating (by property)	Sq footage of participating properties captured when provided.
17	In Unit	Living space as designated by a unique service account and/or dwelling codes.
18	Common Area	Shared space within a property, designated by dwelling codes, a "common area" flag, and/or by use of a commercial meter.
19	Master Metered	Define using rate class, or rate class and/or by dwelling code. Non-overlapping with in-unit
20	Unit	Service accounts within MF property. Non-overlapping with Master Metered.
21	Square Feet of Eligible Population	Sq footage of defined space per metric definition.
22	Public Sector	Per SDG&E BP application (p. 102), "the public sector came to be defined as the group of customers that are tax-payer funded, have political mandates, and that must go through a public budgeting and decision-making process." Local Gov't: Cities, Counties, Special Districts, Solid Waste Facilities, Water / Wastewater Facilities, Hospitals, Correctional Facilities. State: State Buildings, State Park Facilities, Hospitals, Correctional Facilities. Federal: Federal Buildings, US Postal Service, Hospitals, Ports, Military Bases. Native American Tribes Public Education (double check): K-12 Schools (Schools, Admin Buildings), Higher Education (e.g., UC/CSU), community colleges Special exceptions on a case by case basis, determined by PAs based on customer of record.
23	Facility	A structure or collection of structures, covered or uncovered, that typically encompass processing or production capabilities
24	Project Building Floor Plan Area	Sq footage of EE-addressed space, as defined by individual implementation plans
25	Program-Backed Financing	Loan amount
26	Water/Waste Water Facility	A structure or collection of structures, covered or uncovered, that encompass water/waste water treatment processes. EE savings are intended to be captured at the facility level.
27	Annual Flow	Flow (in millions of gallons per day) of water/wastewater as reported by the water/waste water facility
28	Current Benchmark	Benchmarked via Portfolio Manager in the calendar year
29	Investments made by ratepayers and private capital	Project incentive vs project cost
30	Customer Satisfaction	Per consistent survey, to be developed
31	Trade Ally Satisfaction	Per consistent survey, to be developed
32	Customer Size - Small	A service account with <50 kW demand
33	Customer Size - Medium	A service account with 50 - 250 kW demand
34	Customer Size - Large	A service account with >250 kW demand

Attachment E  
Description of Program Changes

## Description of Program Changes

### Programs and Subprograms Proposed To Be Discontinued

#### Resource Programs:

#### 1. Energy Upgrade California Program (SCE-13-SW-001D)

SCE has made multiple improvements since program inception to improve the Energy Upgrade California Home Upgrade (“Home Upgrade”) program; however, the Home Upgrade program continues to have a very low cost-effectiveness ratio as shown in the table below. SCE does not anticipate the TRC improving, and therefore SCE proposes to discontinue this program to improve the cost-effectiveness of its EE portfolio. SCE has communicated to Southern California Gas Company, vendors, and contractors its intention to close this program.

Program ID	Program Name	Program Category	Historical TRC			
			2015 <sup>1</sup>	2016 <sup>1</sup>	2017 <sup>1</sup>	2018 <sup>2</sup>
SCE-13-SW-001D	Energy Upgrade California	Resource	0.16	0.20	0.18	0.18

[1] TRC calculation for 2015-2017 includes 5% Market Effects and was run using the 2013 set of avoided costs.

[2] TRC calculation for 2018 uses 2017 actuals, rerun using 2018 avoided costs, with 5% market effects.

#### 2. IDEEA 365 (SCE-13-TP-020)

The intent of the IDEEA365 Program is to find, fund, and foster the best EE and IDSM delivery approaches available in the marketplace; however, because SCE will be conducting open solicitations for innovative and cost-effective third-party proposed, designed, and implemented programs as directed in D.18-01-004, this program is no longer needed. As such, SCE proposes to close this program and direct future program ideas to its open solicitations.

Program ID	Program Name	Program Category	Historical TRC			
			2015 <sup>1</sup>	2016 <sup>1</sup>	2017 <sup>1</sup>	2018 <sup>2</sup>
SCE-13-TP-020	IDEEA365 Program <sup>3</sup>	Resource	0.06	0.70	-	-

[1] TRC calculation for 2015-2017 includes 5% Market Effects and was run using the 2013 set of avoided costs.

[2] TRC calculation for 2018 uses 2017 actuals, rerun using 2018 avoided costs, with 5% market effects.

[3] Starting 2017, MICE and WISE were removed from IDEEA365 and became standalone programs.

