

**PUBLIC UTILITIES COMMISSION**505 VAN NESS AVENUE  
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Ratesetting

TO PARTIES OF RECORD IN APPLICATION 18-11-003:

This is the proposed decision of Administrative Law Judge Doherty. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's October 24, 2019, Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Parties of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

The Commission may hold a Ratesetting Deliberative Meeting to consider this item in closed session in advance of the Business Meeting at which the item will be heard. In such event, notice of the Ratesetting Deliberative Meeting will appear in the Daily Calendar, which is posted on the Commission's website. If a Ratesetting Deliberative Meeting is scheduled, ex parte communications are prohibited pursuant to Rule 8.2(c)(4)(B).

/s/ ANNE E. SIMONAnne E. Simon  
Chief Administrative Law Judge

AES:jt2

Attachment

Decision PROPOSED DECISION OF ALJ DOHERTY (Mailed 9/23/2019)

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

Application for Approval of Pacific Gas  
and Electric Company's Commercial  
Electric Vehicle Rate. (U39E).

Application 18-11-003

**DECISION APPROVING APPLICATION FOR PACIFIC GAS AND ELECTRIC  
COMPANY'S COMMERCIAL ELECTRIC VEHICLE RATES**

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**DECISION APPROVING APPLICATION FOR PACIFIC GAS AND ELECTRIC COMPANY'S COMMERCIAL ELECTRIC VEHICLE RATES****Summary**

This decision approves the application of Pacific Gas and Electric Company for new commercial electric vehicle rates and the creation of a new class of customers choosing to take service on the rates. Approving the application is consistent with state law requiring widespread transportation electrification and moderation of demand charges faced by customers charging electric vehicles on existing commercial electricity rates.

The original proposal in the application as modified by the joint stipulation of Pacific Gas and Electric Company and the Public Advocates Office of the California Public Utilities Commission forms the basis of the Commission's approved rates. However, this decision makes certain changes to the joint stipulation's terms. Specifically, Pacific Gas and Electric Company must not collect any non-marginal distribution costs through the new rates. The effect of these changes is to substantially reduce the amount of the subscription charge included in the new rates. This addresses a concern that the subscription charge as proposed by Pacific Gas and Electric Company would burden those customers that build and operate electric vehicle charging stations with low utilization rates.

This decision also requires Pacific Gas and Electric Company to file an application for a real-time electric vehicle commercial rate within the next 12 months. This decision also modifies the original overage subscription charge proposal and replaces it with a different scheme.

This proceeding is closed.

## 1. Background

Pacific Gas and Electric Company (PG&E) filed an application for approval of new commercial rates for load serving electric vehicle service equipment (EVSE) on November 5, 2018. The following parties filed timely responses or protests to the application: Small Business Utility Advocates (SBUA), Peninsula Clean Energy and Marin Clean Energy (Joint CCAs), the Solar Energy Industries Association, Environmental Defense Fund (EDF), the California Energy Storage Alliance (CESA), Greenlots, ChargePoint, Inc. (ChargePoint), EVgo, Inc. (EVgo), Tesla, Inc. (Tesla), the Electric Vehicle Charging Association, General Motors LLC, CALSTART,<sup>1</sup> Plug In America, American Honda Motor Co., Inc., Union of Concerned Scientists, Sierra Club, Electric Motor Werks, Inc., Alliance of Automobile Manufacturers, Siemens, Natural Resources Defense Council (NRDC), Association of Global Automakers, Inc., EVBox, Inc., the Coalition of California Utility Employees (CCUE), and the Public Advocates Office of the California Public Utilities Commission (Public Advocates).

A prehearing conference (PHC) was held on January 22, 2019. Sonoma Clean Power Authority was granted party status at the PHC. A motion for party status by Santa Clara Valley Transportation Authority (VTA) was granted on February 13, 2019. The Assigned Commissioner's Scoping Memo and Ruling (scoping memo) was filed on February 14, 2019.

EDF, Joint CCAs, Public Advocates, EVgo, VTA, NRDC,<sup>2</sup> Tesla, and SBUA served direct testimony by April 5, 2019. EDF, PG&E, SBUA, and Tesla served

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<sup>1</sup> This is CALSTART's official name and not an acronym.

<sup>2</sup> On behalf of itself and CCUE, Sierra Club, Union of Concerned Scientists, Plug In America, Greenlots, Siemens, EVBox, Inc., and the Alliance of Automobile Manufacturers.

rebuttal testimony on May 3, 2019. A status conference was held on May 14, 2019 to discuss preparations for the evidentiary hearing.

The evidentiary hearing in this proceeding was held on May 22 and 23, 2019. Opening briefs were filed on June 21, 2019 and reply briefs were filed on July 8, 2019. The matter was considered submitted on July 8, 2019.

