

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298



Pacific Gas & Electric Company
ELC (Corp ID 39)
Status of Advice Letter 6546E
As of September 13, 2023

Subject: Joint Utility Tier 3 Advice Letter to Request an Adjustment to the Approved Program Metrics Used to Determine Per Se Reasonableness Pursuant to Decision 18-05-040 Ordering Paragraph 2

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CPUC Contact Information:

edtariffunit@cpuc.ca.gov

AL Certificate Contact Information:

Darrah Morgan

(626) 302-2086

AdviceTariffManager@sce.com

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298



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April 1, 2022

ADVICE 4761-E
(Southern California Edison Company U 338-E)

ADVICE 6546-E
(Pacific Gas and Electric Company ID U 39-E)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
ENERGY DIVISION

SUBJECT: Joint Utility Tier 3 Advice Letter to Request an Adjustment to the Approved Program Metrics Used to Determine *Per Se* Reasonableness Pursuant to Decision 18-05-040 Ordering Paragraph 2

I. PURPOSE

Southern California Edison Company (SCE) and Pacific Gas and Electric Company (PG&E) (hereinafter referred to as the Joint Utilities) jointly submit this Tier 3 Advice Letter pursuant to Decision (D.) 18-05-040 (the Decision), Ordering Paragraph (OP) 2, to request approval to adjust the approved program metrics, including the program timeline, used to determine per se reasonableness for their respective medium- and heavy-duty (MDHD) vehicle charging infrastructure programs.

II. BACKGROUND

On January 20, 2017, the Joint Utilities submitted applications requesting approval of their respective Transportation Electrification Proposals, pursuant to Senate Bill (SB) 350. SCE submitted Application (A.) 17-01-021 to request approval of its Priority Review and Standard Review programs, including its MDHD vehicle charging infrastructure program, now known as Charge Ready Transport (CRT). PG&E submitted A.17-01-022 requesting approval of its Priority Review and Standard Review programs, including its non-light-duty electric vehicle make-ready program, FleetReady, now known as EV Fleet.

On June 6, 2018, the California Public Utilities Commission (the Commission or CPUC) issued the Decision approving the Joint Utilities' applications with modifications.¹ The Decision also established a set of criteria or *per se* reasonableness metrics for each program that would allow the utilities to record and recover program costs in rates prior to review for reasonableness, with the understanding that the Commission would conduct a reasonableness review of costs after the fact if a program's performance did not meet the criteria and therefore was not considered to be *per se* reasonable.²

For SCE, the Decision approved a total budget of \$342,656,222 (for infrastructure and non-infrastructure) to support SCE's MDHD CRT program.³ Pursuant to OP 32, SCE's CRT program will be considered *per se* reasonable provided that:

- (1) A minimum of 870 make-ready installations are fully contracted for by 2024 and 8,490 additional vehicles are electrified that are directly attributable to the authorized program achieved by site hosts procuring at least two electric vehicles or converting at least two diesel fueled vehicles to electric;
- (2) A minimum of 15 percent of the infrastructure budget serves transit agencies;
- (3) A maximum of 10 percent of the infrastructure budget serves forklifts;
- (4) A minimum of 40 percent of the infrastructure budget results in installations in disadvantaged communities (DACs);
- (5) A minimum of 25 percent of the infrastructure budget services vehicles operating at ports and warehouses;
- (6) Rebate levels for beach head sectors and customers in disadvantaged communities should be established in consultation with each utility's respective Program Advisory Council;
- (7) Rebate levels should not exceed 50 percent of the charger cost; and
- (8) A maximum of 10 percent of the infrastructure budget is spent on program administration.⁴

¹ SCE submitted Application (A.) 17-01-021 and PG&E submitted A.17-01-022.

² See Decision (D.) 18-05-040, p. 105 (June 6, 2018).

³ *Id.* at pp. 103-04.

⁴ *Id.* at pp. 158-59.

For PG&E the Decision approved a total budget of \$236,324,661 (for infrastructure and non-infrastructure) to support PG&E's EV Fleet Program. Pursuant to OP 31, PG&E's EV Fleet program will be considered *per se* reasonable provided that:

- (1) A minimum of 700 make-ready installations are fully contracted for by 2024 and 6,500 additional vehicles are electrified that are directly attributable to the authorized program achieved by site hosts procuring at least two electric vehicles or converting at least two diesel fueled vehicles to electric;
- (2) A minimum of 15 percent of the infrastructure budget serves transit agencies;
- (3) A maximum of 10 percent of the infrastructure budget serves forklifts;
- (4) A minimum of 25 percent of the infrastructure budget results in installations in disadvantaged communities;
- (5) Rebate levels for beach head sectors and customers in disadvantaged communities should be established in consultation with each utility's respective Program Advisory Council;
- (6) Rebate levels should not exceed 50 percent of the charger cost; and
- (7) A maximum of 10 percent of the infrastructure budget is spent on program administration.⁵

The Decision further ordered in OP 2 that after consultation with the Energy Division and each respective Program Advisory Council (PAC), SCE and PG&E "may file a Tier 3 Advice Letter after two years of program implementation to adjust the approved program budgets and metrics used to determine *per se* reasonableness."⁶ The Advice Letter is required to include at a minimum (1) a summary of program status to date; (2) a breakdown of utility-side, customer-side and other costs by sector; (3) a description of the major cost drivers for utility-side and customer-side infrastructure; and (4) an explanation of any site cost caps the utility used to determine customer eligibility for the program or other metrics the utility used to control program costs."⁷

III. **DISCUSSION**

Pursuant to OP 2, the Joint Utilities herein request to adjust the approved metrics, including the timeline, used to determine *per se* reasonableness.