### **3. Cool Schools Program (SCE-13-TP-013)**

The Cool Schools program assists public and private schools with energy efficiency and conservation. Cool Schools utilizes the knowledge and communication channels of trusted institutions and provides financial assistance to accelerate the replacement of existing equipment near the end of its useful life with new, more energy-efficient equipment.

The Cool Schools program is not as financially attractive to customers as turnkey programs. Furthermore, the reduction in Proposition 39 funding has caused many school customers to only bring their buildings up to code instead of achieving savings above code. For these reasons, SCE does not foresee the cost effectiveness of this program increasing over time. In order to maintain the cost-effectiveness of the overall portfolio, SCE proposes to discontinue the Cool Schools program. Please see the table below for the Cool Schools Program's historical TRC ratio.

In 2016, SCE notified vendors that this program will be closed pending Commission approval. In addition in 2017, SCE stopped marketing the program to customers and stopped accepting new project applications.

Program ID	Program Name	Program Category	Historical TRC			
			2015 <sup>1</sup>	2016 <sup>1</sup>	2017 <sup>1</sup>	2018 <sup>2</sup>
SCE-13-TP-013	Cool Schools	Resource	-	0.47	0.54	0.47

[1] TRC calculation for 2015-2017 includes 5% Market Effects and was run using the 2013 set of avoided costs.

[2] TRC calculation for 2018 uses 2017 actuals, rerun using 2018 avoided costs, with 5% market effects.

### **4. Commercial Utility Building Efficiency (SCE-13-TP-014)**

Commercial Utility Building Efficiency (CUBE) provides audits, technical assistance, and incentives to support installation of recommended EE equipment at privately owned commercial office buildings. Changes in claimable energy savings due to Title 24 updates and changes in Industry Standard Practice (ISP) assumptions have drastically reduced the number of eligible measures for CUBE; therefore, SCE does not believe the cost effectiveness of this program will increase in the future. In order to improve the cost-effectiveness of the overall portfolio, SCE proposes to discontinue the program. Please see the table below for the CUBE Program's historical TRC ratio.

The existing commercial building customer base can be served by other programs in SCE's portfolio. In 2016, SCE notified vendors that this program will be closed pending Commission approval. In 2017, SCE stopped marketing the program to customers and stopped accepting new projects.

Program ID	Program Name	Program Category	Historical TRC			
			2015 <sup>1</sup>	2016 <sup>1</sup>	2017 <sup>1</sup>	2018 <sup>2</sup>
SCE-13-TP-014	Commercial Utility Building Efficiency	Resource	0.75	0.51	0.86	0.62

[1] TRC calculation for 2015-2017 includes 5% Market Effects and was run using the 2013 set of avoided costs.

[2] TRC calculation for 2018 uses 2017 actuals, rerun using 2018 avoided costs, with 5% market effects.

## 5. Energy Leader Partnership Program (SCE-12-L-002Rollup)

The intent of the Energy Leader Partner (ELP) Program is to support new local governments in SCE’s service territory by identifying and implementing EE opportunities in municipal facilities and increasing community awareness of, and participation in, demand-side-management programs. SCE proposes to close this program and not add new Partnerships while we focus on improving cost effectiveness in this segment. SCE will provide similar support to local governments through its existing Local Government Partnership (LGP) programs and, if needed and cost effective, SCE will file an Advice Letter to create a new program when a local government is interested in becoming an LGP.

Although the ELP Program is considered a resource program, SCE has not claimed any savings for the program from 2015-2018, as shown below. As such, SCE does not anticipate the TRC improving over time.

Program ID	Program Name	Program Category	Historical TRC			
			2015 <sup>1</sup>	2016 <sup>1</sup>	2017 <sup>1</sup>	2018 <sup>2</sup>
SCE-13-L-002Roll	Energy Leader Partnership Program	Resource	-	-	-	-

[1] TRC calculation for 2015-2017 includes 5% Market Effects and was run using the 2013 set of avoided costs.

[2] TRC calculation for 2018 uses 2017 actuals, rerun using 2018 avoided costs, with 5% market effects.

