## BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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

Rulemaking 13-11-005

# SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) AMENDMENTS TO ITS 2023 ANNUAL REPORT FOR ENERGY EFFICIENCY PROGRAMS

ELLEN A. BERMAN

EB Energy Law, Inc. 50 W. Hillcrest Drive Suite 218 Thousand Oaks, CA 91360 Telephone: (310) 663-7478 Email: ellen@ebenergylaw.com

Attorney for SOUTHERN CALIFORNIA EDISON COMPANY

ANNA VALDBERG

Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, CA 91770 Telephone: (626) 302-1058 Email: Anna.Valdberg@sce.com

Attorney for SOUTHERN CALIFORNIA EDISON COMPANY

Dated: May 30, 2024

## BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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

Rulemaking 13-11-005

## SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) AMENDMENTS TO ITS 2023 ANNUAL REPORT FOR ENERGY EFFICIENCY PROGRAMS

Southern California Edison Company (SCE) hereby submits the following amendments to its Energy Efficiency Annual Report (Annual Report) for its Energy Efficiency (EE) programs and results for Program Year (PY) 2023. As the amendments do not affect confidential information, SCE is submitting, as Attachment A hereto, redlined and clean pages of the public report filed on May 1, 2024 that have been amended.

SCE is amending its PY 2023 Annual Report to correct minor reporting errors for three Net Metered Energy Consumption (NMEC) multi-payment incentive projects in the Public Sector Performance-Based Retrofit High Opportunity Program (HOPPs). Customers participating in the HOPPs program receive multiple incentive payments, some of which are based on initial baseline savings estimates and are later trued up based on actual energy savings. When SCE trued up the first payment for three HOPPs NMEC projects, the second incentive payment amount was negative. This means that the first incentive payment over-estimated the actual savings, and thus the second payment needed to take into account the negative savings value. Collectively, the difference between the first and second payments across the three projects decreased the total annualized portfolio energy savings by 0.043 gigawatt hours (GWh), and the incentives were approximately negative \$1,500. However, because the amounts due to the customers were negative, SCE's iEnergy system logic did not include the projects for 2023 savings claims, when they should have been included. SCE discovered this error, fixed the

system logic in iEnergy, and has made energy savings adjustments for the committed PY 2023 project claims.

As a result of the error described above, the impacts to SCE's total portfolio (including Codes and Standards) are minimal. The portfolio's annualized energy savings decreased from 1,439.967 gigawatt hours (GWh) to 1,439.924 GWh,<sup>1</sup> avoided-tons of carbon dioxide (CO<sub>2</sub>) decreased from 378,140 to 378,129, and Total System Benefits decreased from \$1,512,003,414 to \$1,511,956,410. SCE is making the following updates to its narratives in the Annual Report:

- Table of Contents,<sup>2</sup> Page 3
- Executive Summary, Page 4 (insert)

SCE is also making corrections to the Annual Report Appendix A, Annual Report Tables, as follows:

- Section 3: Emission Reductions, Table 3, Page 99
- Section 4: Expenditures, Table 4, Attachment B hereto
- Section 5: Segment Summary, Table 5, Page 102
- Section 6: Bill Payer Impacts, Table 6, Page 103
- Section 7: Savings by End-Use, Table 7, Page 105
- Section 10: Metrics, Table 10, Attachment C hereto

The changes to Table 4 and Table 10 are provided in Attachments B and C hereto. In the Annual Report, SCE provided a link to Table 4 and Table 10 on California Energy Data and Reporting System (CEDARS) for review, so those tables are not in the Annual Report itself. SCE has uploaded all corrected tables, including Table 4 and Table 10, to CEDARS.<sup>3</sup> For transparency, SCE is including, as

SCE calculated the savings adjustments described herein to the kilowatt hour (kWh), but since savings in the Annual Report are reported at the GWh level, some amended tables did not change due to rounding rules. However, SCE has made those adjustments.

<sup>&</sup>lt;sup>2</sup> In the Table of Contents, the listing of Section 2, Fuel Substitution, Page 98 was inadvertently omitted.

California Energy Data and Reporting System (CEDARS) home page at https://cedars.sound-data.com/documents/standalone/list/

Attachments B and C hereto, the redline changes to Table 4 and Table 10. Therefore, the attached tables show the redlined changes that have been made in the replacement tables uploaded to CEDARS.

Respectfully submitted,

ANNA VALDBERG ELLEN BERMAN

/s/ Anna Valdberg

By: Anna Valdberg

Attorneys for SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue Post Office Box 800 Rosemead, California 91770 Telephone: (626) 302-1058

E-mail: Anna.Valdberg@sce.com

May 30, 2024

### Attachment A-1 (Clean)

SCE's Amendments to 2023 Energy Efficiency Annual Report, including Tables 3, 5, 6 and 7



Energy for What's Ahead	Energy	for	What's	Ahead*
-------------------------	--------	-----	--------	--------

<b>6.</b>	Finance Programs	43
	On-Bill Financing (OBF) Program	
	New Finance Offerings	44
7.	Codes and Standards Program	47
	Compliance Improvement Subprogram	
	Reach Codes Subprogram	
	Planning and Coordination Subprogram	
8.	Emerging Technologies Programs	
	Technology Assessment Subprogram	
	Technology Development Support (TDS)	
	Technology Introduction Support Subprogram	
	Statewide Electric Emerging Technologies Program	80
9.	Workforce Education & Training (WE&T) Program	88
	Integrated Energy Education and Training (IEET) Subprogram	
Ap	pendix A. Annual Report Tables	
	Section 1: Energy Savings	
	Section 2: Fuel Substitution	
	Section 3: Emission Reductions (Environmental Impacts)	100
	Section 4: Expenditures and Cost Effectiveness	102
	Section 5: Segment Summary	103
	Section 6: Bill Payer Impacts	104
	Section 7: Savings by End-Use	106
	Section 8: Commitments	107
	Section 9: Cap and Target Expenditures	109
	Section 10: Metrics	110
	Section 11: Local Program & Statewide Program Third-Party Budgets	111
	Section 12: Third-Party Contracts	112
	Section 13: Final EE Monthly Report	113
Ap	pendix B. Southern California Edison Programs	114
Ap	pendix C. Statewide and Third Party-Implemented Programs	118
Ap	pendix D. Regional Energy Networks Joint Cooperation Memoranda	122
Ap	pendix E. List of Acronyms and Abbreviations	123



#### **Executive Summary**

Southern California Edison Company (SCE), one of the nation's largest Investor-Owned Utilities (IOUs), prides itself on successfully delivering safe, reliable, clean, and affordable energy throughout Southern California. Offering customers long-term, sustainable energy-efficient choices is essential to our continued success.

SCE's 2023 Energy Efficiency (EE) Annual Report covers the year's results and outlines future EE priorities. SCE is committed to achieving a cost-effective portfolio while providing clean, reliable EE solutions to our customers as we move forward in our decarbonization journey. In 2023, SCE examined its portfolio and began to restructure under-performing third-party contracts. Reassessing the portfolio to address challenging market conditions, along with longer-than-anticipated lead times to onboard new programs, resulted in spending 60% less than the 2023 authorized budget <sup>1</sup> of \$369 million.

SCE's Energy Efficiency portfolio did not meet its California Public Utilities Commission (CPUC or Commission)-approved energy savings goals<sup>2</sup> (see inset) for net Demand Reduction (kW) or Total Resource Cost (TRC) ratio. In 2023, Energy Efficiency kW and kWh metrics reported 47% and 28%, respectively, excluding Codes and Standards.<sup>3</sup> Compared to 2022, SCE's net electric energy savings in 2023 increased from 42% (178

SCE Reports its 2023 CPUC Adopted Savings Results and Cost-Effective EE Portfolio (Excluding Codes and Standards)

#### In 2023, SCE achieved:

- 47% of its net electric energy savings goal (217 net annual GWh)
- 28% of its net electric demand reduction goal (19 net demand reduction MW)
- Cost-effectiveness of **0.52** TRC ratio, **0.627** RIM and **0.629** PAC (see Appendix A, Section 4, Expenditures and Cost Effectiveness)
- Average electric rate of \$0.22/kWh and first year ratepayer bill savings of \$47.6 million
- Avoidance of 378,129 net tons of carbon dioxide (CO<sub>2</sub>) emissions annually
- Hard to Reach (HTR) and Disadvantaged Communities (DACs) net annual electric energy savings of 4.1 GWh

GWh) to 47% (217 GWh), and the TRC ratio of 0.52 in 2023, without Codes and Standards, decreased from 0.64 in 2022. SCE's residential Home Energy Advisor (HEA), Comprehensive Commercial Program, and Industrial Strategic Energy Management (SEM) Program represent 88% of the portfolio kWh energy savings.