⁵ *Id.* at pp. 158-59.

⁶ *Id.* at pp. 150, OP 2.

⁷ *Id.* at pp. 150, OP 2.

A. Summary of Program Statuses To-Date

SCE's CRT Program

On September 18, 2018, SCE submitted Advice Letter 3864-E to summarize the authorized budget for SCE's MDHD vehicle charging infrastructure program pursuant to the Decision and to establish Schedule Charge Ready Transport Program (CRTP) with the CRT participation requirements. The CRTP Schedule was approved in Resolution E-4967 on February 7, 2019, and CRT officially launched in May 2019. The CRTP Schedule requires that, for a commercial customer to be eligible to participate in CRT, the customer must: (1) procure at least two electric vehicles or convert at least two fossil-fueled vehicles to electric; (2) purchase and install qualified EVSE for the eligible vehicles; (3) agree to maintain and operate the installed EVSE for at least 10 years; and (4) provide usage data for a minimum of five years after the EVSE is installed.⁸ Additionally, CRT program participants are required to enroll in a time-of-use rate plan and adhere to all CRT program terms and conditions.

Through customer conversations and a fleet research study, SCE developed an integrated approach to educate customers about the benefits of electrification, inform them about CRT, and provide them with resources and tools needed to apply. Since its inception in 2019, CRT has strived to support a variety of non-residential customers in electrifying their fleets, including school districts, commercial customers, warehouses and distribution centers, transit agencies, ports, government agencies, and other industry customers. As of February 28, 2022, SCE was working with 153 sites to potentially support over 4,000 MDHD EVs.⁹ CRT has executed Program Agreements for 70 sites, 46 of which are located in DACs, which will result in the electrification of 1,485 MDHD EVs. This equates to 8 percent of the Decision site goal and 17.5 percent of the Decision vehicle goal. Construction of the make-ready infrastructure was complete at 32 sites to support 378 MDHD EVs.

PG&E's EV Fleet Program

On August 31, 2018, PG&E submitted Advice Letter 5369-E to summarize the budget authorized by the Decision for its MDHD vehicle charging infrastructure program. The EV Fleet budget was approved in Resolution E-4966 on November 29, 2018, and the program officially launched in June 2019. In order to be eligible for participation in the EV Fleet Program, customers must: (1) procure at least two electric vehicles or convert at least two fossil-fueled vehicles to electric; (2) purchase and install qualified EVSE for the eligible vehicles; (3) agree to maintain and operate the installed EVSE for at least 10 years; and (4) provide usage data for a minimum of five years after the EVSE is installed.

⁸ Schedule CRTP, Sheet 1. Available at: https://library.sce.com/content/dam/sce-doclib/public/regulatory/tariff/electric/schedules/other-rates/ELECTRIC_SCHEDULES_CRTP.pdf

⁹ Data as of February 28, 2022. Figures do not include CRT Applications that were on hold, rejected/disqualified, or withdrawn.

In its first two years of program implementation, EV Fleet has utilized several strategies to identify and enroll program participants across all sectors of the MDHD market. The program currently relies heavily on targeted solicitation of companies in various MDHD industries, but other tactics employed include producing multiple sector-oriented webinars, networking at industry events, and partnering with dealerships and financiers to socialize the program. As of February 28, 2022, PG&E was working with 165 sites to potentially support over 4,400 MDHD EVs.¹⁰ EV Fleet has executed contracts for 99 sites, 38 of which are located in DACs, which will result in the electrification of 1,737 MDHD EVs. This is equivalent to 14 percent of the Decision site goal and 27 percent of the vehicle goal, whereas the program timeline has nearly reached the halfway mark of its allotted 5-year duration. Construction of the make-ready infrastructure was complete at 33 sites, which will support charging of 355 MDHD EVs.

While the Joint Utilities are making progress toward the Decision goals, they have learned valuable lessons throughout their first two years of program implementation regarding the state of the MDHD market, customer sophistication, and balancing both site and vehicle goals while meeting and maintaining cost thresholds. Given these learnings, the Joint Utilities are seeking to modify the metrics used to determine *per se* reasonableness in accordance with OP 2 of the Decision. The Joint Utilities' proposed adjustments still intend to spur electrification, offer continued support for fleets, and reduce GHG emissions.