A joint stipulation entered into between PG&E and Public Advocates on May 22, 2019<sup>3</sup> outlined the following commercial electric vehicle (CEV) rates for the Commission's consideration in this proceeding.

Rate Element	CEV-S <sup>4</sup>	CEV-L-S <sup>5</sup>	CEV-L-P <sup>6</sup>
Subscription Charge per Kilowatt (kW) of Peak Demand <sup>7</sup>	\$21.17/10kW block	\$167.75/50kW block	\$153.41/50kW block
Peak Energy Charge	\$0.32166/kilowatt-hour (kWh)	\$0.33410/kWh	\$0.32611/kWh
Off-Peak Energy Charge	\$0.12966/kWh	\$0.12086/kWh	\$0.11723/kWh
Super Off-Peak Energy Charge	\$0.10299/kWh	\$0.09760/kWh	\$0.09457/kWh

<sup>3</sup> Hereinafter "joint stipulation" as memorialized in Exh. JS-01. Attached as Appendix A.

<sup>4</sup> For those customers with peak demands of 100kW or less.

<sup>5</sup> For those customers with peak demands of more than 100kW taking service on secondary voltage.

<sup>6</sup> For those customers with peak demands of more than 100kW taking service on primary voltage.

<sup>7</sup> PG&E proposes a "subscription charge" for its CEV customers similar to data usage plans sold by wireless telecommunication providers. CEV customers would be required to purchase "blocks" of kW to cover their estimated monthly peak kW demand. For example, if a CEV-S customer estimated that their peak monthly demand will be 24kW, they would need to purchase 30kW worth of subscription charges (a 10kW block x 3) to cover the 24kW of estimated peak demand.

The proposed CEV peak period is 4:00 p.m. – 9:00 p.m. all days of the year, and the proposed CEV super off-peak period is 9:00 a.m. – 2:00 p.m. all days of the year. All other hours would fall in the proposed CEV off-peak period. There is no proposed seasonal differentiation in the CEV rates. There are no demand charges or fixed charges proposed for the CEV rates. Costs normally collected by such charges would instead be collected through the subscription charge and energy charges.

## **2. Issues Before the Commission**

The scoping memo sets out the following issues to be resolved in this proceeding:

1. Whether PG&E's proposed CEV rates are reasonable, in compliance with relevant law and Commission decisions and should be approved.
  - a. Are the use cases proposed by PG&E in the development of its CEV rates reasonable?
  - b. Are the load forecasts used to develop the proposed use cases reasonable?
  - c. Do the proposed CEV rates provide adequate fuel switching incentives, when compared to both traditional internal combustion engine-powered vehicles and hybrid vehicles?
  - d. Are the proposed time-of-use (TOU) periods, including the peak period, reasonable?
  - e. Is the lack of seasonal rate differentiation reasonable?
  - f. Is the subscription charge proposal reasonable, and are there other models used in California that could be used instead?
  - g. Is the lack of a dynamic rate option reasonable?
  - h. Is the inclusion of a generation component in the subscription charge reasonable?



2. Does PG&E's proposal reasonably accommodate the customer experience and state policy goals in the following ways:
  - a. Will the proposed CEV rates incent greater adoption of electric vehicles (EV)?
  - b. How will it be ensured that the end user of the EV sees the fuel switching benefit presented by the proposed rate?
  - c. What is the appropriate marketing, education, and outreach (ME&O) that should accompany the new rates, and how should the costs for that be recovered?
  - d. Are the customer eligibility rules proposed by PG&E reasonable?
  - e. How long should the rates remain available before they are reconsidered in a subsequent proceeding?
3. Is PG&E's proposal to create a new rate class for customers taking service on the new CEV rates reasonable?
  - a. Is the proposed 100-kW cutoff between CEV rate schedules reasonable?
  - b. How should any potential cost shift between classes be measured, and if costs shifts are discovered should they be recovered and how should that recovery be accomplished?
  - c. What is the rate impact on other rate classes if the new CEV rate class is created as proposed?
  - d. Are the cost allocators used to create the CEV rate class reasonable?
4. Are the interactions of PG&E's proposal with Community Choice Aggregators (CCA) reasonable?
  - a. Is the calculation and assignment of the Power Charge Indifference Adjustment (PCIA) reasonable?
  - b. How will it be ensured that CCA customers will be able to take advantage of the CEV rates?
  - c. How will CCA customers experience the proposed generation component of the subscription charge?

5. Is it reasonable to evaluate the performance of the CEV rates after their implementation to determine if they are helping to meet Commission objectives and state policy goals?
  - a. If so, what methodology should be used? Should the methodology align with that used in Senate Bill (SB) 350-related proceedings?
  - b. How should the costs of any evaluation be recovered?

To the extent an issue scoped into this proceeding is not moot, it is resolved by this decision.

