Decision 23-08-005 August 10, 2023

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

DECISION ADOPTING ENERGY EFFICIENCY GOALS FOR 2024-2035

TABLE OF CONTENTS

Title **Page**

DECISION ADOPTING ENERGY EFFICIENCY GOALS FOR 2024-2035

Summary

This decision adopts total system benefit and energy savings goals for ratepayer-funded energy efficiency portfolios for 2024 – 2035.

Rulemaking 13-11-005 remains open.

1. Background

1.1. Procedural Background

California Public Utilities (Pub. Util.) Code Sections 454.55 and 454.56 require the California Public Utilities Commission (Commission), in consultation with the California Energy Commission (CEC), to identify all potentially achievable cost-effective electricity and natural gas efficiency savings and "establish efficiency targets" for electrical and gas corporations to achieve.[1] To this end, Commission staff manage the development of a study that provides the technical analysis for assessing the cost-effective energy savings, and associated system benefits, potentially available in the state's residential and commercial building stocks, residential and commercial equipment and processes, and the industrial, agricultural and mining sectors. We use this study primarily to set goals for the large investor-owned utilities (IOUs).[2] These goals in turn inform

[1] Pub. Util. Code §454.55(a)(1): "The commission, in consultation with the Energy Commission, shall identify all potentially achievable cost-effective electricity efficiency savings and establish efficiency targets for an electrical corporation to achieve, pursuant to Section 454.5, consistent with the targets established pursuant to subdivision (c) of Section 25310 of the Public Resources Code." Pub. Util. Code § 454.56: "(a) The commission, in consultation with the Energy Commission, shall identify all potentially achievable cost-effective natural gas efficiency savings and establish efficiency targets for the gas corporation to achieve, consistent with the targets established pursuant to subdivision (c) of Section 25310 of the Public Resources Code."

[2] The large IOUs are Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company.

the planning activities of the energy efficiency portfolio administrators, Commission staff in integrated energy resource planning, and other state agencies, including the CEC, California Air Resources Board (CARB), and the California Independent System Operator. The Commission aims to set goals that are "aggressive yet achievable,"[3] reflecting our intent to balance the mandate to pursue all feasible, reliable and cost-effective energy efficiency opportunities with the important objective of providing reliable estimates for resource planning purposes.

Decision (D.) 15-10-028 established an approach to incorporate new information into required energy efficiency work products, such as the potential study, on a regular basis. D.21-05-031, which adopted a new total system benefit (TSB) goal metric, directed that this new metric replace energy and peak demand savings goals as the single goals metric. The TSB metric reflects the lifecycle energy, capacity, and greenhouse gas benefits of a measure in dollar terms, in contrast to the separate energy and peak demand (*i.e.*, kilowatt-hour, kilowatt, and therm) goals we have traditionally adopted.

The Commission last revised energy efficiency goals in D.21-09-037. The Commission needs to adopt goals for 2024 forward, and incorporate new information that updates or modifies some of the inputs and approaches to estimating energy efficiency potential.

[3] D.15-10-028 *Decision Re Energy Efficiency Goals for 2016 and Beyond and Energy Efficiency Rolling Portfolio Mechanics*, issued October 28, 2015 at 11-17; D.14-10-046 *Decision Establishing Energy Efficiency Savings Goals and Approving 2015 Energy Efficiency Programs and Budgets (Concludes Phase I of R.13-11-005)*, issued October 24, 2014 at 15-16; D.12-05-015 *Decision Providing Guidance on 2013-2014 Energy Efficiency Portfolios and 2012 Marketing, Education, and Outreach*, issued May 8, 2012, at 81.

On April 17, 2023, the assigned administrative law judge (ALJ) issued a ruling inviting parties to comment on the draft 2023 potential study (draft potential study).[4] On May 3, 2023, Commission staff held a workshop for the study's author, Guidehouse, to provide an overview of the draft potential study, and for parties to ask questions.

The draft potential study updates the energy savings potential forecasts of the 2021 potential study, with updated avoided cost assumptions and updated savings estimates for fuel substitution, behavioral, retro commissioning and operational programs, and new assumptions reflecting impacts from the federal Inflation Reduction Act (IRA) and CARB's proposal for a zero-emission standard for space and water heaters in 2030. The draft potential study presents four scenarios of energy efficiency potential based on different assumptions regarding cost-effectiveness and adoption levels:

- Scenario 1: Energy efficiency incentive levels capped at 50 percent, "reference" assumptions for fuel substitution. IRA tax credits not considered;
- Scenario 2: Conservative or "reference" assumptions for IRA tax credits, energy efficiency incentive levels capped at 50 percent, "reference" assumptions for fuel substitution;
- Scenario 3: Conservative or "reference" assumptions for IRA tax credits, energy efficiency incentive levels capped at 75 percent, aggressive assumptions for fuel substitution; and
- Scenario 4: Aggressive assumptions for IRA tax credits, energy efficiency incentive levels capped at 50 percent, "reference" assumptions for fuel substitution.