The benefits of reaching new codes and standards will have significant impacts for both residential and commercial energy efficiency markets statewide. SCE continues to meet its Codes and Standards goals year after year, which demonstrates SCE's focus, commitment, and

Energy Efficiency portfolio budgets do not include EM&V budgets for REN programs, the \$14M Finance Revolving Loan Program, and the \$74.7M AB841 budget.

D.21-05-031, Assessment of Energy Efficiency Potential and Goals and Modification of Portfolio Approval and Oversight Process.

The Codes and Standards Program is not included when referencing energy savings results compared to goals for TRC, kW, and kWh. For energy savings results compared to goals that will include Codes and Standards, see *Appendix A*, below.



## **Section 3: Emission Reductions (Environmental Impacts)**

Table 3. Environmental Impacts (Net) 88

#### T-3 Environmental Impacts of EE Portfolio by Measure Use Category

	Gross annual tonnes	Net annual tonnes of	Gross lifecycle tonnes	Net lifecycle tonnes of	Gross annual tonnes	Net annual tonnes of	Gross lifecycle tonnes	Net lifecycle tonnes	Gross annual tonnes	Net annual tonnes	Gross lifecycle tonnes	Net lifecycle tonnes
Measure Use Category	of CO <sub>2</sub> avoided <sup>1</sup>	CO <sub>2</sub> avoided <sup>1</sup>	of CO <sub>2</sub> avoided <sup>1</sup>	CO <sub>2</sub> avoided <sup>1</sup>	of NOx avoided <sup>2</sup>	NOx avoided <sup>2</sup>	NOx avoided <sup>2</sup>	NOx avoided <sup>2</sup>	PM10 avoided <sup>2</sup>	PM10 avoided <sup>2</sup>	PM10 avoided <sup>2</sup>	PM10 avoided <sup>2</sup>
Appliance or Plug Load	65,695	24,702	601,596	198,896	17	6	139	46	6	2	46	15
Building Envelope	27,058	16,388	576,417	344,599	7	4	122	73	2	1	40	24
Compressed Air	1,636	551	29,827	10,037	0	0	6	2	0	0	2	1
Commercial Refrigeration	74,586	25,984	638,719	236,663	20	7	152	57	6	2	49	18
Codes & Standards	156,888	26,994	3,268,527	520,567	41	7	691	111	14	2	229	37
Food Service	8,815	2,613	218,958	61,092	2	1	45	13	1	0	15	4
HVAC	100,276	37,285	1,862,796	638,818	26	10	401	140	8	3	131	45
Irrigation	259	91	1,446	508	0	0	0	0	0	0	0	0
Lighting	655,417	173,469	8,580,341	2,577,730	172	45	1,918	567	57	15	635	188
Non-Savings Measure	-	-	-	-	-	-	-	-	-	-	-	-
Process Distribution	692	452	6,148	3,945	0	0	1	1	0	0	1	0
Process Drying	-	-	-	-	-	-	-	-	-	-	-	-
Process Heat	52	37	898	645	0	0	0	0	0	0	0	0
Process Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-
Recreation	6,895	3,387	86,127	43,009	2	1	19	10	1	0	6	3
Service	25,837	27,129	25,837	27,129	7	7	7	7	3	3	3	3
Service and Domestic Hot Water	13,782	11,218	140,190	108,932	10	10	101	97	0	- 0	0	- 3
Whole Building	44,738	27,828	926,816	518,013	12	8	195	110	4	3	65	37
TOTAL	1,182,625	378,129	16,964,642	5,290,584	317	106	3,799	1,235	102	32	1,221	372

#### SOURCE: CET Outputs

[1] For 2023 PY, CO<sub>2</sub> emissions in CEDARS are expressed in metric tons for electric and short tons for gas. Conversions are done in this table to represent metric tons (denoted as Tonnes) for the total.

[2] For 2023 PY, NOx and PM10 emissions in CEDARS are represented as pounds; Conversions are done in this table to represent in metric tons (denoted as Tonnes) for the totals.

2023 SCE Energy Efficiency Programs Annual Report – May 30, 2024

The data shown in this Annual Report is based on SCE's ex ante savings, adjusted for actual installations, consistent with the ex ante values and processes adopted by the CPUC in D.11-07-030.