**3. Are PG&E's proposed EV rates reasonable, in compliance with relevant law and Commission decisions, and worthy of approval?**

The Commission finds that the CEV rate designs proposed by PG&E and modified by this decision are reasonable, in compliance with relevant law and Commission decisions, and should be approved. One substantive modification to PG&E's proposed CEV rate design is made. As more fully discussed below, PG&E shall not collect any non-marginal distribution revenue in the subscription charge (or any other CEV rate element). There are also some other changes made in this decision, such as the elimination of the proposed overage charge. Otherwise, the CEV rate designs as proposed by PG&E and Public Advocates in their joint stipulation are approved.<sup>8</sup>

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<sup>8</sup> The approval of the CEV rate designs in the joint stipulation is non-precedential. In particular, this decision does not endorse the position of Public Advocates that final line transformer loads are non-time varying, or that a hybrid of the "new customer only" and "rental" methods for calculating marginal customer costs is reasonable.

### 3.1. Relevant Law and Commission Decisions

Several elements of statute apply to the Commission's analysis of PG&E's CEV rate proposal. These include sections of the Public Utilities Code added by SB 350 (Stats. 2015, ch. 547) (SB 350) that codifies PG&E's obligation to help California attain widespread transportation electrification,<sup>9</sup> and specifically to increase access to the use of electricity as a transportation fuel.<sup>10</sup> PG&E's CEV rate proposal aims to achieve the goals of SB 350 by creating a lower fueling cost for an EV relative to the fueling cost of an internal combustion engine-powered vehicle. This is commonly known as a fuel switching incentive.

This decision considers whether PG&E's CEV rate proposal provides adequate fuel switching incentives when compared to the price of gasoline for both traditional internal combustion engine-powered vehicles and hybrid vehicles. This decision finds that it does, and therefore PG&E's CEV rate proposal as modified by this decision complies with the requirements of SB 350 on a prima facie basis.<sup>11</sup> This decision orders an evaluation of the performance of customers on the CEV rates to test whether the goals of SB 350 are met in the coming years.

SB 1000 (Stats. 2018, ch. 368) (SB 1000) added a section to the Public Utilities Code that requires the Commission to consider rate strategies that can reduce the effects of demand charges on electric vehicle drivers and fleets, and

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<sup>9</sup> Pub. Util. Code § 701.1(a)(1).

<sup>10</sup> Pub. Util. Code § 740.12(a)(1)(E).

<sup>11</sup> See also NRDC opening brief at 2-4 (generally asserting that PG&E's proposed CEV rates support the goals of SB 350 and promote transportation electrification).

help accelerate the adoption of electric vehicles.<sup>12</sup> PG&E's CEV rate proposal gives the Commission the ability to consider rates that reduce the effects of demand charges, given that the proposed CEV subscription charges represent reduced demand charges when compared to commercial rates that the CEV customer would otherwise use.<sup>13</sup> By considering PG&E's CEV rate proposal the Commission's duty under Public Utilities Code Section 740.15(a)(2) and (a)(3), as created by SB 1000, is discharged with respect to PG&E's service territory.

As pointed out by SBUA, the Commission is also obligated in any rate design proceeding to consider whether the proposed rates are just and reasonable per Public Utilities Code Section 451.<sup>14</sup> Because the CEV rates as modified by this decision comply with the requirements of SB 350, and because in the near-term they will potentially lower the rates of other customer classes, the Commission finds that the CEV rates as modified by this decision are just and reasonable.

SBUA also states that Public Utilities Code Section 454 requires PG&E to show that its CEV rate proposal is justified, and that the Commission must find that the CEV rate proposal is justified.<sup>15</sup> For the reasons stated above with respect to Public Utilities Code Section 451, the Commission finds that the CEV rate proposal as modified by this decision is justified.

Finally, there are various Commission decisions that consider rate design principles generally and EV rate design issues specifically. Use of the fuel

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<sup>12</sup> Pub. Util. Code § 740.15(a)(2).

<sup>13</sup> Exh. PGE-1, Chapter 1 at 17.

<sup>14</sup> SBUA opening brief at 2-3.

<sup>15</sup> SBUA opening brief at 3.

switching incentive to gauge the reasonableness of EV rate proposals was adopted explicitly in D.18-11-027 with respect to Southern California Edison Company's (SCE) residential EV rate<sup>16</sup> and implicitly in Decision (D.) 18-05-040 with respect to SCE's commercial EV rates.<sup>17</sup> This decision aligns with those decisions in finding PG&E's CEV rate proposal reasonable on the grounds that it provides a fuel switching incentive for EV drivers through the use of lower off-peak and super off-peak volumetric energy charges and the elimination of a demand charge.

The general rate design principles that apply to any electric rate design proceeding before the Commission are well-established.<sup>18</sup> The Commission finds that PG&E's CEV rate proposal as modified by this decision supports these principles. The table below elaborates on this finding.