[4] Guidehouse also conducted a separate potential study for the low-income sector.

The Public Advocate's Office of the Public Utilities Commission (Cal Advocates); California Efficiency + Demand Management Council (CEDMC); Small Business Utility Advocates (SBUA); Natural Resources Defense Council (NRDC); Association of Bay Area Governments on behalf of Bay Area Regional Energy Network and County of Ventura on behalf of Tri-County Regional Energy Network (jointly, BayREN and 3C-REN); Southern California Regional Energy Network (SoCalREN); Pacific Gas and Electric Company (PG&E); San Diego Gas & Electric Company (SDG&E); Southern California Edison Company (SCE); Southern California Gas Company (SoCalGas); and SPAN.IO, Inc. (SPAN) timely filed comments in response to the April 17, 2023 ruling.[5] On May 18, 2023, CEDMC; SBUA; BayREN and 3C-REN (jointly); PG&E; SDG&E; SCE; SoCalGas; SPAN; NRDC and Sierra Club (jointly); Redwood Coast Energy Authority on behalf of Rural Regional Energy Network (R-REN); Western Riverside Council of Governments on behalf of the Inland Regional Energy Network (I-REN); and San Joaquin Valley Clean Energy Organization (SJVCEO) filed reply comments.

We address party comments as they relate to our consideration of draft potential study assumptions and the determinations we reach in this decision.

1.2. Submission Date

This matter was submitted for decision on May 18, 2023, upon filing of the reply comments.

[5] The final date to file comments on the April 17, 2023, ruling was May 8, 2023. SPAN's comments were accepted for filing on May 9, 2023; the assigned ALJ permitted Docket Office to file SPAN's comments without requiring a motion for acceptance of a late-filed document.

2. Inclusion of Inflation Reduction Act (IRA) Impacts

Cal Advocates and SCE recommend against including any assumed impacts from the IRA. Cal Advocates raises several arguments that generally agree with the draft potential study's acknowledgment that the "precise impacts of the IRA are difficult to predict."[6] SCE similarly suggests holding off on including IRA impacts until more is known about the impact of energy efficiency home improvement credits on uptake of energy efficiency upgrades. SCE also disagrees with the draft potential study's assumption that IRA tax credits feed into the TRC test and act to increase cost-effectiveness.[7] In reply comments, CEDMC agrees with Cal Advocates and SCE, identifying a number of uncertainties about implementation of the IRA.[8]

NRDC, PG&E, SBUA, BayREN and 3C-REN, SoCalREN, and SDG&E support inclusion of the reference IRA assumptions, either explicitly or by virtue of recommending adoption of Scenario 2 or, for BayREN and 3C-REN, a variation between Scenarios 2 and 3.[9] While these parties acknowledge the uncertainty of IRA implementation highlighted by Cal Advocates and SCE, they generally favor including some impacts from the IRA as opposed to no impacts.

SoCalGas recommends inclusion of the aggressive IRA assumptions, noting that the aggressive IRA assumptions include a greater penetration in the commercial sector, and that the draft potential study excludes funding for

---

[6] Cal Advocates comments, at 2.

[7] SCE comments, at 7-8.

[8] CEDMC reply comments, at 2-4. CEDMC's comments supported adoption of Scenario 4, but in reply comments expressed support for Scenario 1.

[9] NRDC comments, at 6; PG&E comments, at 1-4; SBUA comments, at 1; BayREN and 3C-REN comments, at 2-3; SoCalREN comments, at 4-5; and SDG&E comments, at 1-3.

specific programs, such as the High-Efficiency Electric Home Rebate and Home Owner Managing Energy Savings programs, which SoCalGas asserts are significant components of the IRA.[10]

As most parties acknowledge, the draft potential study assumes impacts from the IRA tax credits but does not include rebates/funding for specific programs. At the time the draft potential study was conducted, details about the rebates/program funding were not available, making it difficult to model them with any confidence. This decision generally agrees with the reasoning of most parties that, while the precise impacts of the IRA remain challenging to estimate, it is reasonable to assume some impacts from the IRA on energy efficiency savings. Of the two sets of assumptions, the reference IRA assumptions are more reasonable to incorporate into our consideration for setting goals, as they have a more feasible estimation for commercial potential. With respect to SCE's disagreement with the draft potential study's statement that the tax credits feed into the TRC test, we confirm that the draft potential study's approach to modeling the tax credits is to account for tax credits (as a reduction in cost) in the year during which the tax credit is assumed to be claimed by a participant.[11]

2.1. IRA Implementation Guidance

Many parties, regardless of whether they support including impacts from the IRA, raise an implementation question of whether and how to track and

[10] SoCalGas comments, at 2-3.