## **Section 5: Segment Summary**

Table 5. Program Administrator (PA) Savings by Sector and Segment

T-5 PA Savings By Sector and Segment <sup>1</sup>																
1-0 FA Savings by Sector and Segment									-				DV202	3 ENERGY SAVINGS	(Net)	
				Expenditure %								First Year Net	Lifecycle Net	LIVEROT SAVINOS		Lifecycle Net
Sector	2023 Approv	ved Budget	2023 Expenditures	of Budget	TRC Ratio	PAC Ratio	RIM Ratio	Total System Benef	it	TRC Net Benefits	PAC Net Benefits	GWh	GWh	First Year Net MW		MMTherms
Resource Acquisition																
Agricultural	\$	6,754,495	\$ 859,903	13%	0.83	0.99	0.99	\$ 814,3	93 \$	(170,659)	\$ (10,393)	0.81	7.77	0.19	-	_
Commercial	\$	144,619,581	\$ 64,349,631	44%	0.57	0.69	0.69			(45,932,958)		82.31	798,99	2.20	0.16	0.83
Industrial	\$	53,006,397	\$ 5,715,361	11%	1.50	1.97	1.97			3,754,657		24.80	125.31	2.93	- 0.00	- 0.02
Public	\$	12,306,645	\$ 2,311,134	19%	0.07	0.38	0.38	\$ 742,9	71 5	\$ (10,276,190)	\$ (1,212,103)	1.19	8.15	0.56	0.00	0.01
Residential	\$	74,587,725	\$ 20,565,794	28%	0.83	0.86	0.87	\$ 17,238,2	29 \$	(3,631,806)	\$ (3,018,983)	99.33	148.51	13.29	0.06	0.89
Cross-Cutting	\$	535,091	\$ 1,169,327	219%	0.16	0.28	0.28	\$ 310,9	95 \$	(1,592,695)	\$ (801,978)	0.43	3.21	0.05	-	-
Resource Acquisition Subtotal	\$	291,809,933	\$ 94,971,150	33%	0.61	0.78	0.77	\$ 67,712,	120 \$	(57,849,651)	\$ (26,133,842)	208.87	1,091.95	19.22	0.22	1.72
Market Support																
Agricultural	\$	336,802	\$ 309,030	92%	-	-	-	\$ -	\$	(309,030)	\$ (309,030)	-	-	-	-	-
Commercial	\$	1,985,976	\$ 959,869	48%	-	-	-	\$ -	\$	(959,869)	\$ (959,869)	-	-	-	-	-
Industrial	\$	1,168,033	\$ 104,522	9%	-	-	-	\$ -	\$	(104,522)	\$ (104,522)	-	-	-	-	-
Public	\$	435,334	\$ 612,802	141%	-	-	-	\$ -	\$	(612,802)	\$ (612,802)	-	-	-	-	-
Residential	\$	7,004,790	\$ 4,516,414	64%	0.01	0.01	0.01	\$ 10,8	30 \$	(4,379,447)	\$ (4,496,492)	0.12	1.58	-		-
Cross-Cutting	\$	19,428,935	\$ 17,960,354	92%	-	-	-	\$ -	\$	(8,435,316)	\$ (8,435,316)	-	-	-	-	-
Market Support Subtotal	\$	30,359,871	\$ 24,462,992	81%	0.00	0.00	0.00	\$ 10,8	30 \$	(14,800,986)	\$ (14,918,032)	0.12	1.58	-		-
Equity																
Agricultural	\$	-	\$ -	0%	-	-	-	\$ -	\$	-	\$ -	-	-	-	-	-
Commercial	\$	5,297,422	\$ 13,470	0%	-	-	-	\$ -	\$	(13,470)	\$ (13,470)	-	-	-	-	-
Industrial	\$	-	\$ -	0%	-	-	-	\$ -	\$	-	\$ -	-	-	-	-	-
Public	\$	-	\$ -	0%	-	-	-	\$ -	\$	-	\$ -	-	-	-		-
Residential	\$	7,393,500	\$ 584,586	8%	-	-	-	\$	\$	(584,586)	\$ (584,586)	٠		-	-	-
Cross-Cutting	\$	614,655	\$ 634,713	103%	-	-	-	\$ -	\$	(634,713)	\$ (634,713)	-	-	-	-	-
Equity Subtotal	\$	13,305,577	\$ 1,232,769	9%	-	-	-	\$ -	\$	(1,232,769)	\$ (1,232,769)	-	-	-	-	-
Portfolio																
Agricultural	\$	7,091,297	\$ 1,168,933	16%	0.63	0.72	0.72			(479,689)		0.81	7.77	0.19	-	-
Commercial	\$	151,902,979	\$ 65,322,970	43%	0.56	0.68	0.68			(10,000,000)	\$ (27,627,275)	82.31	798.99	2.20	0.16	0.83
Industrial	\$	54,174,430	\$ 5,819,884	11%	1.48	1.94	1.94			-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$ 5,459,027	24.80	125.31	2.93	- 0.00	- 0.02
Public	\$	12,741,980	\$ 2,923,936	23%	0.06	0.29	0.29			\$ (10,888,992)	, ,,,,,,,,	1.19	8.15	0.56	0.00	0.01
Residential	\$	88,986,015	\$ 25,666,795	29%	0.68	0.69	0.70			(8,595,839)		99.46	150.09	13.29	0.06	0.89
Cross-Cutting	\$	20,578,681	\$ 19,764,394	96%	0.02	0.02	0.02	\$ 310,9	95 \$	(14,941,982)	\$ (14,151,264)	0.43	3.21	0.05	-	-
Resource Acquisition % of Portfolio Budget			\$ 94,971,150	26%												
Market Support % of Portfolio Budget			\$ 24,462,992	7%												
Equity % of Portfolio Budget			\$ 1,232,769	0%												
PA Subtotal (excl. EM&V and C&S)	\$	335,475,381	\$ 120,666,911	36%	0.54	0.66	0.66	\$ 67,723,2	49 \$	\$ (78,162,664)	\$ (46,563,901)	209.00	1,093.53	19.22	0.22	1.72
CPUC Savings Goal ( excl. C&S)									4			461.00		69.00	-	
savings as % of CPUC Savings Goal (w/o C&S)												0.45		0.28		
Total EM&V	\$	16,221,354	\$ 7,216,961	44%					\$	(/,210,001)	\$ (7,216,961)					
Codes and Standards	\$	17,078,491	\$ 20,331,710	119%	3.50		49.95	\$ 1,444,233,1		1,031,505,210	\$ 1,423,901,450	1,222.75	15,934.68	234.63	-	-
PA Portfolio Total (excl. C&S)	\$	351,696,735	\$ 127,883,873	36%	0.52	0.63	0.63	\$ 67,723,2		(85,379,626)		209.00	1,093.53	19.22	0.22	1.72
PA Portfolio Total (incl. C&S)	\$	368,775,226	\$ 148,215,583	40%	2.61	9.29	8.80	\$ 1,511,956,4	10 \$	\$ 946,125,585	\$ 1,370,120,588	1,431.75	17,028.21	253.85	0.22	1.72
CPUC Savings Goal (incl. C&S)									_			1,477.00		269.00	-	
savings as % of CPUC Savings Goal (w/ C&S)	ļ								_			0.97		0.94		
Footnotes:									_							
(1) This table does not include ESA, ME&O, or for IC	OUS REN/CCA ach	nievements.														



T-6 Estimated Billpayer Impacts from Net Savings

#### **Section 6: Bill Payer Impacts**

Table 6. Average Bill Payer Impacts from Net Savings 91

6-1: Energy Savings Used for Bi	ill Savings Calculation											
., .	,	P	A			Additional Savings from	m REN/CCAs (for IOUs)			Total Ener	gy Savings	
2023	First Year Net kWh	Lifecycle Net kWh	First Year Net Therm	Lifecycle Net Therm	First Year Net kWh	Lifecycle Net kWh	First Year Net Therm	Lifecycle Net Therm	First Year Net kWh	Lifecycle Net kWh	First Year Net Therm	Lifecycle Net Therm
Estimated Rate Agriculture	807,236	7,773,918	0	0	0	0	0	0	807,236	7,773,918	0	0
Estimated Rate Commercial	82,306,848	798,990,486	160,629	833,995	0	0	0	0	82,306,848	798,990,486	160,629	833,995
Estimated Rate Industrial	24,801,428	125,312,482	-2,960	-18,931	0	0	0	0	24,801,428	125,312,482	-2,960	-18,931
Estimated Rate Public	1,191,267	8,152,816	3,603	11,664	3,353,770	27,065,818	0	0	4,545,037	35,218,634	3,603	11,664
Estimated Rate Residential	99,458,514	150,087,878	62,664	894,161	4,822,640	53,715,054	0	0	104,281,153	203,802,932	62,664	894,161
Estimated Cross-Cutting	1,223,182,415	15,937,893,231	0	0	0	0	0	0	1,223,182,415	15,937,893,231	0	0
Total	1,431,747,708	17,028,210,810	223,937	1,720,890	8,176,410	80,780,872	0	0	1,439,924,118	17,108,991,682	223,937	1,720,890

6-2:	Estimated	Bill	Savings

2023	Electric Average Rate	Gas Average Rate	Estimated First Year	Estimated Lifecycle	Estimated First Year	Estimated Lifecycle	Estimated First Year	Estimated Lifecycle
	\$/kWh	\$/therm	Bill Savings Electric (\$)	Bill Savings Electric (\$)	Bill Savings Gas (\$)	Bill Savings Gas (\$)	Bill Savings (\$)	Bill Savings (\$)
Estimated Rate Agriculture	\$0.2035	\$0.0000	\$164,299	\$1,582,253	\$0	\$0	\$164,299	\$1,582,253
Estimated Rate Commercial	\$0.2105	\$0.0000	\$17,328,676	\$168,217,441	\$0	\$0	\$17,328,676	\$168,217,441
Estimated Rate Industrial	\$0.1345	\$0.0000	\$3,335,685	\$16,853,986	\$0	\$0	\$3,335,685	\$16,853,986
Estimated Rate Public	\$0.2017	\$0.0000	\$916,947	\$7,105,250	\$0	\$0	\$916,947	\$7,105,250
Estimated Rate Residential	\$0.2476	\$0.0000	\$25,822,569	\$50,466,600	\$0	\$0	\$25,822,569	\$50,466,600
Estimated Cross-Cutting	\$0.2017	\$0.0000	\$246,773,249	\$3,215,420,405	\$0	\$0	\$246,773,249	\$3,215,420,405
Total			\$294,341,425	\$3,459,645,935	\$0	\$0	\$294,341,425	\$3,459,645,935

Notes: (Consistent with SPM TRC/PAC/RIM tests, all savings used from actuals and forecasts in this table are net not gross)

- (1) Estimated first year electric bill savings is calculated by multiplying an Estimated electric rate (as of 12/1/22) with first year net kWh energy savings.
- (2) Estimated first year gas bill savings is calculated by multiplying an Estimated gas rate (as of 12/31/21) with first year net therm energy savings. Gas rate reflects the annual Estimated residential bundled rate for 2022.
- (3) Total Estimated first year bill savings is the sum of Notes 1 and 2.
- (4) Estimated lifecycle electric bill savings is calculated by multiplying an Estimated electric rate with lifecycle net kWh energy savings.
- (5) Estimated lifecycle gas bill savings is calculated by multiplying an Estimated gas rate with lifecycle net therm energy savings.
- (6) Total Estimated lifecycle bill savings is the sum of Notes 4 and 5.
- (7) Total Estimated Bill Savings by Year and Lifecycle Bill Savings include C&S net savings and net lifecycle savings, respectively, and include BayREN, MCE, 3C-REN, RCEA, SJCE, EBCE, PCE, and SCP savings; excludes ESA Program.