B. Request to Adjust Metrics and Timeline

The Joint Utilities are requesting to adjust three metrics used to determine *per se* reasonableness, including the existing due date to achieve site commitments, each program's site goals, and the requirement that all sites procure at least two electric vehicles. The Joint Utilities are not requesting additional funds for their respective programs in this advice letter. In developing these proposals, the Joint Utilities engaged and consulted Energy Division Staff and their Program Advisory Councils (PACs) for feedback and input on each metric adjustment.

On October 21, 2021 and March 3, 2022, the Joint Utilities hosted joint PAC meetings with over 100 attendees from industry to discuss their proposals and solicit virtual feedback during the meetings. The Joint Utilities also gave stakeholders the opportunity to provide written feedback on their proposed adjustments. The Joint Utilities considered stakeholder input received during and after both meetings to refine the adjustments proposed herein.¹¹

¹⁰ Data as of February 28, 2022. Figures do not include EV Fleet applications that have been cancelled.

¹¹ For example, the Joint Utilities initially considered proposing an adjustment to the budget categories included in the Decision. The Joint Utilities received feedback from stakeholders during and after the October 21, 2021 meeting stating that it would be premature to make changes to the respective budget categories at this time and decided not to proceed with the proposal.

a. Extending the Duration of the Joint Utilities' Programs

Although the Joint Utilities are making progress in securing site commitments, both programs experienced slower initial demand than originally anticipated, and the Joint Utilities have determined that additional time is needed to achieve their program goals. Despite efforts to engage with and educate customers about the benefits of electrification and the Joint Utilities' program offerings through targeted outreach, participation in the Joint Utilities' programs has been affected primarily by two factors: market nascency and COVID-19 impacts on potential program participants.

Availability of adequate vehicle types across multiple MDHD vehicle segments remains a barrier and has impacted participation in the Joint Utilities' programs. In SCE's case, many participants were awaiting vehicles that only became available to order starting in 2021,¹² which delayed their ability to demonstrate vehicle commitments that are necessary for participation. PG&E's customers also expressed challenges in testing and procuring electric vehicles that meet their business needs. Additionally, acquiring and electrifying MDHD EVs generally require greater up-front capital investments than their diesel counterparts, which can make it challenging for participants who may not have large fleets or budgets to secure the funding necessary to participate in the Joint Utilities' programs within the allotted program duration. Lastly, understanding electrical infrastructure, charging, and vehicle needs can require significant coaching and advice. Selecting appropriate charger types that match a participant's vehicle choices and operational needs is an important part of developing a concrete electrification plan and delays in these decisions has significantly elongated the timeframe for a customer to commit to the program. In the first two years of program implementation, the Joint Utilities have learned that there can be a steep learning curve and varying degrees of customer sophistication with these elements, further contributing to slower program uptake.

In addition to market-related setbacks, the Joint Utilities' programs experienced slowdowns due to COVID-19. Participants in both IOU programs were impacted by the pandemic in a myriad of ways, including business slowdowns causing reduced capital budgets, delayed availability of vehicles, turnover of project champions, and shifting project scopes. In SCE's case, 14 sites experienced COVID-related setbacks in 2020, which resulted in delays and projects being placed on hold. Two of those 14 sites ultimately withdrew their CRT applications. Several CRT projects also experienced slower permitting review and issuance due to COVID-19 delays. The number of new applications for PG&E's EV Fleet program declined significantly after the onset of the pandemic, from 91 applications received in 2019 to 37 received in 2020.

Given these market and COVID-19 induced delays, and considering the longer operational lead times and procurement cycles for MDHD EVs, the Joint Utilities propose to extend the timeframe for both programs to secure site commitments that are "fully contracted for by

¹² Multiple Class 8 trucks are now available to order but deliver will not begin until later this year at the earliest.

2024”¹³ out to 2026.¹⁴ Extending the time frame to secure commitments for both programs to 2026 will enable the Joint Utilities to continue actively engaging with and supporting fleet customers as they emerge from the near-two-year pandemic ready to develop and implement their electrification plans. To assist customers with the steep learning curve, the Joint Utilities plan to continue their ongoing customer marketing, education, and outreach efforts, which stakeholders expressed interest in during the October 21, 2021 joint PAC meeting. In addition to existing customer marketing and outreach efforts for CRT, SCE’s Transportation Electrification Advisory Services (TEAS) Program intends to provide potential eligible CRT applicants with enhanced education and tools such as EV readiness studies, webinars and workshops, grant writing assistance, and events to further support their transition to electric fleets, which can help increase participation in CRT. PG&E has recently deployed a new Total Cost of Ownership tool to enable customers to evaluate the financial feasibility of electrifying their MDHD fleets and learn more about currently available MDHD EVs.