## 6. ARRA- Originated Financing - EmPower (SCE-13-SW-007B)

The emPower Central Coast Energy Efficiency Financing Program is a continuation of financing programs originally supported by American Recovery and Reinvestment Act (“ARRA”) stimulus funding in 2012 and implemented by the County of Santa Barbara. Subsequently in 2015 it was scaled up to include Ventura and San Luis Obispo counties. The Program was created to streamline the process of attaining low-cost unsecured loans, recruitment and training of local contractors, and directing customers to utility rebates to help homeowners overcome the high upfront cost associated with energy efficiency upgrades. EmPower was also meant to coordinate with and enhance the Participating Utilities Energy Upgrade California program (“EUC Program”) by driving customer participation and qualifying those projects for loans.

After careful consideration and on-going evaluation of the program’s performance and expenditures, the IOUs (SoCalGas, PG&E, SCE) have uniformly determined that the program has not achieved the level of unsecured loans and energy efficiency project savings to make it cost-effective, and therefore to discontinue the program. A contributing factor has been lack of success in generation of direct participation in Investor-Owned Utilities Core EE residential rebate programs, particularly with respect to Energy Upgrade CA. Other reasons for program closure include the recent 3CREN approval to move forward with a program that will include Workforce Education and Training in the same counties for contractors and the CHEEF Residential Energy Efficiency Loan (REEL) program, which is duplicative of emPower’s residential home loan efforts. On July 26th, an official communication was delivered to the County stating the utilities decision to discontinue funding of the program, and the submittal of such intention through the 2019 ABAL. In partnership with the County, current discussions are underway to develop and provide input as to their program activities ramp-down plan, as well as a stakeholder communication plan.

Program ID	Program Name	Program Category	Historical TRC			
			2015 <sup>1</sup>	2016 <sup>1</sup>	2017 <sup>1</sup>	2018 <sup>2</sup>
SCE-13-SW-007B	ARRA-Originated Financing <sup>3</sup>	Resource	-	-	-	-

[1] TRC calculation for 2015-2017 includes 5% Market Effects and was run using the 2013 set of avoided costs.

[2] TRC calculation for 2018 uses 2017 actuals, rerun using 2018 avoided costs, with 5% market effects.

[3] Financing programs are considered resource, but do not have savings attributed to the program.

## Non- Resource Programs:

### 1. Cool Planet Program (SCE-13-TP-002)

The Cool Planet Program is a non-resource program that provides utility business customers with education and technical training to measure and manage their energy use and greenhouse gas (GHG) emissions. Customers earn public recognition and awards of 1-, 2-, or 3-year memberships with The Climate Registry based on meeting kWh energy savings or demand response program participation thresholds. The Cool Planet Program also includes a water-energy GHG education pilot program that offers a clear means to quantify, compare, and analyze the GHG emissions embedded in delivered water using a consistent and transparent methodology.

Due to the lack of success of the program and to improve the cost-effectiveness of the overall portfolio, SCE will discontinue the Cool Planet Program. As an added benefit, this effort will also allow for alignment to SCE’s Public Sector design and open up new opportunities for both water-energy initiatives and education. At the end of the year, SCE will communicate the program closure to customers as well as through the program vendor (i.e., The Climate Registry) and water districts.

## **2. Lighting Market Transformation Program (SCE-13-SW-005A)**

Lighting Market Transformation (LMT) is a non-resource program that promotes efficient lighting technologies. This includes developing innovative data-driven program strategies to use in utility lighting programs. However, due to the adoption of LED technology in the market, LMT's success in supporting efficient progression of lighting solutions into customer EE programs, and the adoption of code requirements for efficient lighting technologies, LMT is no longer necessary.

## **3. Lighting Innovation Program (SCE-13-SW-005B)**

Lighting Innovation (LI) is a non-resource subprogram that evaluates products or program approaches that are new to the market and could potentially enter the Primary Lighting Program or the Commercial, Industrial, and Agricultural EE Programs. While the program provides valuable information on lighting challenges and barriers that exist, activities conducted in the LI subprogram can be administered in the Emerging Technologies Program. Emerging Technologies will continue to support programs by evaluating products and or program approaches under a new Technology Focused Pilot activity. This includes evaluating innovative data-driven program strategies to use in lighting programs and coordination with Codes & Standards. However, it will be up to third parties that are new to the market and could potentially enter the Primary Lighting Program or the Commercial, Industrial, and Agricultural EE Programs to do so.