This section provides an explanation of the impact of EE activities on customer bills after they have participated in EE programs, as compared to their bills without EE program participation.

In 2023, SCE was authorized to collect rates to implement approved EE programs. Customer bills included the authorized collection on January 1, 2023, the date the program year began. Therefore, EE programs increase customer bills "up front," as funds are collected to fund the EE programs. However, upon implementation, the programs result in lower customer energy usage due to improvements in EE and subsequent reductions to participants' bills. In the long term, all users will benefit through reductions in the avoided costs of energy. The table provided above shows bill impacts on participating customers in 2023.

<sup>&</sup>lt;sup>91</sup> The data shown in this Annual Report is based on SCE's *ex ante* savings, adjusted for actual installations, consistent with the *ex ante* values and processes adopted by the Commission.



#### **Section 7: Savings by End-Use**

Table 7. Annual Savings By Use Category<sup>92</sup>

T-7 Annual Savings By Use Categor	y 2023													
	•			1				T				1		
							Gross							
					Gros	s GWh	MW	Gross M	MTherms	Net	GWh	Net MW	Net MM	Therms
	TRC	PAC												
Measure End Use Category	Ratio	Ratio		TSB	First Year	Life Cycle	First Year	First Year	Life Cycle	First Year	Life Cycle	First Year	First Year	Life Cycle
Appliance or Plug Load	1.86	109.90	\$	52,204,863.91	249.47	2,004.54	47.14	0.00	0.00	93.54	669.95	17.51	0.00	0.00
Building Envelope	1.95	290.67	\$	138,652,014.63	95.70	1,703.89	33.04	-	-	58.11	1,021.55	21.51	-	-
Compressed Air	2.53	29.73	\$	2,353,879.22	6.16	92.35	-	-	-	2.07	31.08	-	-	-
Commercial Refrigeration	2.99	6.62	\$	60,344,997.28	279.28	2,146.64	41.53	0.27	1.42	96.77	792.77	13.03	0.17	0.92
Codes & Standards	5.13	228.02	\$	122,574,505.41	598.20	9,981.56	98.62	-	-	102.51	1,601.00	13.25	-	-
Food Service	1.33	5.98	\$	15,127,988.36	35.62	672.09	60.82	-	-	10.48	188.40	15.98	-	-
HVAC	2.93	11.27	\$	204,323,357.20	366.26	5,730.27	148.20	0.05	0.73	139.57	2,058.13	51.22	0.05	0.73
Irrigation	0.30	0.35	\$	194,537.86	1.00	5.22	0.57	-	-	0.35	1.83	0.20	-	-
Lighting	5.63	72.24	\$	614,102,681.09	2,479.53	27,612.47	213.46	- 0.02	- 0.14	653.20	8,172.94	68.88	- 0.02	- 0.10
Non-Savings Measure	-	-	\$	-	-	-	-	-	-	-	-	-	-	-
Process Distribution	0.21	0.74	\$	1,374,677.60	2.58	20.49	0.15	-	-	1.69	13.17	0.10	-	-
Process Drying	-	-	\$	-	-	ı	-	-	-	-	-	-	-	-
Process Heat	7.75	293.76	\$	3,076,013.01	0.18	2.70	-	-	-	0.13	1.94	-	-	-
Process Refrigeration	-	-	\$	-	-	-	-	-	-	-	-	-	-	-
Recreation	4.23	495.58	\$	10,328,219.97	27.30	294.42	6.55	-	-	13.59	148.80	2.86	-	-
Service	1.13	1.13	\$	11,563,716.13	88.74	88.74	10.87	-	-	93.17	93.17	11.41	-	-
Service and Domestic Hot Water	1.41	2.10	\$	109,145,915.16	76.93	765.09	3.16	-	-	68.25	676.75	1.75	-	-
Whole Building	1.67	19.94		166,589,043.53	162.89	2,778.13	70.09	0.02	0.24	98.33	1,556.72	36.16	0.01	0.18
TOTAL	2.61	9.29	1	1,511,956,410.36	4,469.83	53,898.61	734.22	0.32	2.25	1,431.75	17,028.21	253.85	0.22	1.72

The Commission's EE reporting requirements mandate that SCE submit regular reports to the Commission quantifying the accomplishments of the portfolio. One such requirement, reporting portfolio performance of energy savings and demand reduction by end use, is reported on a regular basis as part of SCE's monthly report. The table above illustrates the 2023 results, by end use, of SCE's portfolio of EE programs.

The data shown in this Annual Report is based on SCE's *ex ante* savings, adjusted for actual installations, consistent with the *ex ante* values and processes adopted by the CPUC in D.11-07-030 and subsequent decisions and resolutions.

### Attachment A-2 (Redline)

SCE's Amendments to 2023 Energy Efficiency Annual Report, including Tables 3, 5, 6 and 7



	Class A Dublis Caster Description	20
	Closed Public Sector Programs	
6.	Finance Programs	
	On-Bill Financing (OBF) Program	
	New Finance Offerings	43
7.	Codes and Standards Program	46
	Compliance Improvement Subprogram	48
	Reach Codes Subprogram	52
	Planning and Coordination Subprogram	57
8.	Emerging Technologies Programs	75
	Technology Assessment Subprogram	
	Technology Development Support (TDS)	77
	Technology Introduction Support Subprogram	
	Statewide Electric Emerging Technologies Program	
9.	Workforce Education & Training (WE&T) Program	
	Integrated Energy Education and Training (IEET) Subprogram	
An	pendix A. Annual Report Tables	
Р	Section 1: Energy Savings	
	Section 2: Fuel Substitution	
	Section 3: Emission Reductions (Environmental Impacts)	
	Section 4: Expenditures and Cost Effectiveness	
	Section 5: Segment Summary	
	Section 6: Bill Payer Impacts	
	Section 7: Savings by End-Use	
	Section 8: Commitments	
	Section 9: Cap and Target Expenditures	
	Section 10: Metrics	
	Section 11: Local Program & Statewide Program Third-Party Budgets	
	Section 12: Third-Party Contracts	
	Section 13: Final EE Monthly Report	
An	pendix B. Southern California Edison Programs	
_	pendix C. Statewide and Third Party-Implemented Programs	
-	pendix D. Regional Energy Networks Joint Cooperation Memoranda	
_		
Аp	pendix E. List of Acronyms and Abbreviations	122



### **Executive Summary**

Southern California Edison Company (SCE), one of the nation's largest Investor-Owned Utilities (IOUs), prides itself on successfully delivering safe, reliable, clean, and affordable energy throughout Southern California. Offering customers long-term, sustainable energy-efficient choices is essential to our continued success.

SCE's 2023 Energy Efficiency (EE) Annual Report covers the year's results and outlines future EE priorities. SCE is committed to achieving a cost-effective portfolio while providing clean, reliable EE solutions to our customers as we move forward in our decarbonization journey. In 2023, SCE examined its portfolio and began to restructure under-performing third-party contracts. Reassessing the portfolio to address challenging market conditions, along with longer-than-anticipated lead times to onboard new programs, resulted in spending 60% less than the 2023 authorized budget <sup>1</sup> of \$369 million.