Rate Design Principle	PG&E CEV Rate Proposal as Modified
Low-income and medical baseline customers should have access to enough electricity to ensure basic needs (such as health and comfort) are met at an affordable cost.	Essentially non-applicable as only commercial rates are considered in this proceeding.

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<sup>16</sup> D.18-11-027 at 44-46.

<sup>17</sup> D.18-05-040 at 116 (citing "attractive volumetric rates during daytime super-off-peak periods and overnight" as a reason to approve SCE's proposed commercial EV rates).

<sup>18</sup> D.15-07-001 at 28. *See also* D.17-01-006 at 37; D.17-08-030 at 30-31; and D.18-08-013, CoL 22.

Rate Design Principle	PG&E CEV Rate Proposal as Modified
Rates should be based on marginal cost.	PG&E’s workpapers indicate that the rates highly amplify the marginal generation cost signal during the 4:00 p.m. – 9:00 p.m. peak period. The subscription charge as modified only collects marginal costs.
Rates should be based on cost-causation principles.	By amplifying the marginal generation cost signal and only collecting marginal distribution costs, the modified CEV rates align with high-cost periods to serve. The rates also adopt a super off-peak period to further align with low-cost periods.
Rates should encourage conservation and energy efficiency.	By highly amplifying the peak period marginal generation cost signal and creating a daytime super off-peak period, the CEV rate proposal encourages conservation during peak periods and consumption during periods of high solar penetration.
Rates should encourage reduction of both coincident and non-coincident peak demand.	By highly amplifying the peak period marginal generation cost signal, the CEV rates should encourage reduction of coincident demand. The use of subscription charges tied to non-coincident peak demand should encourage reductions in non-coincident peak demand as well.
Rates should be stable and understandable and provide customer choice.	The CEV rates will stay in effect until sometime in 2025, which promotes stability. The CEV rates have a simple structure, and also provide a specific EV rate option for PG&E’s commercial customers.
Rates should generally avoid cross-subsidies, unless the cross-subsidies appropriately support explicit state policy goals.	The CEV rates do not employ cross-subsidies as there is no Commission-authorized revenue requirement for the new CEV class to meet. Any collections from the new class beyond marginal cost will be considered overcollections to be redistributed to other customer classes.

Rate Design Principle	PG&E CEV Rate Proposal as Modified
Incentives should be explicit and transparent.	The CEV rates do not employ incentives per se. There is a focus on reducing the off-peak price to encourage EV charging, but this is a rate design policy that supports an explicit state policy goal to encourage widespread transportation electrification.
Rates should encourage economically efficient decision-making.	The CEV rate proposal as modified encourages conservation during high-cost hours, which should lead to lower costs for the CEV customer and PG&E.
Transitions to new rate structures should emphasize customer education and outreach that enhances customer understanding and acceptance of new rates, and minimizes and appropriately considers the bill impacts associated with such transitions.	The CEV rate proposal includes an ME&O component, and this ME&O plan is enhanced by this decision as discussed below. The bill impacts of the CEV rate proposal are expected to be generally favorable for CEV customers when compared to existing commercial rates.

**3.2. Are the use cases and load forecasts used to develop the proposed CEV rates reasonable?**

PG&E examined five use cases for its application that modeled kW capacity, utilization rates, and load profiles. The use cases examined were for EVSE load at 1) multi-unit dwellings, 2) workplaces, 3) direct current fast charging (DCFC) stations, 4) medium-duty delivery fleet operators, and 5) transit fleet operators.<sup>19</sup> Billing determinants were based on the forecasted loads and number of customers in each category.

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<sup>19</sup> Exh. PGE-1, Chapter 1 at 24.

Some parties, such as Public Advocates, offered alternate use cases and load forecasts for consideration in this proceeding. These were meant to test the veracity of PG&E's assertion that its proposed CEV rates would actually lower the bills of CEV customers when compared to their standard PG&E rate. Public Advocates suggested that changing some of PG&E's load and usage assumptions made some customers worse off on the new CEV rates when compared to fueling a traditional internal combustion engine-powered vehicle or hybrid vehicle.<sup>20</sup> EVgo and Tesla implicitly criticized PG&E's load forecasting in this proceeding when pointing out that the utilization rates for DCFC operators may be too optimistic in some cases.

However, Public Advocates altered its position after discussions with PG&E, and in briefs grants that there is not enough data to reliably estimate customer impacts. Public Advocates therefore concludes that PG&E's load profiles are a "reasonable starting point" for the initial CEV rate design and agrees with PG&E that data tracking and reporting will be a useful tool to evaluate and inform future CEV rate design.<sup>21</sup>

In spite of the uncertainty in PG&E's load forecasting pointed out by some parties, this decision finds that the load forecasts used to develop PG&E's proposed use cases are reasonable. PG&E's forecasts are necessarily speculative and parties in the proceeding grant that more data collection and research is necessary to refine PG&E's CEV rates going forward. The consensus among the parties to study the actual usage, including utilization rates, by customers on the

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<sup>20</sup> Exh. Public Advocates-1, Chapter 2 at 6-10.