[11] California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001, at 29-32. Uniform resource locator (url): https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy_-_electricity_and_natural_gas/cpuc-standard-practice-manual.pdf

account for customers who leverage the available tax credits.[12] NRDC observes that program design should account for the fact that implementers will need to educate customers on how to claim IRA tax credits, and evaluations should assess whether customers claimed the IRA tax credit, and reasons for not claiming the tax credit.[13] SoCalGas suggests that the Commission encourage the use of outside funds in ratepayer-funded programs by directing that evaluation methods consider co-funding as a form of energy efficiency program influence (as opposed to an indication of free-ridership).[14] Similarly, SDG&E identifies potential negative impacts to program net-to-gross (NTG) if customer choice is partially influenced by the IRA, and suggests that we alternatively consider the IRA tax credit as a benefit in that it improves customers' return on investment calculations.[15] SCE, though it recommends against including IRA impacts, urges the Commission to use the incentive "stacking" or layering framework established in the Building Decarbonization proceeding (Rulemaking 19-01-011), as this would enable IRA funding and other funding sources to be fully

[12] Cal Advocates comments, at 6; and PG&E comments, at 5.

[13] NRDC comments, at 8.

[14] SoCalGas comments, at 3.

[15] SDG&E comments, at 4-5. NTG ratio is "a factor representing net program load impacts divided by gross program load impacts that is applied to gross program load impacts to convert them into net program load impacts." Gross load impact is the "change in energy consumption and/or demand that results directly from program-related actions taken by participants in a [demand-side management, or DSM] program, regardless of why they participated." Net load impact is the "total change in load that is attributable to the utility DSM program. This change in load may include, implicitly or explicitly, the effects of free-drivers, free-riders, state or federal energy efficiency standards, changes in the level of energy service and natural change effects." *See* California Energy Efficiency Evaluation Protocols: Technical, Methodological, and Reporting Requirements for Evaluation Professionals, April 2006, Appendix B (Glossary of Terms). Url: https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/c/5212-caenergyefficiencyevaluationprotocols.doc

leveraged for building electrification measures.[16] CEDMC also urges the Commission to consider how to stack incentives. Like NRDC, CEDMC urges consideration of rebate engagement including user-friendliness, timeliness, efficiency of the flow of funds and security and oversight. CEDMC also recommends that policy and implementation considerations include equitable distribution of benefits in line with the Justice40 Initiative and the state's equity goals.[17]

The Commission agrees with the need for explicit evaluation guidance in order to encourage implementers to leverage the IRA in marketing and promoting energy efficiency projects. Such guidance also in part addresses the concern raised by Cal Advocates and PG&E regarding challenges to tracking customer savings and utilization of tax credits. This decision provides that ex-post evaluations should align with the draft potential study's assumptions, *i.e.*, evaluations should not lower the program NTG ratio in cases where collected documentation shows IRA tax credits influenced a customer's choice to adopt an energy efficiency measure or project. Portfolio administrators and/or program implementers must create and maintain, at minimum, promotional and educational documentation to influence customers to use the IRA tax credit for applicable measures. Promotional materials must explain the benefits of IRA tax

[16] SCE comments, at 10. Incentive stacking, also referred to as layering, refers to the availability of multiple program incentives, with each program having different funding sources, design requirements, goals, and evaluation methodologies, for a given measure (e.g., electric heat pump water heaters). D.21-11-002 adopted a set of guiding principles for the layering of incentives from various building decarbonization programs. *See* D.21-11-002, at Section 2.

[17] CEDMC comments, at 6. The federal government's Justice40 Initiative establishes a goal that 40 percent of the overall benefits of certain Federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution. *See* Executive Order 14008, Sec. 223. url: https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/

credits to the end customer. Educational materials must explain how IRA tax credits can be used by the customer to calculate their cost for equipment and installation, as well as information about how the customer claims the tax credits. The portfolio administrators must take steps to identify which customers have received or plan to receive the applicable IRA tax incentives in order to receive credit for IRA program influence in their ex-post evaluations. Portfolio administrators may do this by adding questions to existing tools to inspect their programs and determine customer eligibility.