Additional time to secure site commitments will also allow the programs to support customers seeking to adopt vehicles that have not yet hit the market. CALSTART suggests a 250 percent increase in zero-emission heavy-duty truck models by 2023, from 8 models in 2020 to 28 in 2023,¹⁵ and extending the duration of both programs will allow a greater number of customers procuring these vehicles, among others, to benefit. Extending the Joint Utilities’ MDHD infrastructure programs will enable continued support of customers’ electrification plans as the MDHD market recovers from the pandemic and ultimately matures.

b. Modifications to the Joint Utilities’ Site Goals

A primary objective of the Joint Utilities’ MDHD infrastructure programs is to help California achieve its climate goals by reducing greenhouse gas (GHG) emissions from the non-light duty sector, which is “the source of significant GHG, nitrogen oxide (NOx) and other emissions, but which is seriously lagging behind the light-duty vehicle sector in the adoption and deployment of [zero-emission vehicles] ZEVs.”¹⁶ The Decision’s inclusion of a two-vehicle minimum requirement for participation in CRT and EV Fleet is unique to the Joint Utilities’ MDHD programs, underscoring their vehicle-oriented nature. To ensure support for sites with limited resources or smaller vehicle deployment plans, the Decision also stipulated that both programs achieve site targets in addition to their vehicle goals.¹⁷ The Joint Utilities recognize that increased and accelerated adoption of MDHD EVs is essential to reducing GHG emissions and thus, prioritizing and potentially exceeding the vehicle goals of both programs is paramount.

¹³ D.18-05-040 at pp. 157-58, OPs 31, 32.

¹⁴ Design, permitting, construction, and rebate issuance, where applicable, for sites that execute Program Agreements through 2026 may extend beyond December 31, 2026.

¹⁵ CALSTART, *Biggest Zero-Emission Trucks Hit Market at Accelerating Rate, Boast Impressive Ranges*, May 18, 2021, available at <https://www.calstart.org/zeti-analytics-may2021/>.

¹⁶ Decision 18-05-040 at p. 86.

¹⁷ *Id.* at p.105.

Given the nascent state of the MDHD EV market today, both programs have been challenged to recruit sites that can help them achieve their Decision site and vehicle goals while remaining within their stipulated budgets. The programs have found that there is an inherent trade-off between per-vehicle cost and the number of vehicles being electrified. Sites with low vehicle counts tend to be more costly on a per-vehicle basis, and although enrolling these sites may help the programs achieve their site goals, they also compromise the ability of the programs to achieve their vehicle goals. Conversely, large sites with high vehicle counts are generally more cost-effective on a per-vehicle basis, but the programs are significantly limited in the number of large sites they can support without putting their site goals at risk.

To make the situation more challenging, construction costs have undergone significant inflation since the Joint Utilities' MDHD programs were first scoped in 2017. The Associated General Contractors of America estimates that input costs to nonresidential construction, which includes materials and services, have increased 19.6 percent over the period from December 2020 to December 2021 alone.¹⁸ While the Joint Utilities believe that they can still achieve the MDHD vehicle count targets within their allotted program budgets, increasing construction costs could further impact both programs' budgets in future years. The Joint Utilities request to alleviate some of this pressure on the programs through modifications to their site goals.

Proposed Modifications to SCE's Site Goal

SCE recognizes that the Decision intended to establish both site and vehicle goals to ensure support for sites with limited resources that are adopting fewer vehicles in addition to those adopting a large number of vehicles in the near term.¹⁹ While CRT does support smaller sites deploying fewer vehicles that meet program cost thresholds, the program also recognizes the GHG emission reduction benefits and potential industry learnings associated with larger vehicle deployments. However, due to the inherent trade-off in customers served when balancing both site and vehicle goals, SCE requests that its current goal of "achieving a minimum of 870 sites" is modified to include a range of acceptable site deployments, between 470 and 870 sites, that are fully contracted for by 2026.

SCE developed the proposed range with the intention of achieving its vehicle goal of electrifying 8,490 MDHD EVs and supporting as many sites as possible while remaining within the approved program budget. As of February 28, 2022, 42.8 percent of committed sites are electrifying fewer than 10 vehicles, and 12.8 percent of committed sites are electrifying more than 30 MDHD EVs. However, given the increasing number of vehicles per CRT application overall, the average number of vehicles per site per CRT application exceeds 15 vehicles.²⁰ SCE's proposed range of 470 to 870 sites will afford SCE greater flexibility in balancing

¹⁸ AGC, *Construction Inflation Alert*, Feb. 2022, available at https://www.agc.org/sites/default/files/users/user21902/Construction%20Inflation%20Alert%20Cover%20-%20Feb%202022_000.pdf.

¹⁹ D.18-05-040 at p.105.

²⁰ Program data through February 28, 2022. Figures do not include CRT Applications that were on hold, rejected/disqualified, or withdrawn.

support for those sites procuring fewer vehicles with those that adopt a higher number of vehicles, while achieving no less than 54 percent of the Decision's original site goal.

Additionally, introducing an acceptable range of committed sites will enable SCE to support a mix of small and large sites, while remaining within the cost parameters set forth for CRT. In SCE's experience, sites with higher vehicle counts can positively impact CRT's per-vehicle cost metrics and alleviate the per-vehicle cost pressures for smaller sites adopting fewer vehicles without significantly impacting program cost metrics.