SCE's Energy Efficiency portfolio did not meet its California Public Utilities Commission (CPUC or Commission)-approved energy savings goals <sup>2</sup> (see inset) for net Demand Reduction (kW) or Total Resource Cost (TRC) ratio. In 2023, Energy Efficiency kW and kWh metrics reported 47% and 28%, respectively, excluding Codes and Standards.<sup>3</sup> Compared to 2022, SCE's net electric energy savings in 2023 increased from 42% (178

SCE Reports its 2023 CPUC Adopted Savings Results and Cost-Effective EE Portfolio (Excluding Codes and Standards)

#### In 2023, SCE achieved:

- 47% of its net electric energy savings goal (217 net annual GWh)
- 28% of its net electric demand reduction goal (19 net demand reduction MW)
- Cost-effectiveness of **0.52** TRC ratio, **0.627** RIM and **0.629** PAC (see Appendix A, Section 4, Expenditures and Cost Effectiveness)
- Average electric rate of \$0.22/kWh and first year ratepayer bill savings of \$47.6 million
- Avoidance of 378,140 378,129 net tons of carbon dioxide (CO<sub>2</sub>) emissions annually
- Hard to Reach (HTR) and Disadvantaged Communities (DACs) net annual electric energy savings of 4.1 GWh

GWh) to 47% (217 GWh), and the TRC ratio of 0.52 in 2023, without Codes and Standards, decreased from 0.64 in 2022. SCE's residential Home Energy Advisor (HEA), Comprehensive Commercial Program, and Industrial Strategic Energy Management (SEM) Program represent 88% of the portfolio kWh energy savings.

The benefits of reaching new codes and standards will have significant impacts for both residential and commercial energy efficiency markets statewide. SCE continues to meet its Codes and Standards goals year after year, which demonstrates SCE's focus, commitment, and

Energy Efficiency portfolio budgets do not include EM&V budgets for REN programs, the \$14M Finance Revolving Loan Program, and the \$74.7M AB841 budget.

D.21-05-031, Assessment of Energy Efficiency Potential and Goals and Modification of Portfolio Approval and Oversight Process.

The Codes and Standards Program is not included when referencing energy savings results compared to goals for TRC, kW, and kWh. For energy savings results compared to goals that will include Codes and Standards, see *Appendix A*, below.



## **Section 3: Emission Reductions (Environmental Impacts)**

Table 3. Environmental Impacts (Net) 88

#### T-3 Environmental Impacts of EE Portfolio by Measure Use Category

	0	Not consultance of	0	N-41:6	Cross annual tannas	Not annual tennes of	Cross lifesyals tennes	Not life avale tennes	Cross annual tannas	Not annual tannas	Cross life avale tennes	Not life avale tennes
	Gross annual tonnes		Gross lifecycle tonnes		Gross annual tonnes	_	Gross lifecycle tonnes		Gross annual tonnes	Net annual tonnes	Gross lifecycle tonnes	Net lifecycle tonnes
Measure Use Category	of CO <sub>2</sub> avoided <sup>1</sup>	CO <sub>2</sub> avoided <sup>1</sup>	of CO <sub>2</sub> avoided <sup>1</sup>	CO <sub>2</sub> avoided <sup>1</sup>	of NOx avoided <sup>2</sup>	NOx avoided <sup>2</sup>	NOx avoided <sup>2</sup>	NOx avoided <sup>2</sup>	PM10 avoided <sup>2</sup>	PM10 avoided <sup>2</sup>	PM10 avoided <sup>2</sup>	PM10 avoided <sup>2</sup>
Appliance or Plug Load	65,695	24,702	601,596	198,896	17	6	139	46	6	2	46	15
Building Envelope	27,058	16,388	576,417	344,599	7	4	122	73	2	1	40	24
Compressed Air	1,636	551	29,827	10,037	0	0	6	2	0	0	2	1
Commercial Refrigeration	74,586	25,984	638,719	236,663	20	7	152	57	6	2	49	18
Codes & Standards	156,888	26,994	3,268,527	520,567	41	7	691	111	14	2	229	37
Food Service	8,815	2,613	218,958	61,092	2	1	45	13	1	0	15	4
HVAC	100,276	37,285	1,862,796	638,818	26	10	401	140	8	3	131	45
Irrigation	259	91	1,446	508	0	0	0	0	0	0	0	0
Lighting	655,417	173,469	8,580,341	2,577,730	172	45	1,918	567	57	15	635	188
Non-Savings Measure	-	-	-	-	-	-	=	-	-	-	-	-
Process Distribution	692	452	6,148	3,945	0	0	1	1	0	0	1	0
Process Drying	-	-	-	-	-	-	=	-	-	-	-	-
Process Heat	52	37	898	645	0	0	0	0	0	0	0	0
Process Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-
Recreation	6,895	3,387	86,127	43,009	2	1	19	10	1	0	6	3
Service	25,837	27,129	25,837	27,129	7	7	7	7	3	3	3	3
Service and Domestic Hot Water	13,782	11,218	140,190	108,932	10	10	101	97	0	- 0	0	- 3
	44,750	<del>27,840</del>	<del>926,966</del>	<del>518,163</del>								
Whole Building	44,738	27,828	926,816	518,013	12	8	195	110	4	3	65	37
	1,182,637	<del>378,140</del>	<del>16,964,793</del>	5,290,735								
TOTAL	1,182,625	378,129	16,964,642	5,290,584	317	106	3,799	1,235	102	32	1,221	372

SOURCE: CET Outputs

2023 SCE Energy Efficiency Programs Annual Report – May 30, 2024

<sup>[1]</sup> For 2023 PY, CO2 emissions in CEDARS are expressed in metric tons for electric and short tons for gas. Conversions are done in this table to represent metric tons (denoted as Tonnes) for the total.

<sup>[2]</sup> For 2023 PY, NOx and PM10 emissions in CEDARS are represented as pounds; Conversions are done in this table to represent in metric tons (denoted as Tonnes) for the totals.

The data shown in this Annual Report is based on SCE's ex ante savings, adjusted for actual installations, consistent with the ex ante values and processes adopted by the CPUC in D.11-07-030.