## **4. WE&T Planning (SCE-13-SW-010C)**

Workforce Education and Training (WE&T) is a non-resource program that involves management and execution of several strategic statewide planning tasks, including holding annual WE&T public workshops and stakeholder engagement sessions, conducting needs assessments, and hiring industry subject matter experts and consultants to assist in the development of a comprehensive approach to WE&T program design and implementation. While the program does provide some value to customers, the program is not cost-effective because it does not deliver energy savings. Thus, WE&T Planning will be discontinued to improve the cost effectiveness of the portfolio. As noted above, SCE recommends the Commission consider removing the costs of WE&T programs from the cost-effectiveness evaluations as part of the Market Transformation policy issues that will be considered in Phase III of R.13-11-005.

## **5. WE&T – Mobile Energy Unit**

The Mobile Education Unit (MEU) Program is a non-resource customer outreach program designed to increase awareness and participation in SCE's Energy Efficiency, Demand Response, Self-Generation, and Income Qualified programs. MEU attends various community-based events throughout SCE's service territory. While the program does provide some value to end user residential customers, the program is not cost-effective because it does not deliver energy savings. Thus, MEU



will be discontinued. Internal and external stakeholders, including the Customer Call Center, will be notified of the program's closure through website updates, email blasts, and formal communication.

## **6. WE&T – Community Language Efficiency Outreach**

The Community Language Efficiency Outreach (CLEO) Program is a non-resource, language-based customer outreach program designed to increase awareness and participation in SCE's Energy Efficiency, Demand Response, Self-Generation, and Income Qualified programs. CLEO attends various community-based events throughout SCE's service territory to educate customers on the programs and services available to them in their primary language. While the program does provide some value to end user residential customers, the program is not cost-effective because it does not deliver energy savings. Thus, CLEO will be discontinued. Internal and external stakeholders, including the Customer Call Center, will be notified of the Program's closure through website updates, email blasts, and formal communication.

## **7. Sustainable Communities Pilot Program (SCE-13-TP-019)**

SCE's Sustainable Communities Program (SCP) is a non-resource program that provides design and technical assistance, training, and other professional resources to new construction projects. The purpose of SCP is to advance new construction projects beyond Title 24 requirements to achieve Zero Net Energy (ZNE). As part of the 2018 –2025 EE Business Plan, SCE's Codes and Standards program already plans to enhance its Planning and Coordination sub-program to include ZNE-preparedness activities to support the building industry in reaching ZNE; specifically, ZNE-preparedness activities with an emphasis on residential new construction through design and technical assistance, pilots, and other industry-supporting activities. Additionally, the Codes and Standards and Emerging Technologies Programs will continue to coordinate activities to leverage the successes of the past SCP and ZNE projects. SCE is eliminating the SCP to avoid overlapping efforts and, thereby, optimizing the cost-effectiveness of the EE portfolio.

## **8. Integrated Demand Side Management Program (SCE-13-SW-006)**

SCE's Energy Efficiency Integrated Demand Side Management Program (EE IDSM) is a non-resource program that encourages programs to integrate the full range of demand-side management (DSM) options; however, a specific EE IDSM program is no longer needed as SCE transitions to third-party proposed, designed, and implemented programs through the upcoming third party solicitations where bidders will be encouraged to propose IDSM approaches in support of the IDSM efforts directed by the Commission in D.18-05-041. SCE will also continue to foster IDSM through the DR IDSM program and associated budget.

## **Program Realignment**

### **1. Strategic Energy Management (SCE-13-SW-003D)**

SCE will consolidate the Agriculture Continuous Energy Improvement Program (SCE-13-SW-004D), Commercial Continuous Energy Improvement Program (SCE-13-SW-002E), and the Industrial Continuous Energy Improvement Program (SCE-13-SW-003D), into a single program named the Strategic Energy Management program (previously the program number for the Industrial Continuous Energy Improvement Program). The Strategic Energy Management (SEM) program is a resource program that provides a concierge approach in identifying, assisting, and implementing EE projects with a whole facility focus. SEM is a milestone-based program with eight workshops that span 26 months. The purpose of the workshops is to educate and deliver savings to the customer. The concierge service will have one implementer and one point of contact to assist the contractor through the sunrise and sunset of EE projects with a whole-building approach.

### **2. Commercial Continuous Energy Improvement (SCE-13-SW-002E)**

Per the discussion above, SCE will consolidate the Agriculture Continuous Energy Improvement Program, Commercial Continuous Energy Improvement Program, and the Industrial Continuous Energy Improvement Program into a single program named the Strategic Energy Management (SEM) program.