3. Assumptions Regarding Fuel Substitution

Most parties recommend adoption of a scenario that includes reference assumptions as opposed to aggressive assumptions for fuel substitution, asserting generally that the draft potential study's aggressive assumptions are unreasonably optimistic.[18] NRDC and Sierra Club are the two parties that support inclusion of aggressive fuel substitution assumptions, asserting that this is necessary to ensure the market is mature enough by 2030 for CARB to equitably implement zero-emission standards for space and water heating.[19] Several parties observe a considerable gap in results between Scenarios 2 and 3, which differ mainly on the fuel substitution assumptions, and suggest further modeling of some sort of "middle ground" between the reference and aggressive fuel substitution assumptions is needed.[20]

---

[18] Cal Advocates comments, at 7-8; CEDMC comments, at 7 and reply comments, at 3-4; SBUA comments, at 2; SCE comments, at 11; PG&E comments, at 7; R-REN reply comments, at 1-2; and SJVCEO reply comments, at 3-4.

[19] NRDC comments, at 9-11 and NRDC/Sierra Club reply comments, at 2-3.

[20] BayREN/3C-REN comments, at 2-3; NRDC comments, at 3; and SoCalGas comments, at 4.

This decision agrees with most parties that the draft potential study's reference fuel substitution assumptions are reasonable (as incorporated into Scenarios 1, 2 and 4) as opposed to the aggressive assumptions. In D.21-09-037 the Commission adopted goals that for the first time included savings from fuel substitution. Those estimates were significantly high and did not account for more recent program data from PG&E and SCE. In adopting goals that included these significant fuel substitution savings, we stated our intent to send a strong signal for portfolio administrators to aggressively pursue fuel substitution savings opportunities. Importantly, D.21-09-037 also acknowledged that the Commission would have the benefit of more program data to estimate fuel substitution savings potential more accurately as part of the 2023 study.[21] This decision maintains the stated intent from D.21-09-037, that the IOUs should continue to aggressively pursue fuel substitution savings opportunities; at the same time, we must also consider what can be reasonably adopted over the course of the study period. The goals adopted in this decision not only influence, in part, the overall budgets for the IOU energy efficiency portfolios, but also are used by the CEC in modeling the overall energy demand forecast for the state. The 2023 draft potential study reflects the results of portfolio administrators' efforts to pursue fuel substitution savings opportunities. It would be unreasonable to ignore recent program data that more accurately reflects what is realistically achievable; therefore this decision determines to estimate fuel substitution savings potential using the draft potential study's reference fuel substitution assumptions.

[21] D.21-09-037, at 16-17.

3.1. Methodology for Estimating Infrastructure Costs

PG&E, BayREN and 3C-REN, and NRDC agree with the draft potential study's approach to estimating panel upgrade costs for fuel substitution measures, given the limitations of available data.[22] Cal Advocates and SBUA urge consideration of alternatives to panel upgrades, and Cal Advocates further suggests that scenarios that include impacts from the IRA should consider available federal tax credits for electrical panel upgrades.[23] SPAN highlights the potential to use smart panels as an alternative, and NRDC recommends that future studies consider technological developments in circuit-sharing devices and in low-amp electric appliances.[24] SCE and SDG&E note the wide variation in costs from project to project; SCE proposes including additional methodological steps to obtain more granular estimates, and SDG&E recommends that future studies create a robust panel cost reference.[25]

In light of the available data at the time of conducting the study, this decision finds the draft potential study's approach to estimating fuel substitution panel upgrade costs reasonable. We acknowledge party comments that the draft potential study's estimates are still uncertain; in some ways the study may

[22] PG&E comments, at 10; BayREN and 3C-REN comments, at 6; and NRDC comments, at 11.

[23] Cal Advocates comments, at 12. A panel upgrade, for instance increasing the size of the electrical panel to accommodate added electric load, may be needed when substituting gas technologies for electric technologies. *See* Appendix C of the draft study.

[24] SPAN comments, at 4; and NRDC comments, at 5. SPAN's comments refer to smart panels as "a one-for-one replacement of the traditional residential electrical breaker box. Intelligent hardware is included in smart panels that can enable whole-home electrification, including the installation of rooftop solar, backup battery, heat pump heating, ventilation and air conditioning ('HVAC'), hot water heaters, induction cooking, and electric vehicle ('EV') charging without the need for expensive utility service upgrades." SPAN comments, at 1-2.