<sup>21</sup> Public Advocates opening brief at 6-7.



CEV rates gives the Commission confidence that any shortcomings with PG&E's assumptions in this proceeding will be addressed in the future.

**3.3. Do the proposed EV rates provide adequate fuel switching incentives when compared to the price of gasoline for both traditional internal combustion engine-powered vehicles and hybrid vehicles?**

Most parties agreed that the proposed CEV rates will provide adequate incentives for vehicle owners to switch from gasoline or diesel powered vehicles to EVs.<sup>22</sup> For example, NRDC asserts that the CEV rates as proposed by PG&E would save CEV customers 30% to 50% on their monthly bills and reduce their vehicle fuel costs by 50%.<sup>23</sup> Some parties disputed that all potential load profiles for each assumed use case would benefit from the new CEV rates;<sup>24</sup> but this decision defers consideration of impacts on specific sub-use cases until further research is conducted on the experience of CEV customers.

Given that this decision alters the revenue allocation to the new CEV rate class such that the illustrative subscription charges provided by PG&E are substantially lowered, it is reasonable to conclude based on the record that the proposed EV rates will provide fuel switching incentives to the PG&E customer of record. This is because the lowered subscription charges will reduce the

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<sup>22</sup> See, e.g., PG&E opening brief at 13 (stating that PG&E's testimony provides "directional indications that the proposed rates enable valuable savings over current rates and gas or diesel fuels").

<sup>23</sup> NRDC opening brief at 6.

<sup>24</sup> Exh. Public Advocates-1, Chapter 2 at 6-10. See also NRDC opening brief at 7 ("PG&E's proposed rates should provide savings to both low and high utilization sites, although the level of relative savings will ultimately depend on the proportion of subscription and volumetric charges in the CEV rate structure").

levelized cost of electricity per kWh provided to EVSE operators, which will generally create more of a fuel switching incentive for the PG&E customer of record than estimated by the parties to this proceeding when considering PG&E's original CEV rates.

**3.4. Are the proposed time-of-use periods, including the peak period, reasonable?**

PG&E originally proposed a 4:00 p.m. – 10:00 p.m. peak period for CEV rates to apply on all days, year-round.<sup>25</sup> Public Advocates, Tesla, and EDF objected to PG&E's original proposal.<sup>26</sup> After discussions with the parties, PG&E stipulated to a revised peak period of 4:00 p.m. – 9:00 p.m. for its CEV rates.<sup>27</sup> SBUA continues to advocate for an expanded peak period of 4:00 p.m. – 11:00 p.m. in its briefs.<sup>28</sup>

The revised proposal by PG&E in the joint stipulation aligns with the peak period for PG&E's residential and commercial TOU rates, and represents a reasonable approximation of the high cost hours experienced by PG&E.<sup>29</sup> SBUA's analysis may be correct that the 9:00 p.m. – 11:00 p.m. hours in the summer are high cost hours.<sup>30</sup> However, in D.17-01-006 the Commission expressed a preference for stability in core TOU periods so that customers are not

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<sup>25</sup> Exh. PGE-1, Chapter 2 at 6-7.

<sup>26</sup> Public Advocates opening brief at 12; Exh. Tesla-1 at 4; Exh. EDF-2 at 5.

<sup>27</sup> Exh. JS-01 at 8; RT 16:6-27.

<sup>28</sup> SBUA opening brief at 7.

<sup>29</sup> D.18-08-013 at 33-35.

<sup>30</sup> Public Advocates also grants that "the marginal cost data indicates that 4-10 p.m. is in fact a peak cost period in this case." (Public Advocates opening brief at 12.)

constantly confronted by changing peak periods.<sup>31</sup> The core 4:00 p.m. – 9:00 p.m. peak period adopted for residential and commercial customers in PG&E’s territory is only now coming into existence from the customer’s perspective, and it would be contra to the policy of TOU period stability to change that peak period at this time. Other parties also pointed out the consistency with existing peak periods and customer understanding superseded considerations about perfect alignment with marginal costs in this case.<sup>32</sup> Per D.17-01-006, PG&E’s peak period delineation is to be regularly revisited in a PG&E General Rate Case (GRC) Phase 2 proceeding, and the Commission encourages SBUA to raise its concerns in that forum.<sup>33</sup>

Because the revised peak period of 4:00 p.m. – 9:00 p.m. for CEV rates is a reasonable approximation of the high cost hours faced by PG&E, tracks the new peak period established for PG&E’s residential and commercial customers, and because D.17-01-006 encourages the Commission to maintain peak period definitions for a number of years to encourage customer understanding of TOU rates, the revised peak period proposal in the joint stipulation is reasonable and approved.