### **3. Agricultural Continuous Energy Improvement (SCE-13-SW-004D)**

Per the discussion above, SCE will consolidate the Agriculture Continuous Energy Improvement Program, Commercial Continuous Energy Improvement Program, and the Industrial Continuous Energy Improvement Program into a single program named the Strategic Energy Management (SEM) program.

### **4. Industrial Continuous Energy Improvement**

Per the discussion above, SCE will consolidate the Agriculture Continuous Energy Improvement Program, Commercial Continuous Energy Improvement Program, and the Industrial Continuous Energy Improvement Program into a single program named the Strategic Energy Management (SEM) program.

## **New Programs and Subprograms**

The following programs are existing programs that began as pilots but do not have formal implementation plans and Programs IDs.

### **1. Midstream Point of Purchase (SCE-13-SW-002H)**

The Midstream Point of Purchase (MPOP) program provides incentives at the point of purchase through participating distributors of certain pre-approved energy-efficient products. The MPOP program encourages distributors to purchase and stock higher quantities of high-efficiency equipment. MPOP's instant rebate at the point of purchase facilitates customer decisions to purchase high-efficiency equipment by reducing both the equipment cost premium and the effort required to submit an application. SCE reimburses the participating distributor a pre-authorized incentive amount for each qualifying product sold to an eligible business customer. The distributor collects the customer information at the point of purchase and provides product data to SCE through an online tool for invoice processing. SCE validates the customer and product data and issues payment to the distributor. MPOP began as a pilot in SCE's Lighting Innovation program. Below is the forecasted TRC of the program.

Program ID	Program Name	Program Category	Forecasted TRC
			Year 2019
SCE-13-SW-002H	Midstream Point of Purchase	Resource	1.12

### **2. Water Infrastructure and System Efficiency Program (SCE-13-TP-002)**

The Water Infrastructure and System Efficiency Program (WISE) program is the result of a successful IDEEA365 offering from 2014. The WISE program will leverage data from the Pump Efficiency Services Program (a successful SCE water-energy program that produces significant water and energy savings) as a baseline for the new pump measures. WISE will target water-energy solutions at all major areas of water in SCE's service territory (e.g., source water pumping, water treatment, water distribution, and waste water treatment). WISE will also look at benchmarking opportunities and audit functions as well as installations with an emphasis on measures such as system optimization, pump efficiency, and pump repair for customers, including those from SCE's Government and Institutional Partnership programs. Below is the forecasted TRC of the program.

Program ID	Program Name	Program Category	Forecasted TRC
			Year 2019
SCE-13-TP-002	Water Infrastructure and System Efficiency Program	Resource	0.36

### **3. AB793 Residential Pay for Performance Program (SCE-13-TP-024)**

California Assembly Bill 793 (AB 793), and the associated Commission Resolution E-4820, mandates all IOUs to develop and implement incentive programs targeting residential customers who acquire Energy Management Technologies (EMTs). Pursuant to Resolution E-4820, program offerings should include a mechanism to incentivize residential customers to acquire EMTs to meet EE savings goals under a pay-for-performance model. In 2017, SCE issued a Request for Offer (RFO) to seek cost effective, and “ready-to-implement” proposals from qualified third-parties to initiate a Pay-for-Performance program that links incentives directly to measured energy savings. As a result, SCE awarded Home Energy Analytics (HEA) a contract to design, implement, and administrator the Home Intel Program. The Home Intel Program will assist residential customers to quickly and accurately understand their home’s energy usage and implement a cost-effective path to savings. Below is the forecasted TRC of the program.

Program ID	Program Name	Program Category	Forecasted TRC
			Year 2019
SCE-13-TP-024	AB 793 Residential Pay for Performance	Resource	0.73

### **4. Facilities Assessment (SCE-13-TP-025)**

Pursuant to AB 793 described above, SCE created the Facilities Assessment Program, a third-party implemented program that will provide services to SCE customers that will allow them to better manage their energy usage, identify behavioral, retro-commissioning, and operational-based energy saving opportunities, and achieve energy savings by utilizing energy management technology or software. The program will be a resource program designed to leverage the investment SCE has made in its Advanced Meter Infrastructure (AMI) deployment through data analytics and customer engagement. Savings resulting from the Facilities Assessment Program will be calculated using the Normalized Metered Energy Consumption (NMEC) approach.