Proposed Modifications to PG&E's Site Goal

Through the first two years of EV Fleet, PG&E has sought to recruit a diverse set of customers who are electrifying a wide range of fleet sizes into the program. As of February 28, 2022, 46 percent of committed sites are electrifying 9 vehicles or less and only 2 percent are electrifying more than 50 vehicles. Despite this, the program has an average of 17.5 vehicles electrified per site overall, which is far above the 9.3 vehicles per site average that would be required to meet the Decision site goal for EV Fleet. PG&E has found that enrolling high-vehicle-count sites into the program can alleviate per-vehicle cost pressure for smaller sites, but there are not enough viable smaller sites applying to the program to offset larger applicants when considering the program site goal. Declining high-vehicle-count sites on a site cost basis in order to reserve funds for hypothetical low-cost sites in the future compromises the program's ability to meet both its site goal and its vehicle goal.

Given the ambiguity around which types of sites will be ready to electrify in the future, PG&E would like the ability to offer support to all viable sites, including those with high vehicle counts, that are ready to electrify today. To this end, PG&E requests increased flexibility in implementing EV Fleet through the elimination of its goal of a minimum of 700 make-ready installations while maintaining its goal of 6,500 additional vehicles electrified. This is consistent with the approach that was used to evaluate PG&E's other large-scale transportation infrastructure program, EV Charge Network, which had only a total number of ports metric and did not have a total number of sites metric.²¹ This modification will still enable EV Fleet to achieve the same GHG emissions and pollution reductions. It is PG&E's intention to continue implementing the EV Fleet program until funds are exhausted or the program duration has expired, with the expectation that the vehicle goal may be exceeded. The program will also continue to seek out applicants with low vehicle counts and enroll those that are eligible and financially viable.

c. Adjusting Program Eligibility Requirements to Enable Support for Public MDHD Charging Projects

Although the Decision's inclusion of a two-vehicle procurement minimum²² ensures that the Joint Utilities' MDHD infrastructure programs directly contribute to the adoption of MDHD EVs,

²¹ D.16-12-065, p. 83, OP 1 (Dec. 21, 2016).

²² D.18-05-040 at pp. 157-58, OPs 31, 32.

the requirement indirectly precludes applicants seeking to develop public MDHD charging sites from receiving program funding. However, public EV charging infrastructure options will be key for fleet operators without a private depot or home base to refuel. According to a Port of Long Beach (POLB) public charging port study, approximately 58 percent of battery electric trucks could require public charging support.²³ Additionally, establishing public MDHD charging options along corridors is critical to enabling the electrification of long-haul trucking and the Class 8 truck segment, which will benefit communities near ports, railyards, distribution centers, and freight corridors that are disproportionately harmed by MDHD vehicle emissions.²⁴ Recognizing the importance of expanding EV charging infrastructure access to ensure a more full and more equitable MDHD market transformation, the Joint Utilities request to adjust the Decision's *per se* reasonableness metrics regarding vehicle procurements and conversions for public charging sites. Specifically, the Joint Utilities propose to modify the existing Decision metric requiring site hosts to "procure at least two electric vehicles or convert at least two diesel fueled vehicles to electric"²⁵ to include a provision that allows MDHD public charging site hosts to instead "support at least two electric vehicles".²⁶ Modifying this eligibility requirement only for applicants seeking to develop MDHD public charging projects will enable both programs to provide an additional avenue of support for independent fleet operators lacking dedicated places to charge and those in the long-haul trucking segment. Applicants seeking program support for private, captive fleet charging infrastructure would still be required to adhere to the Decision's existing two-vehicle procurement minimum.

Although MDHD public charging site hosts may not acquire EVs directly, it is important that both IOU programs still have a mechanism for attributing support for these MDHD public charging sites toward their vehicle goals. Rather than collecting proof of procurement or conversion documentation from MDHD public charging site hosts, the Joint Utilities propose to adopt a simple methodology informed by the California Energy Commission's (CEC's) AB 2127 Report and a POLB port study to establish a fair number of vehicles supported by each MDHD public charging site for both programs. An overview of the methodology, which was presented to members of the Joint Utilities' Program Advisory Councils on March 3, 2022 and CEC staff on March 23, 2022 for feedback, is included in Figure 1 below.

²³ Port of Long Beach, *Fueling the Future Fleet: Assessment of Public Truck Charging and Fueling Near the Port of Long Beach*, p. 9, Sept. 2021, available at <https://thehelm.polb.com/download/379/zero-emissions/12744/final-polb-charging-study-12-sep-2021.pdf>.

²⁴ California Energy Commission's Draft AB 2127 Report, pg. 25.

²⁵ D.18-05-040 at pp. 157-58, OPs 31, 32.

²⁶ If the Joint Utilities' proposal to enable support for MDHD public charging is approved by the CPUC, SCE will submit a Tier 1 Advice Letter to conform SCE's Schedule CRTP, *Charge Ready Transport Program*, with the approved Tier 3 Advice Letter.