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<sup>31</sup> D.17-01-006 at 11.

<sup>32</sup> Public Advocates opening brief at 12; EDF reply brief at 3-4; CALSTART reply brief 11; Tesla opening brief at 4-5; EVgo opening brief at 10.

<sup>33</sup> *See, e.g.*, D.18-08-013 at 32-33, explaining that PG&E should reconsider in its 2020 GRC Phase 2 proceeding the assignment of the months of June and October to the summer and winter seasons, respectively.

### **3.5. Is the lack of seasonal rate differentiation reasonable?**

While some parties had concerns regarding the lack of seasonal differentiation in the CEV rates,<sup>34</sup> PG&E insisted that customer understanding would be enhanced by a relatively simple rate that did not change prices between summer and winter. SBUA supported this claim, while pointing out that seasonal differentiation should be revisited in the future “[o]nce the commercial EV market is more built out.”<sup>35</sup> Public Advocates also supported a lack of seasonal differentiation at this time.<sup>36</sup>

While seasonal differentiation is a standard element of TOU rates generally, the Commission agrees with the position of various parties that simplicity and consistency in CEV rates is valuable at this nascent stage of transportation electrification so that EVSE operators have the benefit of stable and consistent rates for several years. It is therefore reasonable to create CEV rates without seasonal differentiation at this time. This issue may be revisited by the Commission in the future.

To assist in future assessments of the cost-basis of the CEV rates, PG&E and Public Advocates have agreed to track what the revenue collection would have been from the CEV rate class if certain assumptions about marginal cost causation were made by tracking CEV usage against so-called shadow CEV rates. Evaluating seasonality in the shadow CEV rates may be helpful in evaluating the cost basis of the CEV rates in the future. These shadow rate analyses will be used

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<sup>34</sup> See, e.g., EDF opening brief at 7.

<sup>35</sup> SBUA opening brief at 10.

<sup>36</sup> Public Advocates opening brief at 13.

in a future proceeding to inform discussions about potential modifications to the CEV rates. Therefore, per the joint stipulation, PG&E shall include seasonal differentiation in its shadow rates for the CEV class.

**3.6. Is the subscription charge proposal reasonable, and are there other models used in California that could be used instead?**

**3.6.1. CEV-S Subscription Charge Design**

No party generally opposed PG&E's proposal for a subscription charge design for the CEV-S rate, although some parties suggested modifications as described below. Many parties, including EDF, supported the idea of eliminating fixed charges and demand charges with a subscription charge. CEV customers participating in the Electric Power Research Institute (EPRI) Study<sup>37</sup> that was used as a foundation for PG&E's CEV rate proposal also registered their distaste for demand charges and openness to the concept of a subscription charge model.

SBUA questions why subscription charges should be set in blocks of 10kW for CEV-S customers. SBUA reasons that many customers' maximum demands are unlikely to fall in tidy 10kW increments, and therefore PG&E's proposed subscription charge design ensures that CEV-S customers will oversubscribe and spend more than they should. For example, a CEV-S customer with a maximum demand of 21kW would need to subscribe to 30kW of maximum demand given the 10kW nature of the subscription blocks. SBUA describes the principle at

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<sup>37</sup> Exh. PGE-1, Appendix B.

issue neatly when it says “[c]ustomers should not have to pay for energy they do not use and should only be billed for energy actually consumed.”<sup>38</sup>

SBUA’s concerns are noted, and further in this decision the Commission addresses steps that PG&E must take in order to reduce the risk that CEV-S customers will face onerous overage charges when using the 10kW subscription charge increments. Subject to the orders appearing below regarding overage penalties and customer ME&O, the subscription charge design for CEV-S customers as proposed by PG&E is reasonable and should be adopted. PG&E must apply the revenue allocation for the new CEV class mandated by this decision when setting the prices for the CEV-S subscription charge.

### **3.6.2. CEV-L Subscription Charge Design**

Parties were mixed in their response to PG&E’s proposed subscription charge design for CEV-L customers. In particular, EVgo and Tesla each argued that the subscription charge design could be harmful for the DCFC use case despite being an improvement compared to existing demand charge rate designs.<sup>39</sup> Their claim is that low utilization DCFC sites will continue to face large de facto fixed charges in the form of subscription charges.<sup>40</sup> EVgo asserts

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<sup>38</sup> SBUA opening brief at 5. The Commission understands “energy” in this statement to actually refer to the power capacity utilized by the CEV customer. All energy consumed by the CEV customer would be charged a per kWh volumetric rate.

<sup>39</sup> Tesla opening brief at 7-8; EVgo opening brief at 12-14. These proposals are not strictly limited to the CEV-L rate design, and may apply to the CEV-S rate as well. This decision considers the issue of Tesla and EVgo’s proposed optional CEV rate design generally in this section.