Program ID	Program Name	Program Category	Forecasted TRC
			Year 2019
SCE-13-TP-025	Facilities Assessment	Resource	0.61

### **5. National and International Standards (Sub-Program of the Codes & Standards Program)**

National and International Standards is a new category of activities that focuses on both federal regulations as well as voluntary codes that are developed at a national level and directly impact IOU customers. California codes and standards need to align with and reflect international as well as national standards. The purpose of this new category is to help ensure such an alignment by identifying and participating in the various processes associated with national code development bodies such as the U.S. Department of Energy, the American Society of Heating, Refrigerating, and

Air-Conditioning Engineers (ASHRAE), the International Code Council (ICC), as well as national organizations that oversee national voluntary standards such as the U.S. Environmental Protection Agency, the U.S. Green Building Council, the Collaborative for High Performance Schools (CHPS), and other national organizations such as the Federal Trade Commission (FTC) and the U.S. Legislature. This will be a non-resource program, so no TRC estimate is provided as shown in the table below.

Program ID	Program Name	Program Category	Forecasted TRC
			Year 2019
SCE-13-SW-008F	National and International Standards	Non-Resource	N/A

### **Expanded Programs (By More Than 40 Percent Change in Funding)**

#### **1. Residential Direct Install (SCE-13-TP-024)**

Residential Direct Install is a cost-effective program designed to provide comprehensive EE measures to residential customers and enhance the EE knowledge and program participation of the residential market segment in an effort to drive them to undertake deeper EE activities and retrofits. Funding for this program increased by greater than 40% due to the increase of potential high TRC projects that will be completed in 2019. In addition, this program has an increased budget due to its cost-effectiveness when compared with other portfolio offerings. No significant program modifications are proposed for 2018; however, SCE will continue to review this and other programs for potential improvements to cost-effectiveness.

#### **2. Enhanced Retro-commissioning (SCE-13-TP-021)**

The Enhanced Retro-commissioning Program provides comprehensive IDSM solutions for customers by using advanced analytical tools to identify retro-commissioning opportunities in complex buildings, including large commercial offices, hospitals, and resorts. This program has the potential to capture significant cost-effective savings in the future using an NMEC approach. The funding level increased by greater than 40% to ramp-up program activities.

#### **3. Local Government Programs**

Local Government Programs provide support to local governments in SCE's service territory in order to identify and address EE opportunities in municipal facilities, take actions that support the California Long-Term EE Strategic Plan (CLTEESP or "Strategic Plan") and increase community awareness of, and participation in, demand-side management opportunities. A key goal of SCE's Local Government Partnerships is to help cities and counties lead by example by addressing EE first in their own municipal facilities. Funding for the following programs has been increased

by greater than 40% to allow for increased activities and participation in these programs:

- Gateway Cities (SCE-13-L-002F)
- Orange County Cities (SCE-13-L-002L)
- Ventura County (SCE-13-L-002Q)
- Western Riverside (SCE-13-L-002R)
- West Side (SCE-13-L-002T)

#### **4. Statewide Codes and Standards**

The Statewide Codes and Standards (C&S) Program saves energy on behalf of ratepayers by influencing appliance and building standards and code-setting bodies, such as the CEC and the U.S. Department of Energy (DOE), to strengthen and advance energy efficiency regulations by continuous improvements in and advancement of energy regulations, improving compliance with existing codes and standards, assisting local governments in developing ordinances that exceed statewide minimum requirements, and coordinating with other programs and entities to support the State's ambitious policy goals. The California Energy Commission recently underscored that they will place added focus on the Title 24 Building Efficiency Standards activities that continue to work towards the State's GHG reduction goals and move to a more GHG-based metric that promotes electrification. The Planning and Coordination subprogram will need to plan for additional energy efficiency activities that can support the CEC accordingly. The CEC has indicated a priority for the Title 24 Standards to be better harmonized with the electric grid which will require greater efforts to coordinate with the SCE transmission and distribution organization. In addition, increasing SCE's C&S budget will better align with the overall statewide Advocacy budget in preparation for the transition to the new statewide program model where funding will be based on load and saving allocation will be based on the funding provided by each statewide program administrator.

#### **5. WE&T Connections (SW-13-SW-010B)**

The WE&T Connections subprogram promotes energy efficiency and other DSM concepts, as well as energy awareness and green career pathways, through age appropriate education and teacher training at all grade levels from K-12 to postsecondary, as well as through community outreach. While the proposed program budget in this 2019 Advice Letter reflects an increase of greater than 40% from the current 2018 budget, SCE will be shifting funds to increase its 2018 budget as well. Once the fund shift occurs, the resulting budget difference between 2018 and 2019 will likely be less than 40%. Additional budget will be used to incorporate support for workforce standards into training curriculum offered through this program. SCE will continue to look for opportunities to increase the value of this and other non-resource programs.