[25] SCE comments, at 13-14; and SDG&E comments, at 9-10.

underestimate these costs (*e.g.*, by not including costs beyond the electric panel, such as wiring or outlets) and in other ways it may overestimate them (*e.g.,* by not accounting for alternatives to panel upgrades or by attributing the full cost of an upgrade to a measure even though the upgrade enables adoption of more electric technologies). The additional and alternative considerations suggested by Cal Advocates, SPAN, NRDC and SCE may be examined as part of the market studies on panel upgrade costs ordered in D.23-04-035, which will inform future potential studies.[26]

4. Inclusion of CARB's State Implementation Plan Memo

Most parties either agree with or do not address the draft potential study's inclusion of CARB's State Implementation Plan (SIP) memo,[27] which reduces energy efficiency potential beginning in 2030 due to the anticipated adoption of zero-emission standards for space and water heaters.[28] NRDC notes that the draft potential study will only impact programmatic potential for the next two to three years (in spite of forecasting potential for ten years), but cautions that CARB will not be able to implement the SIP equitably unless heat pumps become affordable to purchase and operate relative to gas appliances for all customers.[29] SDG&E recommends that the draft potential study treat the SIP memo's requirements in the same manner as new state and federal codes and standards (and any new

[26] *See* D.23-04-035, at 25-26 and Ordering Paragraph 7.

[27] California Air Resources Board, "2022 State Strategy for the State Implementation Plan," Adopted September 22, 2022. url: https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf

[28] Cal Advocates comments, at 10-11; BayREN and 3C-REN comments, at 5; and SCE comments, at 12 agree. CEDMC comments, at 8; SoCalGas comments, at 5; and SoCalREN comments, at 6 explicitly do not address.

[29] NRDC comments, at 11.

legislation impacting appliances and equipment), which is to set a new baseline or industry standard practice after 2030 that would only apply to the Normal Replacement measure application type. SDG&E elaborates that Accelerated Replacement measure offerings should still be eligible (after 2030).[30] PG&E is the one party to recommend against modeling the SIP memo in the draft potential study, arguing it is premature because CARB has not yet adopted the proposed standards.[31]

This decision finds the draft potential study's approach to modeling the SIP memo reasonable. While we acknowledge that even though CARB has yet to adopt zero-emission standards for space and water heaters, as noted by PG&E and NRDC, it is helpful to anticipate and estimate the potential impact of these standards on longer-term savings potential. Future studies will certainly model the SIP memo and any other relevant policies based on the most reliable and current information available at the time of conducting the study.

[30] SDG&E comments, at 7-8. Normal Replacement refers to measure installations where the existing equipment has failed or no longer meets current or anticipated needs or is being replaced due to normal remodeling or upgrading or replacement activities that are expected and undertaken in the normal course of business. Accelerated Replacement refers to replacements of existing equipment with nominally higher efficiency equipment and where the preponderance of evidence supports that a) the existing equipment would have remained in operation for at least the remaining life of the existing equipment, performing its current service requirement and b) the energy efficiency program activity induced or accelerated the equipment replacement. The remaining useful life must be at least one year to qualify as Accelerated Replacement. Accelerated Replacement is further categorized as repair eligible, repair indefinitely or early retirement. *See* Track 1 Working Group Report, Appendix A at 12-13. url: https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/c/6442451953-cpuc-ml-poe-dec12.pdf and Resolution E-4818 at 27-28.

[31] PG&E comments, at 8.

5. Codes and Standards

The final potential study used the same methodology that has been historically used in previous potential studies to allocate codes and standards potential among the IOUs, forecasting a best approximation for where savings are expected to occur by using an IOU allocation factor based on energy sales. However, as PG&E points out in their opening comments to the proposed decision, this is in contrast to the way IOU budgets to achieve the codes and standards goals are set in D.23-06-055, which addressed the portfolio administrators' 2024-2027 portfolios and budgets. This inconsistency may pose challenges to IOUs such as SoCalGas and SDG&E, which have a greater portion of overall codes and standards potential allocated to them than their portion of the allocated codes and standards budget. Because of this, this decision directs the IOUs to use their annual true-up advice letters that are to be submitted 60 days after the energy efficiency goals are adopted to adjust their codes and standards budgets to align their with codes and standards potential in the final potential study.[32]

6. Energy Efficiency Goals for 2024-2035

Based on our determinations to include reference IRA assumptions and reference fuel substitution assumptions, this decision adopts TSB and energy efficiency goals for 2024-2035 using Scenario 2 from the final potential study, included in this decision as Attachment 1. In alignment with D.21-05-031, the goals for each four-year period between 2024 and 2035 are set cumulatively (2024-2027, 2028-2031, and 2032-2035). The following tables show the adopted cumulative goals and annual targets for each IOU; savings from codes and

[32] D.23-06-055, Ordering Paragraph 37.

standards programs continue to be expressed in electric energy (gigawatt-hours, or GWh), demand (megawatts, or MW) and gas energy (million metric therms, or MMTherms). Adoption/updating of energy efficiency goals for the low-income sector will be addressed in the next applications for approval of the Energy Savings Assistance (ESA) programs and budgets, or a mid-cycle update. Pursuant to D.21-06-015, the ESA Working Group is the appropriate forum for addressing the study's approach to estimating low-income savings potential.[33]

[33] D.21-06-015, at 220-221.