## **Section 5: Segment Summary**

Table 5. Program Administrator (PA) Savings by Sector and Segment

T-5 PA Savings By Sector and Segment <sup>1</sup>											ļ <u> </u>		ļ <u> </u>	
												3 ENERGY SAVINGS		
			Expenditure %							First Year Net	Lifecycle Net			Lifecycle Net
Sector	2023 Approved Budget	2023 Expenditures	of Budget	TRC Ratio	PAC Ratio	RIM Ratio	Total System Benefit	TRC Net Benefits	PAC Net Benefits	GWh	GWh	First Year Net MW	MMTherms	MMTherms
Resource Acquisition											I		1	1
Agricultural	\$ 6,754,49			0.83	0.99	0.99				0.81	7.77			-
Commercial	\$ 144,619,58		44%	0.57	0.69	0.69		\$ (45,932,958)	\$ (26,653,935)	82.31	798.99	2.20	0.16	0.83
Industrial	\$ 53,006,39	7 \$ 5,715,361	11%	1.50	1.97	1.97		\$ 3,754,657	\$ 5,563,549	24.80	125.31	2.93	- 0.00	- 0.02
Public	\$ 12,306,64	5 \$ 2,311,134	19%	0.07	0.40 0.38	0.40 0.38	<del>\$ 789,975</del> \$ 742,971	\$ (10,229,186) \$ (10,276,190)	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1.23 1.19	8.64 8.15	0.56	0.00	0.01
Residential	\$ 74,587,72	5 \$ 20,565,794	28%	0.83	0.86	0.87	\$ 17,238,229	\$ (3,631,806)	\$ (3,018,983)	99.33	148.51	13.29	0.06	0.89
Cross-Cutting	\$ 535,09	1 \$ 1,169,327	219%	0.16	0.28	0.28	\$ 310,995	\$ (1,592,695)	\$ (801,978)	0.43	3.21	0.05	-	-
Resource Acquisition Subtotal	\$ 291,809,93	3 \$ 94,971,150	33%	0.61	0.78	0.77	\$ <del>67,759,423</del> \$67,712,420	\$ (57,802,647) \$ (57,849,651)	\$ (26,086,838) \$ (26,133,842)	208.91 208.87	1,092.44 1,091.95	19.22	0.22	1.72
Market Support							7 , ,	+ (,,)	+ (==,===,= :=)					
Agricultural	\$ 336.80	2 \$ 309,030	92%	-	-	-	\$ -	\$ (309,030)	\$ (309,030)	-	-	-	-	-
Commercial	\$ 1,985,97			-	-	-	\$ -	\$ (959,869)	\$ (959,869)	-	-	-	-	-
Industrial	\$ 1,168,03		9%	_	_	-	\$ -	\$ (104,522)	\$ (104,522)	-	-	-	-	
Public	\$ 435,33					-	\$ -	\$ (612,802)	\$ (612,802)		_	-	-	
Residential	\$ 7,004,79			0.01	0.01	0.01	\$ 10,830	\$ (4,379,447)	\$ (4,496,492)	0.12	1.58	-	-	
Cross-Cutting	\$ 19,428,93			- 0.01	- 0.01	-	\$ -	\$ (8,435,316)	\$ (8,435,316)		-	-	-	-
Market Support Subtotal	\$ 30,359,87			0.00		0.00	T		\$ (14,918,032)	0.12		-	-	-
	φ 30,339,67	1 φ 24,402,552	0170	0.00	0.00	0.00	φ 10,830	φ (14,600,360)	φ (14,310,032)	0.12	1.38	-	-	
Equity Agricultural	•	\$ -	0%	-	-	-	\$ -	\$ -	6	-	-	-	-	
Agricultural  Commercial	\$ 5,297,42			-	-	-	\$ -	\$ (13,470)	\$ (13,470)	-	-	-	-	-
Industrial	\$ 5,297,42	\$ -	0%	-	-	-	\$ -	\$ (13,470)	\$ (13,470)	-	-	-	-	-
	\$ -	\$ -		-				\$ -	*	-				
Public	Ψ	Ψ	0%		-	-	T	T	\$ -		-	-	-	-
Residential	Ψ 7,000,00		8%	-	-	-	·	\$ (584,586)	\$ (584,586)	-	-	-	-	-
Cross-Cutting	\$ 614,65			-	-	-	\$ -	\$ (634,713)	\$ (634,713)		-	-	-	-
Equity Subtotal	\$ 13,305,57	7 \$ 1,232,769	9%	-	-	-	\$ -	\$ (1,232,769)	\$ (1,232,769)	-	-	-	-	-
Portfolio		Т.							Ι.		1		1	
Agricultural	\$ 7,091,29		16%	0.63	0.72	0.72				0.81	7.77	0.19		-
Commercial	\$ 151,902,97		43%	0.56	0.68	0.68			\$ (27,627,275)	82.31	798.99	2.20	0.16	0.83
Industrial	\$ 54,174,43	0 \$ 5,819,884	11%	1.48	1.94	1.94		\$ 3,650,135	\$ 5,459,027	24.80	125.31	2.93	- 0.00	- 0.02
Public	\$ 12,741,98	0 \$ 2,923,936	23%	<del>0.07</del> 0.06	0.31 0.29	0.31 0.29	<del>789,975</del> 742,971	\$ (10,881,988) \$ (10,888,992)	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	- <del>1.23</del> 1.19	8.64 8.15	0.56	0.00	0.01
Residential	\$ 88,986,01	5 \$ 25,666,795	29%	0.68	0.69	0.70	\$ 17,249,058	\$ (8,595,839)	\$ (8,100,061)	99.46	150.09	13.29	0.06	0.89
Cross-Cutting	\$ 20,578,68	1 \$ 19,764,394	96%	0.02	0.02	0.02	\$ 310,995	\$ (14,941,982)	\$ (14,151,264)	0.43	3.21	0.05	-	-
Resource Acquisition % of Portfolio Budget		\$ 94,971,150	26%											
Market Support % of Portfolio Budget		\$ 24,462,992	7%											
Equity % of Portfolio Budget		\$ 1,232,769	0%											
PA Subtotal (excl. EM&V and C&S)	\$ 335,475,38	1 \$ 120,666,911	36%	0.54	0.66	0.66	\$67,770,253 \$67,723,249	\$ (78,115,661) \$ (78,162,664)	\$ (46,516,897) \$ (46,563,901)	<del>209.04</del> 209.00	1,094.02 1,093.53	19.22	0.22	1.72
CPUC Savings Goal ( excl. C&S)									, , , , , , , ,	461.00		69.00	-	
savings as % of CPUC Savings Goal (w/o C&S)						i				0.45		0.28		
Total EM&V *	\$ 16,221,35	4 \$ 7,216,961	44%					\$ (7,216,961)	\$ (7,216,961)					
Codes and Standards	\$ 17,078,49			3.50	71.03	49.95	\$ 1,444,233,161			1,222.75	15,934.68	234.63	-	-
Codes and Standards	Ψ 17,070,40	Σ0,001,710	11370	0.00	71.00	40.00	\$67,770,253	\$ (85,332,622)	\$ (53,733,859)	209.04	1,094.02	204.00		
PA Portfolio Total (excl. C&S)	\$ 351,696,73	5 \$ 127,883,873	36%	0.52	0.63	0.63	\$67,723,249	\$ (85,379,626)	\$ (53,780,862)	209.00	1,093.53	19.22	0.22	1.72
PA Portfolio Total (incl. C&S)	\$ 368,775,22	6 \$ 148,215,583	40%	2.61	9.29	8.80	\$1,512,003,414 \$1,511,956,410	<del>\$ 946,172,588</del> \$ 946,125,585	\$ 1,370,167,592 \$ 1,370,120,588	<del>1,431.79</del> 1,431.75	17,028.70 17,028.21		0.22	1.72
CPUC Savings Goal (incl. C&S)										1,477.00		269.00	-	
savings as % of CPUC Savings Goal (w/ C&S)									ļ	0.97		0.94		
Footnotes:														
(1) This table does not include ESA, ME&O, or for IC	OUs REN/CCA achievements.													



(6) Total Estimated lifecycle bill savings is the sum of Notes 4 and 5.