## **6. Statewide Emerging Technologies Program (ETP)**

The statewide Emerging Technologies Program (ETP) helps to bring new technologies and savings opportunities to the California IOUs' EE Portfolios. As the program administrators transition to the new statewide administration and third party model, ETP anticipates that additional funding is needed in several key areas including: developing a new statewide emerging products database and intake process; developing and executing the third party solicitations and associated documentation; developing the required Technology Focused Pilots (TFP); and, establishing a new quality management function associated with the new statewide and third party implemented program model.

In addition, ETP placed a number of projects on hold that were previously slated to be launched and committed under the 2018 budget due to uncertainty earlier in the year regarding the overall 2018 EE budget and other contracting delays. Some of these projects are now scheduled to begin in 2019, for which there are already negotiated scopes of work and in some cases signed letters of commitment. In late 2017 and into 2018, ETP also signed a record number of letters of commitment with partners for proposed projects associated with the California Energy Commission's Electric Program Investment Charge (EPIC) Program solicitations and Department of Energy solicitations. The signed letters of commitment are associated with key focus areas for SCE and the State of California, including ZNE and GHG reduction efforts. ETP would like to ensure that there is enough budget in 2019 to meet our commitments and to help transition to the new statewide and third party model.

## **Reduced Programs (By More Than 40 Percent Change in Funding)**

### **1. Nonresidential HVAC Program (SCE-13-SW-002F)**

The Nonresidential HVAC Program is a statewide program that implements a comprehensive set of strategies to promote high efficiency HVAC equipment and high quality installation and maintenance. Market penetration and associated budget and savings projections are significantly diminished due to impacts from a reduction in cost-effective measures, as well as a scarcity of equipment in the market that meet DEER high efficiency tier eligibility requirements. Due to these impacts, SCE has projected a reduced budget for this non-cost-effective statewide program.

### **2. Industrial Deemed Energy Efficiency Program (SCE-13-SW-003C)**

The Industrial Deemed Energy Efficiency Program offers eligible business customers incentives that encourage common, standardized EE equipment retrofits. Deemed retrofit measures have fixed incentive amounts per measure unit and are intended for projects that have well defined energy and demand savings. SCE has seen reduced activity in this area in recent years. This can be attributed to reduced measure availability and decreased customer interest. The budget reduction reflects the current forecast of project commitments for 2019.

### **3. Agriculture Deemed Energy Efficiency Program (SCE-13-SW-004C)**

The Agriculture Deemed Incentive Program offers eligible agricultural customers incentives that encourage common, standardized EE equipment retrofits. Deemed retrofit measures have fixed incentive amounts per measure unit and are intended for projects that have well defined energy and demand savings. SCE has seen reduced activity in this area in recent years. This can be attributed to reduced measure availability and decreased customer interest. SCE is reducing the 2019 budget given the reduced level of activity.

### **4. Lodging Energy Efficiency Program (SCE-13-TP-005)**

The Lodging Energy Efficiency Program (LEEP) is a comprehensive EE retrofit program that delivers multi-measure retrofits and retro-commissioning to small, medium, and large lodging facilities. The Program provides an integrated approach to EE that is specifically tailored to the hotel and motel market segment, including spas and resorts, within SCE's service territory. The program also seeks out DR opportunities in this market segment. In 2019, SCE will begin to ramp down existing third-party programs and transition to new third-party program designs as part of SCE's third-party solicitation effort. The program will continue to be funded to complete committed projects in the pipeline as of the end of 2018.



## **5. Comprehensive Chemical Products (SCE-13-TP-009)**

The Comprehensive Chemical Products Program delivers electric energy savings and demand reduction for the chemical and allied products, transportation equipment manufacturing, and beverage industries throughout SCE's service territory. In 2019, SCE will begin to ramp down existing third-party programs and transition to new third-party program designs as part of SCE's third-party solicitation effort. The program will continue to be funded to complete committed projects in the pipeline as of the end of 2018.