Table 1: Cumulative Adopted TSB and Energy Efficiency Goals for PG&E (2024-2035)

Period	Incentive Programs	Codes and Standards		
	TSB	GWh	MW	MMTherms
2024-2027	$852,860,729	3,976.6	733.2	74.8
2028-2031	$917,142,715	2,654.4	531.3	51.8
2032-2035	$1,053,987,446	1,851.8	397.8	43.4

Table 2: Annual TSB and Energy Efficiency Targets for PG&E (2024-2035)

Year	**Incentive Programs**	**Codes and Standards**		
	TSB	GWh	MW	MMTherms
2024	$211,992,628	1,071.2	201.9	23.0
2025	$211,860,888	1,008.4	184.7	22.5
2026	$212,385,721	987.2	180.7	14.5
2027	$216,621,492	909.8	165.9	14.8
2028	$227,558,742	830.0	157.8	13.8
2029	$238,185,795	659.5	132.0	13.1
2030	$222,939,809	599.0	123.2	12.7
2031	$228,458,369	565.9	118.3	12.2
2032	$244,634,558	530.2	110.0	11.4
2033	$261,850,172	502.5	104.3	11.0
2034	$265,251,413	417.5	94.0	10.7
2035	$282,251,303	401.6	89.5	10.3

Table 3: Cumulative Adopted TSB and Energy Efficiency Goals for SCE (2024-2035)

Period	Incentive Programs	Codes and Standards		
	TSB	GWh	MW	MMTherms
2024-2027	$500,266,416	3,976.6	682.5	-
2028-2031	$574,255,562	2,654.4	491.0	-
2032-2035	$555,486,815	1,851.8	364.3	-

Table 4: Annual TSB and Energy Efficiency Targets for SCE (2024-2035)

Year	**Incentive Programs**	**Codes and Standards**		
	TSB	GWh	MW	MMTherms
2024	$112,534,778	1,071.2	186.5	-
2025	$117,062,964	1,008.4	172.4	-
2026	$128,212,309	987.2	168.9	-
2027	$142,456,365	909.8	154.7	-
2028	$154,873,672	830.0	147.1	-
2029	$166,183,167	659.5	121.9	-
2030	$123,108,254	599.0	113.3	-
2031	$130,090,469	565.9	108.7	-
2032	$134,974,655	530.2	101.0	-
2033	$136,958,995	502.5	95.8	-
2034	$139,056,217	417.5	85.9	-
2035	$144,496,948	401.6	81.6	-

Table 5: Cumulative Adopted TSB and Energy Efficiency Goals for SDG&E (2024-2035)

Period	Incentive Programs	Codes and Standards		
	TSB	GWh	MW	MMTherms
2024-2027	$184,147,673	814.4	140.6	7.6
2028-2031	$205,673,091	543.7	100.9	5.2
2032-2035	$238,753,108	379.2	74.4	4.3

Table 6: Annual TSB and Energy Efficiency Targets for SDG&E (2024-2035)

Year	**Incentive Programs**	**Codes and Standards**		
	TSB	GWh	MW	MMTherms
2024	$45,004,630	219.4	38.2	2.3
2025	$45,267,492	206.5	35.6	2.3
2026	$45,878,572	202.2	34.9	1.5
2027	$47,996,979	186.3	31.9	1.5
2028	$53,596,931	170.0	30.3	1.4
2029	$54,624,969	135.1	25.0	1.3
2030	$47,447,704	122.7	23.3	1.3
2031	$50,003,487	115.9	22.3	1.2
2032	$53,833,829	108.6	20.7	1.1
2033	$60,192,598	102.9	19.6	1.1
2034	$59,986,628	85.5	17.5	1.1
2035	$64,740,053	82.2	16.6	1.0

Table 7: Cumulative Adopted TSB and Energy Efficiency Goals for SoCalGas (2024-2035)

Period	Incentive Programs	Codes and Standards		
	TSB	GWh	MW	MMTherms
2024-2027	$772,530,337	-	-	83.2
2028-2031	$892,488,372	-	-	57.8
2032-2035	$1,054,383,919	-	-	48.3

Table 8: Annual TSB and Energy Efficiency Targets for SoCalGas (2024-2035)

Year	**Incentive Programs**	**Codes and Standards**		
	TSB	GWh	MW	MMTherms
2024	164,432,152	-	-	25.6
2025	188,742,137	-	-	25.0
2026	203,872,384	-	-	16.1
2027	215,483,664	-	-	16.5
2028	227,299,260	-	-	15.4
2029	237,409,377	-	-	14.6
2030	208,882,271	-	-	14.2
2031	218,897,464	-	-	13.6
2032	237,492,445	-	-	12.6
2033	254,060,765	-	-	12.3
2034	269,208,582	-	-	11.9
2035	293,622,127	-	-	11.5