#### **Section 6: Bill Payer Impacts**

Table 6. Average Bill Payer Impacts from Net Savings 91

T-6 Estimated Billpayer Impac					,	er rinput	,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	et Savings				
	cts from Net Savings											
6-1: Energy Savings Used for E	Bill Savings Calculation											
,	g	P	'A			Additional Savings from	n REN/CCAs (for IOUs)			Total Energ	gy Savings	
2023	First Year Net kWh	Lifecycle Net kWh	First Year Net Therm	Lifecycle Net Therm	First Year Net kWh	Lifecycle Net kWh	First Year Net Therm	Lifecycle Net Therm	First Year Net kWh	Lifecycle Net kWh	First Year Net Therm	Lifecycle Net Therr
Estimated Rate Agriculture	807,236	7,773,918	0	0	0	0	0	0	807,236	7,773,918	0	
Estimated Rate Commercial	82,306,848	798,990,486	160,629	833,995	0	0	0	0	82,306,848	798,990,486	160,629	833,9
Estimated Rate Industrial	24,801,428	125,312,482	-2,960	-18,931	0	0	0	0	24,801,428	125,312,482	-2,960	-18,9
	<del>1,234,290</del>	8,640,888							<del>4,588,060</del>	<del>35,706,706</del>		
Estimated Rate Public	1,191,267	8,152,816	3,603	11,664	3,353,770	27,065,818	0	0	4,545,037	35,218,634	3,603	11,60
Estimated Rate Residential	99,458,514	150,087,878	62,664	894,161	4,822,640	53,715,054	0	0	104,281,153	203,802,932	62,664	894,1
Estimated Cross-Cutting	1,223,182,415	15,937,893,231	0	0	0	0	0	0	1,223,182,415	15,937,893,231	0	
	<del>1,431,790,730</del>	<del>17,028,698,882</del>							<del>1,439,967,140</del>	<del>17,109,479,754</del>		
Total	1,431,747,708	17,028,210,810	223,937	1,720,890	8,176,410	80,780,872	0	0	'1,439,924,118	17,108,991,682	223,937	1,720,89
5-2: Estimated Bill Savings 2023	Electric Average Rate \$/kWh	Gas Average Rate \$/therm	Estimated First Year Bill Savings Electric (\$)	Estimated Lifecycle	Estimated First Year Bill Savings Gas (\$)	Estimated Lifecycle Bill Savings Gas (\$)	Estimated First Year Bill Savings (\$)	Estimated Lifecycle Bill Savings (\$)				
Estimated Rate Agriculture	\$0.2035			DILL SAVINGS ELECTRIC (\$)	DILL SAVILIES GAS (\$)							
			\$164.200	¢1 E02 2E2	40							
		\$0.0000	\$164,299 \$17,328,676	\$1,582,253 \$168,217,441	\$0 \$0	\$0	\$164,299	\$1,582,253				
Estimated Rate Commercial	\$0.2105	\$0.0000	\$17,328,676	\$168,217,441	\$0	\$0 \$0	\$164,299 \$17,328,676	\$1,582,253 \$168,217,441				
Estimated Rate Commercial			\$17,328,676 \$3,335,685	\$168,217,441 \$16,853,986		\$0 \$0	\$164,299 \$17,328,676 \$3,335,685	\$1,582,253 \$168,217,441 \$16,853,986				
Estimated Rate Commercial Estimated Rate Industrial	\$0.2105 \$0.1345	\$0.0000 \$0.0000	\$17,328,676 \$3,335,685 <del>\$925,627</del>	\$168,217,441 \$16,853,986 <del>\$7,203,717</del>	\$0 \$0	\$0 \$0 \$0	\$164,299 \$17,328,676 \$3,335,685 <del>\$925,627</del>	\$1,582,253 \$168,217,441 \$16,853,986 <del>\$7,203,717</del>				
	\$0.2105	\$0.0000	\$17,328,676 \$3,335,685 <del>\$925,627</del> \$916,947	\$168,217,441 \$16,853,986	\$0	\$0 \$0 \$0	\$164,299 \$17,328,676 \$3,335,685 \$925,627 \$916,947	\$1,582,253 \$168,217,441 \$16,853,986 <del>\$7,203,717</del> \$7,105,250				
Estimated Rate Commercial Estimated Rate Industrial Estimated Rate Public	\$0.2105 \$0.1345 \$0.2017	\$0.0000 \$0.0000 \$0.0000	\$17,328,676 \$3,335,685 <del>\$925,627</del>	\$168,217,441 \$16,853,986 <del>\$7,203,717</del> \$7,105,250	\$0 \$0	\$0 \$0 \$0 \$0	\$164,299 \$17,328,676 \$3,335,685 <del>\$925,627</del> \$916,947 \$25,822,569	\$1,582,253 \$168,217,441 \$16,853,986 \$7,203,717 \$7,105,250 \$50,466,600				
Estimated Rate Commercial Estimated Rate Industrial Estimated Rate Public Estimated Rate Residential	\$0.2105 \$0.1345 \$0.2017 \$0.2476	\$0.0000 \$0.0000 \$0.0000 \$0.0000	\$17,328,676 \$3,335,685 \$925,627 \$916,947 \$25,822,569	\$168,217,441 \$16,853,986 <del>\$7,203,717</del> \$7,105,250 \$50,466,600	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$164,299 \$17,328,676 \$3,335,685 <del>\$925,627</del> \$916,947 \$25,822,569	\$1,582,253 \$168,217,441 \$16,853,986 \$7,203,717 \$7,105,250 \$50,466,600				

This section provides an explanation of the impact of EE activities on customer bills after they have participated in EE programs, as compared to their bills without EE program participation.

In 2023, SCE was authorized to collect rates to implement approved EE programs. Customer bills included the authorized collection on January 1, 2023, the date the program year began. Therefore, EE programs increase customer bills "up front," as funds are collected to fund the EE programs. However, upon implementation, the programs result in lower customer energy usage due to improvements in EE and subsequent reductions to participants' bills. In the long term, all users will benefit through reductions in the avoided costs of energy. The table provided above shows bill impacts on participating customers in 2023.

(7) Total Estimated Bill Savings by Year and Lifecycle Bill Savings include C&S net savings and net lifecycle savings, respectively and include BayREN, MCE, 3C-REN, RCEA, SJCE, EBCE, PCE, and SCP savings; excludes ESA Program.

The data shown in this Annual Report is based on SCE's *ex ante* savings, adjusted for actual installations, consistent with the *ex ante* values and processes adopted by the Commission.



#### **Section 7: Savings by End-Use**

Table 7. Annual Savings By Use Category<sup>92</sup>

T-7 Annual Savings By Use Categor	y 2023												
						Gross							
	TRC	PAC		Gross GWh		MW	Gross MMTherms		Net GWh		Net MW	Net MMTherms	
Measure End Use Category	Ratio	Ratio	TSB	First Year	Life Cycle	First Year	First Year	Life Cycle	First Year	Life Cycle	First Year	First Year	Life Cycle
Appliance or Plug Load	1.86	109.90	\$ 52,204,863.91	249.47	2,004.54	47.14	0.00	0.00	93.54	669.95		0.00	
Building Envelope	1.95	290.67	\$ 138,652,014.63	95.70	1,703.89	33.04	-	-	58.11	1,021.55	21.51	-	-
Compressed Air	2.53	29.73	\$ 2,353,879.22	6.16	92.35	-	-	-	2.07	31.08	-	-	-
Commercial Refrigeration	2.99	6.62	\$ 60,344,997.28	279.28	2,146.64	41.53	0.27	1.42	96.77	792.77	13.03	0.17	0.92
Codes & Standards	5.13	228.02	\$ 122,574,505.41	598.20	9,981.56	98.62	-	-	102.51	1,601.00	13.25	-	-
Food Service	1.33	5.98	\$ 15,127,988.36	35.62	672.09	60.82	-	-	10.48	188.40	15.98	-	-
HVAC	2.93	11.27	\$ 204,323,357.20	366.26	5,730.27	148.20	0.05	0.73	139.57	2,058.13	51.22	0.05	0.73
Irrigation	0.30	0.35	\$ 194,537.86	1.00	5.22	0.57	-	-	0.35	1.83	0.20	-	-
Lighting	5.63	72.24	\$ 614,102,681.09	2,479.53	27,612.47	213.46	- 0.02	- 0.14	653.20	8,172.94	68.88	- 0.02	- 0.10
Non-Savings Measure	-	-	\$ -	-	-	-	-	-	-	-	-	-	-
Process Distribution	0.21	0.74	\$ 1,374,677.60	2.58	20.49	0.15	-	-	1.69	13.17	0.10	-	-
Process Drying	-	-	\$ -	-	-	-	-	-	-	-	-	-	-
Process Heat	7.75	293.76	\$ 3,076,013.01	0.18	2.70	-	-	-	0.13	1.94	-	-	-
Process Refrigeration	-	-	\$ -	-	-	-	-	-	-	-	-	-	-
Recreation	4.23	495.58	\$ 10,328,219.97	27.30	294.42	6.55	-	-	13.59	148.80	2.86	-	-
Service	1.13	1.13	\$ 11,563,716.13	88.74	88.74	10.87	-	-	93.17	93.17	11.41	-	-
Service and Domestic Hot Water	1.41	2.10	\$ 109,145,915.16	76.93	765.09	3.16	-	-	68.25	676.75	1.75	-	-
	1.68	<del>19.95</del>	\$166,636,047.05	162.93	2,778.61				98.38	1,557.21			
Whole Building	1.67	19.94	\$166,589,043.53	162.89	2,778.13	70.09	0.02	0.24	98.33	1,556.72	36.16	0.01	0.18
TOTAL			<del>\$1,512,003,413.87</del>	4,469.87	53,899.10				1,431.79	<del>17,028.70</del>	)		
TOTAL	2.61	9.29	\$1,511,956,410.36	4,469.83	53,898.61	734.22	0.32	2.25	1,431.75	17,028.21	253.85	0.22	1.72

The Commission's EE reporting requirements mandate that SCE submit regular reports to the Commission quantifying the accomplishments of the portfolio. One such requirement, reporting portfolio performance of energy savings and demand reduction by end use, is reported on a regular basis as part of SCE's monthly report. The table above illustrates the 2023 results, by end use, of SCE's portfolio of EE programs.

The data shown in this Annual Report is based on SCE's *ex ante* savings, adjusted for actual installations, consistent with the *ex ante* values and processes adopted by the CPUC in D.11-07-030 and subsequent decisions and resolutions.