## **6. Comprehensive Petroleum Refining (SCE-13-TP-010)**

The Comprehensive Petroleum Refining program targets all the major petroleum refineries and petroleum product manufacturers in SCE's service territory to produce long-term, cost-effective electrical energy savings. The program achieves this goal by implementing a comprehensive set of calculated and deemed approaches to address every major electrical operation within the oil refining and petroleum manufacturing industry. In 2019, SCE will begin to ramp down existing third-party programs and transition to new third-party program designs as part of SCE's third-party solicitation effort. The program will continue to be funded to complete committed projects in the pipeline as of the end of 2018.

## **7. Oil Production (SCE-13-TP-011)**

The Oil Production program targets oil production facilities in SCE's service territory with the goal of producing long-term, cost-effective electrical energy savings by replacing or retrofitting existing motor and pumping systems with more efficient systems. In 2019, SCE will begin to ramp down existing third-party programs and transition to new third-party program designs as part of SCE's third-party solicitation effort. The program will continue to be funded to complete committed projects in the pipeline as of the end of 2018.

## **8. Local Government Programs**

Local Government Programs provide support to local governments in SCE's service territory in order to identify and address EE opportunities in municipal facilities, take actions that support the California Long-Term EE Strategic Plan (CLTEESP or "Strategic Plan") and increase community awareness of, and participation in, demand-side management opportunities. A key goal of SCE's Local Government Partnerships is to help cities and counties lead by example by addressing EE first in their own municipal facilities. However, funding for the following programs has been reduced to align with a decrease in opportunities projected for 2019.

- Kern County (SCE-13-L-002K)
- San Joaquin Valley (SCE-13-L-002N)
- South Bay (SCE-13-L-002O)

- South Santa Barbara (SCE-13-L-002P)
- High Desert Regional (SCE-13-L-002S)
- North Orange County (SCE-13-L-002V)
- County of Riverside (SCE-13-L-003D)
- County of San Bernardino (SCE-13-L-003E)
- State of California (SCE-13-L-003F)
- UC/CSU Energy Efficiency (SCE-13-L-003G)

**Attachment F**  
**Near Term EM&V Activities Identified**

## **Near Term EM&V Activities Identified for the Additional Budget Request**

### **1. Market Assessments for Baseline and Industry Standard Practice**

SCE agrees with the Commission's perspective as laid out in this section of D.16-08-119:

*We also agree with the CEEIC's contention in its EM&V comments that broader ISP studies should be used as an approach to market assessment. How these studies should be designed and carried out should be clarified in the revision to the existing ISP Guidance Document and any associated EM&V plans. (p.41)*

A key outcome of such studies is the overall determination of the appropriate baseline for Accelerated Replacement/Early Replacement deemed measures, which appears to be a new requirement. Determining customer and project characteristics for upstream or midstream deemed programs is by necessity data intensive. Whereas a direct install program delivery model allows for these characteristics to be identified at installation, upstream or midstream programs will require market studies. SCE views this deemed measure research program as the analog of the custom industry standard practice research. Such research is better suited for a formal market study research program, guided by a market study PCG group.

### **2. Market and Customer Studies to Support Metrics Reporting and Market Transformation**

Studies will also be needed to support portfolio metrics reporting where gathering data through program implementation is not feasible or readily available (e.g. square footage, customer satisfaction, or other data that are not captured by PAs or implementers). Appropriate data on market indicators can be gathered in these studies to also support strategic market transformation programs to track and monitor achievement of desired market responses to inform entry and exit strategy for such programs.

### **3. Customer Segmentation Research**

Improving the performance of EE programs is a major priority for SCE. In order to do so, it is essential to have a strong understanding of whom to target and how to target (e.g. channels, messaging, incentives, etc.). An in-depth psychographic and behavioral segmentation of SCE's customer bases will allow SCE to uncover the attitudinal and behavior drivers that impact the customer decision making process and inform SCE and its third party implementers to design best-in-class EE programs tailored to customer needs and communicated through the most impactful channels with the most impactful messages.

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#### **4. Normalized Meter-Based Consumption (NMEC) Analysis**

Meter-based programs, such as NMEC, will provide additional avenues to attain capacity, energy savings, and GHG goals of California. However, support for this effort will require increased EM&V resources to realize the potential. NMEC projects and programs will require substantial modeling and analytic efforts to ensure that grid savings and emission reductions are well supported.

In summary, SCE requests incremental funding to enhance the value proposition of energy efficiency for SCE and other statewide policymakers and stakeholders. SCE looks forward to coordinating with Energy Division Staff, the other PAs, and stakeholders as we update the EM&V Research Roadmaps to incorporate the aforementioned research activities that are anticipated to bring forth the benefits that good research produces.