Parties raised a number of issues relating to data assumptions (*e.g.,* the specific inputs or approaches used) in the draft potential study.[34] The final study includes an appendix (Appendix L) that addresses these comments, and whether

[34] PG&E comments, at 11-15; SCE comments, at 6 and 14-17; SDG&E comments, at 10-11; SoCalGas comments, at 6; and SoCalREN comments, at 3-7.

and how the study team adjusted its analysis in response to each comment. One adjustment that merits highlighting here is that the final study updates the analysis for emerging technologies potential, as recommended by PG&E, which advocates to use historical claims data to calibrate this forecast.[35] Particularly because the growth rate is based on a compounded annual growth rate function, we agree that the draft potential study's forecast is unrealistically high in the later years. No new data was available to calibrate to, so the final study constrains growth in the later years (after 2030), similar to the approach taken in the 2021 study.

As with past study cycles, CEDMC and NRDC recommend modeling a PAC scenario.[36] For the same reasons provided in D.17-09-025, particularly that modeling and considering a PAC scenario requires consideration of revising our portfolio cost-effectiveness requirements, which is beyond the scope of this decision, we decline to consider this recommendation.[37] We also reiterate, as with past study cycles and in response to party comments recommending adoption of more aggressive goals, that the goals we adopt establish a floor (as opposed to a ceiling) and, certainly, the portfolio administrators should strive to exceed these goals when designing and implementing their portfolios.[38]

---

[35] PG&E comments, at 14.

[36] CEDMC comments, at 2; and NRDC comments, at 4. The PAC test "measures the net costs of a demand-side management program as a resource option based on the costs incurred by the program administrator (including incentive costs) and excluding any net costs incurred by the participant. The benefits are similar to the TRC benefits. Costs are defined more narrowly." *See* Standard Practice Manual at Chapter 5.

[37] D.17-09-025, at 17-23.

[38] D.19-08-034, at 15.

7. Considerations for Future Study Cycles

This decision acknowledges party comments for future study cycles, which Commission staff and the selected study team will take into consideration when developing the 2025 potential study; we note however that any recommendations for the 2025 study will also need to be provided as part of the development process for that study so that they may be considered as part of the record. These include most parties' agreement that future studies should model regionally specific policy decisions and suggestions for how to achieve such modeling,[39] SoCalREN's recommendation to model the public sector separate from commercial and industrial,[40] and Cal Advocates' recommendation to forecast savings potential in the equity segment,[41] among other proposals.[42] With respect to Cal Advocates' recommendation, it is worth emphasizing that the study's bottom-up approach is not easily conducive to parsing out savings estimates for the equity segment because this approach is program-agnostic. It may be feasible to estimate equity segment potential if a more top-down analysis is conducted for calibration purposes (similar to the 2021 top-down study), and with greater input from portfolio administrators' knowledge of their own equity segment customers.[43] More immediately, portfolio administrators can certainly

[39] CEDMC comments, at 7-8; BayREN/3C-REN comments, at 6; SCE comments, at 12; NRDC comments, at 11; and PG&E comments, at 8.

[40] BayREN/3C-REN comments, at 3.

[41] Cal Advocates comments, at 14-15.

[42] Further recommendations were provided by PG&E, SCE and SBUA in comments to the proposed decision.

[43] *See* 2021 top-down study documentation, available at https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/energy-efficiency-potential-and-goals-studies/2021-potential-and-goals-study.

use the study's Analytica files and the low-income sector study, combined with their knowledge of their own equity segment customers, to inform their portfolios and strategies. Parties and other stakeholders are encouraged to participate and provide input into development of the potential studies from the outset, which may occur as early as July 2024, to ensure consideration of all study inputs, assumptions, approaches, etc. prior to modeling specific scenarios.[44]

8. Summary of Public Comment

Rule 1.18 of the Commission's Rules of Practice and Procedure allows any member of the public to submit written comments in any Commission proceeding using the "Public Comment" tab of the online Docket Card for that proceeding on the Commission's website. Rule 1.18(b) requires that relevant written comments submitted in a proceeding be summarized in the final decision issued in that proceeding. The Commission received no public comments addressing this issue as of the submission date.

9. Comments on Proposed Decision

The proposed decision of ALJ Valerie U. Kao in this matter was mailed to the parties in accordance with Section 311 of the Pub. Util. Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. The Commission received timely comments from SCE, PG&E, SoCalGas, SDG&E, Cal Advocates, CEDMC and SBUA;[45] and timely reply comments from I-REN, SoCalGas, PG&E, SCE and SDG&E.