#### **Attachment B**

#### SCE's Amendments to 2023 Energy Efficiency Annual Report Table 4

T-4 Programs & Expenditures												
									Net GWh		Gross	s GWh
PA/SW	Lead PA	Program ID	Program Name	TRC/PAC Benefits	TRC Ratio	PAC Ratio	RIM Ratio	Total System Benefit	First Year	Life Cycle	First Year	Life Cycle
İ			-	<del>\$248,276</del>	0.03	0.63	0.63	<del>\$248,276</del>	0.21	2.61	0.21	2.61
PA	SCE	SCE-13-L-003I	Public Sector Performance-Based Retrofit High Opportunity Program	\$201,272	0.02	0.51	0.51	\$201,272	0.16	2.13	0.16	2.13
			PA PROGRAM TOTAL	\$1,535,504,211				<del>\$1,512,003,414</del>	<del>1,431.79</del>	1,7028.70	4,469.87	53,899.10
			PAPROGRAPITOTAL	\$1,535,457,207				\$1,511,956,410	1,431.75	1,7028.21	4,469.83	53,898.61
			PA Program and EM&V Total	\$1,535,504,211				<del>\$1,512,003,414</del>	<del>1431.79</del>	<del>17,028.70</del>	4,469.87	53,899.10
			PA Plogram and Enay Total	\$1,535,457,207				\$1,511,956,410	1,431.75	17,028.21	4,469.83	53,898.61
				\$1,535,504,211				<del>\$1,512,003,414</del>	1,431.79	<del>17,028.70</del>	4,469.87	53,899.10
			Total Including Financing Pilot Programs Total	\$1,535,457,207				\$1,511,956,410	1,431.75	17,028.21	4,469.83	53,898.61
				\$ <del>1,535,504,211</del>				\$1,512,003,414	1,431.79	17,028.70	4,469.87	53,899.10
			Portfolio Total with C&S	\$1,535,457,207				\$1,511,956,410	1,431.75	17,028.21	4,469.83	53,898.61
				<del>\$91,271,050</del>				<del>\$67,770,253</del>	209.04	1,094.02	210.92	1,131.15
			Portfolio Total w/out C&S	\$91,224,046				\$67,723,249	209.00	1.093.53	210.87	1.130.66

 $Notes: (PA \ to \ add \ as \ needed, e.g., relevant \ advice \ letter \ references, decision \ references \ and \ any \ other \ needed \ explanations.)$ 

<sup>1.</sup> SCE's Pension & Benefits are collected through the GRC and are not included in the approved budget but are included for TRC calculations.

<sup>2.</sup> EM&V costs only includes PA's Total EM&V budget (PA + ED). For the PA EM&V budget it does not include REN or CCAs EM&V budget.

<sup>3.</sup> Some payments to 3P Implementers for savings achieved and reported for 2023 have not been made due to terms of payment not being reached. However, expenses have been included.

**Attachment C** 

SCE's Amendments to 2023 Energy Efficiency Annual Report Table 10

1-10 202	23 Busir	iess Pla	an Metr	ics Resul	ıts							
Spreadsh eet Indez	PA	AttA Page	AttA Order	Method Code	Units of Measurement	Metric Type	Metric <i>i</i> Indicator		Metric	Sector	Baseli ne Year	2023 Number
1	SCE	A03	PL1	G	MT CO2eq	GHG	Metric	RSF2-G-•Greenhouse gasses (MT CO2eq) Net kWh savings, reported on an annual basis-•	CO2-equivalent of net annual kWh savings	Portfolio Level (PL)- All Sectors	2016	<del>34,872</del> 34,861
ŀ	SCE	A02	PL1	PL1 S1 First year annual kWh gross St: Energy Savings Metric PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand sav			First year annual kWh gross	Portfolio Level (PL)- All Sectors	2016	<del>217,752,500</del> 217,709,478		
5	SCE	A02	PL1	S1	First year annual kWh net	S1: Energy Savings	Metric	PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net)••	First year annual kWh net	Portfolio Level (PL)- All Sectors	2016	<del>216,215,848</del> 216,172,826
8	SCE	A02	PL1	S1	Lifecycle ex-ante kW gross	S1: Energy Savings	Metric	PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net)••	Lifecycle ex-ante kW gross	Portfolio Level (PL)- All Sectors	2016	<del>77,703</del> 77,640
9	SCE	A02	PL1	S1	Lifecycle ex-ante kW net	S1: Energy Savings	Metric	PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net)••	Lifecycle ex-ante kW net	Portfolio Level (PL)- All Sectors	2016	<del>64,847</del> 64,779
10	SCE	A02	PL1	S1	Lifecycle ex-ante kWh gross	S1: Energy Savings	Metric	PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net)••	Lifecycle ex-ante kWh gross	Portfolio Level (PL)- All Sectors	2016	<del>1,137,985,818</del> 1,137,497,746
11	SCE	A02	PL1	S1	Lifecycle ex-ante kWh net	S1: Energy Savings	Metric	PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net)••	Lifecycle ex-ante kWh net	Portfolio Level (PL)- All Sectors	2016	<del>1,101,196,538</del> 1,100,708,466
38	SCE	A02	PL4	LC	PAC Levelized Cost (\$/kW)	Cost per unit saved	Metric	PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)••	PAC Levelized Cost (\$/kW)	Portfolio Level (PL)- All Sectors	2016	<del>2,236</del> 2,238
41	SCE	A02	PL4	LC	TRC Levelized Cost (\$/kW)	Cost per unit saved	Metric	PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	TRC Levelized Cost (\$/kW)	Portfolio Level (PL)- All Sectors	2016	<del>2,723</del> 2,726
191	SCE	A06	P1	S1	First year annual kWh gross	S1: Energy Savings	Metric	P.S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) across Public Sector programs	First year annual kWh gross	Public Sector (P)	2016	<del>2,237,001</del> 2,193,978
192	SCE	A06	P1	S1	First year annual kWh net	S1: Energy Savings	Metric	P-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) across Public Sector programs	First year annual kWh net	Public Sector (P)	2016	<del>1,665,535</del> 1,622,512
195	SCE	A06	P1	S1	Lifecycle ex-ante kW gross	S1: Energy Savings	Metric	P-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) across Public Sector programs	Lifecycle ex-ante kW gross	Public Sector (P)	2016	<del>4,540</del> 4,478
196	SCE	A06	P1	S1	Lifecycle ex-ante kW net	S1: Energy Savings	Metric	P-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) across Public Sector programs	Lifecycle ex-ante kW net	Public Sector (P)	2016	<del>4,369</del> 4,300
197	SCE	A06	P1	S1	Lifecycle ex-ante kWh gross	S1: Energy Savings	Metric	P-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) across Public Sector programs••	Lifecycle ex-ante kWh gross	Public Sector (P)	2016	<del>14,892,629</del> 14,404,557
198	SCE	A06	P1	S1	Lifecycle ex-ante kWh net	S1: Energy Savings	Metric	P-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) across Public Sector programs••	Lifecycle ex-ante kWh net	Public Sector (P)	2016	<del>11,855,486</del> <del>11,367,414</del>
203	SCE	A06	P2	G	MT CO2eq	GHG	Metric	P-GGreenhouse gasses (MT CO2eq) based on net lifecycle kWh and Therms savings, reported on an annual basis, incorporating average fuel/technology	CO2-equivalent of net annual kWh savings	Public Sector (P)	2016	444 432
208	SCE	A06	P3i	D5	Annual NET kWh	D5: Depth of interventions••Per square foot	Indicator	P-D5[Indicator] Average annual energy savings (kWh, kw, therms) per project building floor plan area-	Average annual net kw savings per project building floor plan area	Public Sector (P)	N/A - Indicato r	<del>7</del> 8
216	SCE	A07	P5	rc	PAC Levelized Cost (\$/kW)	Cost per unit saved	Metric	P-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)••	PAC Levelized Cost (\$/kW)	Public Sector (P)	2016	<del>842</del> 856
219	SCE	A07	P5	LC	TRC Levelized Cost (\$/kW)	Cost per unit saved	Metric	P-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)••	TRC Levelized Cost (\$/kW)	Public Sector (P)	2016	<del>3,088</del> 3,148