<sup>40</sup> See also CALSTART reply brief at 8-10.

that low utilization sites are extant, and they may continue to be a feature of California's DCFC landscape in places like transit corridors in the long-term.<sup>41</sup>

EVgo's concern is that the proposed subscription charges could significantly add to the levelized price per kWh that a DCFC operator incurs on a CEV rate at low-utilization sites. This may interfere with state policy goals to encourage fuel switching and widespread transportation electrification given that some DCFC stations along transit corridors and other areas may necessarily be low-utilization sites.<sup>42</sup> PG&E's comparison of DCFC costs under a CEV-L rate when compared to gasoline assumed an approximate 8% utilization rate.<sup>43</sup> According to EVgo, a DCFC station with a low utilization rate of around 2% may end up not providing energy to customers that is favorable on a cost basis when compared to gasoline.<sup>44</sup>

EVgo and Tesla argue that a solution to this problem is to allow them to take service on an optional CEV rate that primarily uses energy charges, and in the case of EVgo's proposal, waives all subscription charges for a certain period of time.<sup>45</sup> This would ensure that DCFC operators pay only for the kWh consumed by EV drivers at their stations in the short-term, and removes the risk of spreading fixed costs across a small number of drivers and thereby

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<sup>41</sup> EVgo reply brief at 3. PG&E disputes some of evidence EVgo presented, arguing that EVgo's evidence actually showed that DCFC stations in the San Joaquin Valley had a load factor of 7.6% that is close to PG&E's modeled utilization rate of 8% for DCFC customers. (PG&E reply brief at 2.)

<sup>42</sup> EVgo opening brief at 2.

<sup>43</sup> EVgo opening brief at 6.

<sup>44</sup> EVgo opening brief at 6-7.

<sup>45</sup> Tesla opening brief at 7-8; EVgo opening brief at 12.

significantly raising the per kWh price of electricity. This proposal also mirrors a rate design recently adopted by the Commission for SCE's commercial EV customers.<sup>46</sup> EVgo specifies that their optional rate may only apply to those CEV customer sites with utilizations below 10%, with an eventual transition of those sites to CEV rates with subscription charges.<sup>47</sup>

PG&E disagrees with this proposal and reasons that higher usage customers may end up paying more than the cost to serve them under an all-volumetric rate, that rate stability would not be assured under a scheme in which the fundamental rate design was changing every few years, and that there are concerns that the eventual rates proposed by EVgo and Tesla would be costly for CEV customers once demand charges are reintroduced.<sup>48</sup>

PG&E also argues that EVgo's proposal would significantly raise off-peak and super off-peak rates while lowering peak prices, which provides a weaker price signal to EV drivers to charge during low cost periods. PG&E further claims that the optional rate would only benefit a limited number of small and low utilization customers at the expense of higher utilization customers.<sup>49</sup> EVgo's proposal would also allegedly raise average prices for EV charging in multi-unit dwellings (MUD) by 3%, for medium-duty fleets by 19%, and for

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<sup>46</sup> EVgo opening brief at 12.

<sup>47</sup> EVgo opening brief at 13.

<sup>48</sup> Exh. PGE-2 at 11-17.

<sup>49</sup> PG&E opening brief at 3.



transit agencies by 36%.<sup>50</sup> Public Advocates, EDF, and NRDC oppose the proposal by Tesla and EVgo as well.<sup>51</sup>

The proposal of EVgo and Tesla for an optional energy charge-focused rate for CEV customers is not adopted at this time. The damage to off-peak charging signals, combined with the uncertainties in the costliness of the rate in the long-term for CEV customers, are sufficient bases to reject the proposal. PG&E has met its burden of demonstrating that the subscription charge rate design is generally in compliance with relevant law and Commission decisions, and the Commission agrees that the subscription charge approach is reasonable, even for low utilization customers.<sup>52</sup>

With respect to the concerns of EVgo and Tesla, and the objectives of SB 1000 to consider reduced demand charges for EVSE operators, the Commission notes that this decision adjusts the revenue allocation of the CEV rate class to substantially lower the subscription charge faced by all CEV customers. PG&E must apply the revenue allocation for the new CEV class as mandated in this decision when setting the prices for the CEV-L subscription charge. While this will not result in a near elimination of the subscription charge as desired by EVgo and Tesla, it will substantially reduce the subscription charge while maintaining energy rates with strong peak and off-peak price signals. This

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<sup>50</sup> Exh. PGE-2 at 17.

<sup>51</sup> Public Advocates opening brief at 5-6 (specifically repeating PG&E's criticisms); NRDC reply brief at 1-2; EDF reply brief at 4-5.