Figure 1: Methodology to Determine the Number of MDHD Vehicles Supported at MDHD Public Charging Sites²⁷

$$\begin{array}{rcccl} \mathbf{180,000} & & & & \\ \text{Number of battery} & & & & \\ \text{electric trucks in 2030} & \times & \mathbf{58\%} & & \\ & & \text{Est. share of battery} & & \\ & & \text{electric trucks supported} & & \\ & & \text{by public charging} & & \\ \hline & & & = & \mathbf{6 MDHD vehicles per} \\ & & & & \mathbf{1 DCFC charger} \\ & & & & \\ & & \mathbf{16,000} & & \\ & & \text{Number of public DCFC chargers} & & \\ & & \text{needed to support battery electric} & & \\ & & \text{trucks} & & \end{array}$$

Leveraging the CEC’s projected number of battery electric trucks on the road in California in 2030, the POLB port study’s estimated share of trucks that could need public charging support, and the CEC’s projected number of public DCFC chargers needed to support battery electric trucks in 2030, the Joint Utilities intend to count six MDHD vehicles supported for every DCFC charger installed at an MDHD public charging site.²⁸ Six MDHD vehicles per charger is a conservative representation of the number of vehicles supported by an MDHD public charging site and ensures that the Joint Utilities do not over-attribute vehicles electrified at these sites to their programs. Moreover, establishing a fixed number of vehicles supported per MDHD public charging site provides a consistent approach for the Joint Utilities to evaluate MDHD public charging applications and comply with their proposed modified Decision requirement of supporting at least two MDHD electric vehicles.

The Joint Utilities intend to assess MDHD public charging applications to ensure that they support MDHD public charging sites that will help California achieve its broader climate goals and ensure a more equitable market transformation. Because MDHD public charging is so nascent, the Joint Utilities will continue to refine their evaluation criteria for these sites as applications are submitted. This will allow both programs to listen to the needs of their respective markets rather than prescribing what those needs should be. Additionally, MDHD public charging sites that receive program funding will be required to adhere to both programs’ existing data and reporting requirements. This includes the installation of charging equipment with networking capabilities that will enable the Joint Utilities to track charger utilization at these sites. If this proposal is approved, the Joint Utilities will report on MDHD Public Charging projects in their annual SB 350 reports.

²⁷ The projected number of battery electric trucks in 2030 and number of public DCFC chargers needed to support battery electric trucks is derived from the CEC’s AB 2127 Report at p. 55, Table 12. The share of battery electric trucks that could require public charging is derived from the POLB’s Public Truck Charging and Fueling Assessment Study at p. 9.

²⁸ CEC staff members indicated that the Joint Utilities’ proposed methodology appeared reasonable but requested that the Joint Utilities revisit the inputs to their proposed methodology as new, relevant CEC data for the AB 2127 Report is made available. The Joint Utilities agreed.

C. Breakdown of Utility-Side, Customer-Side, and Other Costs by Sector

SCE’s CRT Costs

As of March 15, 2022,²⁹ four completed CRT projects were fully invoiced, and CRT had issued one Make-Ready Rebate for customer-built infrastructure.

Table 1: SCE CRT Program Cost Summary³⁰

Cost Summary	All Sectors³¹
Count of Sites	4
Count of Vehicles	62
Average make-ready cost of infrastructure on the utility side of the meter (TTM)	\$38,538
Average make-ready cost of infrastructure on the customer side of the meter (BTM)	\$70,824
Average Rebate amount applied for EVSE	\$34,220
Average Rebate amount applied for customer-side infrastructure³²	N/A

PG&E’s EV Fleet Costs

As of February 28, 2022, 26 EV Fleet sites were fully invoiced.

Table 2: PG&E EV Fleet Program Cost Summary³³

Cost Summary	School Bus	All Other Sectors
Count of Sites	17	9
Count of Vehicles	189	92
Average make-ready cost of infrastructure on the utility side of the meter (TTM)	\$179,142	\$129,496

²⁹ SCE is including CRT cost information through March 15, 2022 rather than February 28, 2022 in an effort to include as many data points as possible. Additional CRT sites are complete and in the process of being fully closed out.

³⁰ Program costs are included for completed sites that have been fully invoiced with charging equipment rebates paid, where applicable, as of March 15, 2022.

³¹ SCE is combining program costs from multiple market sectors due to the limited number of sites per market sector. SCE intends to report average costs by market sector as more sites have been completed.

³² As of March 15, 2022, SCE issued one customer-side make-ready infrastructure rebate, resulting in a statistically insignificant number of sites to include in this submission.

³³ Program costs are included for sites that have been fully invoiced as of February 28, 2022.

Average make-ready cost of infrastructure on the customer side of the meter (BTM)	\$0	\$0
Average rebate amount applied for EVSE ³⁴	\$165,882	\$58,333
Average rebate amount applied for customer-side infrastructure ³⁵	\$41,493	\$48,362

D. Description of Major Cost Drivers for Utility-Side and Customer-Side Infrastructure

In performing site assessments and designing and constructing projects for numerous fleet customers, the Joint Utilities have identified cost drivers for their utility-side and customer-side infrastructure deployments, which extend to projects beyond those included in Table 1 and Table 2.