---

[44] *See* the Final Workplan prepared for the 2023 study, accessible at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/energy-efficiency/2023-potential-goals-study/final-group-e-workplan---2023-energy-efficiency-pg-study.pdf .

[45] On July 26, 2023, SBUA provided notice via email that its comments, which were timely served, were tendered for filing several minutes after the filing deadline; SBUA requested that its comments be accepted for filing. The assigned ALJ instructed Docket Office to late-file SBUA's comments given the stated circumstances.

The proposed decision has been modified in response to party comments in the following respects:

- Modify the evaluation guidance regarding IRA implementation to specify the type of documentation that should be created and maintained, for purposes of demonstrating the IRA tax credit's influence on customer adoption. Further, make clear that portfolio administrators must take steps to identify which customers have received or plan to receive the applicable tax incentives, while affording flexibility in how this may be achieved.
- Include tables to show four-year cumulative goals, consistent with D.21-05-031, and clarify that the annual TSB and energy savings estimates are targets rather than goals.[46]
- Provide that the IOUs' codes and standards budgets should align with their codes and standards potential in the final 2023 potential study, as suggested by PG&E.

Most significantly, SCE and CEDMC maintain that the Commission should adopt Scenario 1, repeating and adding to their prior arguments that indicate Scenario 2 is not realistically achievable. This decision maintains that Scenario 2 reflects aggressive yet achievable goals. In response to SoCalGas's recommendation to include the CEC's Reliability Analysis of the CARB SIP Memo, modeling/forecasting grid impacts of state policies is more appropriately within scope of other proceedings related to grid planning.

This decision confirms that SCE's GWh targets and goals for codes and standards are correct, and that the "low-income" building types identified by SDG&E are appropriately included in the potential and goals study, as these building types are not applicable to the Energy Savings Assistance program.

[46] D.21-05-031, Conclusion of Law 24.

10. Assignment of Proceeding

Genevieve Shiroma is the assigned Commissioner and Julie A. Fitch and Valerie U. Kao are the assigned ALJs in this proceeding.

Findings of Fact

1. Pub. Util. Code Sections 454.55 and 454.56 require the Commission, in consultation with the CEC, to identify all potential achievable cost-effective electricity and natural gas efficiency savings and "establish efficiency targets" for electrical and gas corporations to achieve.

2. The Commission sets electricity and natural gas efficiency savings "targets," *i.e.,* goals, for the IOUs.

3. The Commission's policy objective in setting energy efficiency goals is to set goals that are realistic and aggressive, yet achievable.

4. Scenario 2 of the 2023 final potential study includes reference assumptions for savings from IRA tax credits and for fuel substitution savings, and sets aggressive yet achievable energy savings goals.

Conclusions of Law

1. It is reasonable to establish goals that are "aggressive yet achievable," and that reflect an accurate estimation of energy efficiency cost-effectiveness.

2. It is reasonable to adopt energy efficiency goals for 2024 – 2035 based on Scenario 2 of the 2023 final potential study, which includes reference assumptions for IRA tax credits and for fuel substitution savings, because it best reflects the Commission's intent to set aggressive yet achievable energy savings goals.

3. Because the 2023 potential study (draft and final) assumes energy savings from IRA tax credits, it is reasonable to provide explicit evaluation guidance to

encourage implementers to leverage the IRA in marketing and promoting energy efficiency projects.

O R D E R

IT IS ORDERED that:

1. The total system benefit and energy savings goals for 2024 – 2035 for Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company based on Scenario 2 of the 2023 final potential study are adopted as detailed in Section 5 of this decision.

2. Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, Southern California Gas Company, and all other energy efficiency portfolio administrators must collect and maintain documentation showing implementers' involvement in using the Inflation Reduction Act (IRA) tax credits to influence customer adoption, for programs where marketing and promotion of IRA tax credits occurs. The portfolio administrators must take steps to identify which customers have received or plan to receive credit for IRA program influence in their ex-post evaluations.

3. The Codes and Standards Statewide Advocacy Program budget allocations among Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company shall be aligned with the distribution methodology for codes and standards potential and goals established by the final 2023 potential study. Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company shall use the annual true-up advice letters that are to be submitted 60 days after the energy efficiency

goals are adopted to adjust their Codes and Standards budgets to align with their codes and standards potential in the final 2023 potential study.

4. Rulemaking 13-11-005 remains open.

This order is effective today.

Dated August 10, 2023, at San Francisco, California.

ALICE REYNOLDS
President
GENEVIEVE SHIROMA
DARCIE L. HOUCK
JOHN REYNOLDS
Commissioners

Commissioner Karen Douglas, being necessarily absent, did not participate.

ATTACHMENT 1

REPORT TEMPLATE