Utility-Side Infrastructure Cost Drivers

Utility-side infrastructure costs are primarily driven by two factors: the level of infrastructure required to support a project and the associated civil improvements. Significant utility-side upgrades may be required to bring power to sites in remote locations or those without existing electrical infrastructure available to support the charging equipment, regardless of charging power output level. Additionally, sites requesting to add more than 300 kVA or higher-powered charging are often not equipped with adequate existing utility infrastructure to support the charging load and may necessitate new transformers and other infrastructure upgrades, even when load management strategies are utilized on site. With regard to civil improvements, the length and size of the trenching required is a key driver of utility-side infrastructure costs. Furthermore, MDHD sites can often include thick concrete that is required to be heavily reinforced, which can be difficult and expensive to restore after trenching.

Customer-Side Infrastructure Cost Drivers

Similar to utility-side infrastructure costs, SCE has experienced that customer-side infrastructure costs are also driven by the level of behind-the-meter (BTM) infrastructure required to support the project, including switchgears, distribution panels, and step-down transformers, and civil improvements, including trenching and restoration. Sites requiring larger BTM equipment and longer trenching tend to be more expensive. PG&E’s EV Fleet Program has not yet constructed any BTM infrastructure, but PG&E believes that BTM cost

³⁴ Reflects average of maximum available EVSE rebate amounts, since EVSE rebates are issued over multiple years.

³⁵ Includes infrastructure rebates committed for fully invoiced sites that have not yet received rebate payments.

drivers borne by site hosts mirror those experienced by SCE as evidenced by our experience constructing BTM infrastructure for the EV Charge Network program.

E. Explanation of Any Site Cost Caps the Utility Used to Determine Customer Eligibility for the Program or Other Metrics Used to Control Program Costs

The Joint Utilities review each application received and consider multiple factors in determining program eligibility, including but not limited to the number and timing of vehicles acquired, the financial viability of the applicant, overall complexity and cost of the project, and remaining program funds available. To control program costs, both programs leverage existing equipment whenever possible and utilize cost metrics to determine the level of program support for each site.

SCE's Approach to Controlling Program Costs

In assessing sites for viability, SCE requires each CRT applicant to submit a vehicle acquisition plan (VAP) that reflects their EV procurement plans over a ten-year horizon and then works with customers to understand their plans over time. The VAP informs the infrastructure required and is then balanced by the level of infrastructure that the program can support. To determine customer eligibility and overall CRT support for projects, SCE developed cost thresholds that are used in each site evaluation that ensure program funds are expended to maximize benefits to customers and minimize costs to the program.

SCE leveraged the budget assumptions included in the Decision to inform the establishment of per-vehicle cost thresholds for each vehicle type, which it applies to each site evaluation. Projects that meet per-vehicle cost thresholds and other program requirements are accepted into CRT. Projects that do not meet per-vehicle cost thresholds and/or other program requirements are assessed further, and SCE engages with customers to explore opportunities to adjust the project scope, where possible, in these instances. CRT may consider accepting sites that exceed program cost thresholds if they hold other merit, such as the potential to provide significant learnings that will advance the industry or have a positive impact on a known DAC or trucking corridor, and do not stand to significantly impact program cost metrics.

PG&E's Approach to Controlling Program Costs

When evaluating EV Fleet sites, PG&E works with each site host to understand their vehicle acquisition plan and operational characteristics. Engineers then determine the level of infrastructure that will be required to support the expected charging load, and a cost estimate is developed that aims to minimize site costs while following PG&E's policies and procedures on infrastructure installations. Automated load management (ALM) is also evaluated as a potential strategy for reducing site costs where appropriate.

In order to control program site costs, PG&E has used the Decision as a starting point to evaluate site eligibility for the EV Fleet. The Decision allocates \$148,546,450 towards make-ready infrastructure, allowing for a program average of \$212,209 per site and \$22,853 per vehicle. These values inform per-site and per-vehicle cost thresholds that are examined on a regular basis to adjust for remaining uncommitted funds and the number of outstanding vehicles needed to meet program goals. Eligible sites that fall below the per-site and per-vehicle thresholds are accepted into the program. For sites that fall above the per-site cost threshold, PG&E assesses the impact of enrolling the project into the program against the remaining available funds for future sites. Despite the existence of cost thresholds, EV Fleet may consider enrolling sites that exceed these values if they hold other merit, such as those that may have an outsized impact on awareness of fleet electrification in California or those that help the program achieve its DAC or Transit goals. These assessment criteria are complicated and imperfect, which underscores the challenges that the program faces in attempting to achieve its goals while controlling for its budget.

TIER DESIGNATION

Pursuant to OP 2 of D.18-05-040, this advice letter is submitted with a Tier 3 designation.

EFFECTIVE DATE

This advice letter will become effective upon Commission Resolution.

NOTICE

Anyone wishing to protest this advice letter may do so only electronically. Protests must be received no later than 20 days after the date of this advice letter. Protests should be submitted to the CPUC Energy Division at:

E-mail: EDTariffUnit@cpuc.ca.gov

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

Shinjini C. Menon
Managing Director, State Regulatory Operations
E-mail: AdviceTariffManager@sce.com

and

Tara S. Kaushik
Managing Director, Regulatory Relations
c/o Karyn Gansecki
E-mail: Karyn.Gansecki@sce.com

April 1, 2022

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

In accordance with General Rule 4 of GO 96-B, SCE is serving copies of this advice letter to the interested parties shown on the attached GO 96-B and R.18-12-006, and R.19-10-005 service lists. Address change requests to the GO 96-B service list should be directed by electronic mail to AdviceTariffManager@sce.com or at (626) 302-3719. For changes to all other service lists, please contact the Commission's Process Office at (415) 703-2021 or by electronic mail at Process_Office@cpuc.ca.gov.

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

For questions, please contact Melodee Black at (626) 302-4728 or by electronic mail at Melodee.Black@sce.com.

Southern California Edison Company

/s/ Shinjini C. Menon
Shinjini C. Menon

SCM:mb:cm
Enclosures



ADVICE LETTER SUMMARY

ENERGY UTILITY



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

Company name/CPUC Utility No.: Southern California Edison Company (U 338-E)

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Darrah Morgan
 Phone #: (626) 302-2086
 E-mail: AdviceTariffManager@sce.com
 E-mail Disposition Notice to: AdviceTariffManager@sce.com

EXPLANATION OF UTILITY TYPE

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 4761-E et al.

Tier Designation: 3

Subject of AL: Joint Utility Tier 3 Advice Letter to Request an Adjustment to the Approved Program Metrics Used to Determine Per Se Reasonableness Pursuant to Decision 18-05-040 Ordering Paragraph 2

Keywords (choose from CPUC listing): Compliance

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: Decision 18-05-040

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

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

Confidential treatment requested? Yes No

If yes, specification of confidential information:

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

Resolution required? Yes No

Requested effective date:

No. of tariff sheets: -0-

Estimated system annual revenue effect (%):

Estimated system average rate effect (%):

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

Tariff schedules affected: None

Service affected and changes proposed¹:

Pending advice letters that revise the same tariff sheets: None

¹Discuss in AL if more space is needed.

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

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

Name: Shinjini C. Menon
Title: Managing Director, State Regulatory Operations
Utility Name: Southern California Edison Company
Address: 8631 Rush Street
City: Rosemead
State: California Zip: 91770
Telephone (xxx) xxx-xxxx: (626) 302-3377
Facsimile (xxx) xxx-xxxx: (626) 302-6396
Email: advicetariffmanager@sce.com

Name: Tara S. Kaushik c/o Karyn Gansecki
Title: Managing Director, Regulatory Relations
Utility Name: Southern California Edison Company
Address: 601 Van Ness Avenue, Suite 2030
City: San Francisco
State: California Zip: 94102
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx: (415) 929-5544
Email: karyn.gansecki@sce.com

ENERGY Advice Letter Keywords

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

**PG&E Gas and Electric
Advice Submittal List
General Order 96-B, Section IV**

AT&T Albion Power Company	East Bay Community Energy Ellison Schneider & Harris LLP Engineers and Scientists of California	Pioneer Community Energy
Alta Power Group, LLC Anderson & Poole	GenOn Energy, Inc. Goodin, MacBride, Squeri, Schlotz & Ritchie Green Power Institute Hanna & Morton ICF International Power Technology	Public Advocates Office Redwood Coast Energy Authority Regulatory & Cogeneration Service, Inc. SCD Energy Solutions San Diego Gas & Electric Company
Atlas ReFuel BART		SPURR San Francisco Water Power and Sewer Sempra Utilities
Barkovich & Yap, Inc. Braun Blasing Smith Wynne, P.C. California Cotton Ginners & Growers Assn California Energy Commission	Intertie	Sierra Telephone Company, Inc. Southern California Edison Company Southern California Gas Company Spark Energy Sun Light & Power Sunshine Design Tecogen, Inc. TerraVerde Renewable Partners Tiger Natural Gas, Inc.
California Hub for Energy Efficiency Financing	Intestate Gas Services, Inc. Kelly Group Ken Bohn Consulting Keyes & Fox LLP Leviton Manufacturing Co., Inc.	TransCanada Utility Cost Management Utility Power Solutions Uplight Water and Energy Consulting Wellhead Electric Company Western Manufactured Housing Communities Association (WMA) Yep Energy
California Alternative Energy and Advanced Transportation Financing Authority California Public Utilities Commission Calpine	Los Angeles County Integrated Waste Management Task Force MRW & Associates Manatt Phelps Phillips Marin Energy Authority McClintock IP McKenzie & Associates	
Cameron-Daniel, P.C. Casner, Steve Center for Biological Diversity	Modesto Irrigation District NLine Energy, Inc. NRG Solar	
Chevron Pipeline and Power City of Palo Alto	OnGrid Solar Pacific Gas and Electric Company Peninsula Clean Energy	
City of San Jose Clean Power Research Coast Economic Consulting Commercial Energy Crossborder Energy Crown Road Energy, LLC Davis Wright Tremaine LLP Day Carter Murphy		
Dept of General Services Don Pickett & Associates, Inc. Douglass & Liddell		