<sup>52</sup> See Public Advocates reply brief at 3-4, explaining that the subscription charge sends a demand-based price signal to customers that reflects customer hookup costs, as judged appropriate for electricity ratepayers in D.15-07-001.

should assist CEV customers with low utilization rates in maintaining levelized per kWh prices of energy that create a fuel switching incentive.

### **3.6.3. Overages**

PG&E proposes to charge customers 200% of the equivalent monthly kW subscription rate for all additional units of subscription required to meet their actual demand each month. For example, if a CEV-S customer subscribed to 20kW of demand and registered 21kW of maximum demand in a month, then that customer would be required to pay double for an extra 10kW of subscription to cover the extra demand. Several parties object to PG&E's proposal to charge overages to those customers that register non-coincident peak demands that exceed their subscription.<sup>53</sup>

SBUA argues that this fee is excessive and would frustrate the objective of widespread transportation electrification codified by SB 350. They also contend that PG&E is vague about a potential "grace period" that might apply to those customers that exceed their subscribed demand.<sup>54</sup>

The Commission agrees that PG&E should disincentivize customers from intentionally choosing lower subscription levels that do not match their demand in order to "game" the system (and thus lower their bills). However, this decision agrees with SBUA that a punitive overage charge without a well-defined grace period is not the proper method to avert this hypothetical scenario, particularly given the difficulty some customers may have in accurately selecting their initial subscription level, thus potentially punishing less

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<sup>53</sup> SBUA opening brief at 5-7; CALSTART reply brief at 7-8 (recommending a one-year phase-in period before overages are assessed); Exh. EVgo-1 at 5.

<sup>54</sup> SBUA opening brief at 6.

sophisticated or experienced customers. Instead, PG&E should take an approach to overage mitigation that both disincentivizes gaming while also providing a reasonable grace period for customers to adjust to this new paradigm of subscription-based rates.

To this end, in the event a customer exceeds their subscribed demand, PG&E shall not charge its proposed overage fee and instead shall:

- 1) provide warnings to customers via their electricity bills and other means (e.g., e-mails or automated phone calls or text messages) that their demand has exceeded their subscription level,
- 2) provide customers an opportunity to adjust their subscription level (or their demand) over the next two billing cycles,
- 3) automatically adjust subscription levels to match the customer's actual demand on the third bill of the overage period if they have not chosen an appropriate subscription level,<sup>55</sup> and
- 4) bill customers at the automatically set subscription level for three consecutive billing cycles before a customer could be eligible to lower their subscription level.

For example, a CEV-S customer that subscribed to 20kW of demand but registered 21kW of maximum demand in month one would receive an overage warning from PG&E on their monthly bill and an opportunity to adjust their subscription level to 30kW or lower their demand. If they do not adjust their subscription level or lower their demand in the subsequent two months, and they continue to register 21kW of maximum demand, PG&E would adjust their bill to a subscription level of 30kW in the third month, and bill at that rate for three consecutive billing cycles, at which point the customer could reduce their

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<sup>55</sup> Note that automatically setting a customer's subscription level on the third billing cycle of consecutive overages equates to a two-month grace period. This method also eliminates punitive overage charges.

subscription level if the customer believes they could match their demand to a lower subscription level. There would be no retroactive billing for the first two months of the overage period, nor would there be any penalties assessed.

In order to further disincentivize gaming, if a CEV customer were to non-consecutively exceed their subscribed demand six times in a rolling 12-month period, PG&E shall immediately set the CEV customer's subscription level to correspond with their highest monthly demand on the sixth occurrence, and notify the CEV customer of the change. Following such an increase, the CEV customer is required to exhibit a lower peak demand for six consecutive months before it is permitted to lower its subscription level.

### **3.7. Is the lack of a dynamic rate option reasonable?**

The scoping memo asks whether it is reasonable that PG&E's proposed CEV rate proposal lacks a dynamic rate option. This decision finds the lack of such a rate option in this proceeding is reasonable in light of the record, but orders PG&E to prepare and submit a proposal for an optional dynamic CEV rate no later than 12 months after the effective date of this decision.

As noted in PG&E's application, the EPRI Study of CEV customer rate preferences forms the basis for PG&E's proposals in this proceeding. It is therefore reasonable to consult the EPRI Study to determine CEV customer preferences regarding a dynamic rate option.

PG&E recited findings from the EPRI Study in its testimony, asserting that preferences for or against a dynamic rate varied among respondents, and that vehicle makers and software providers were most likely to favor "variable

rates.”<sup>56</sup> EPRI interviewed respondents while referencing illustrative rate options, including a dynamic rate option, as described in PG&E’s testimony. Figure 1-1 in exhibit PGE-1, Chapter 1 indicates that the illustrative dynamic rate option used by EPRI in its interviews consisted of a fixed customer charge, variable demand charge, and hourly energy charges where the price of energy varied in each hour of the day.

The EPRI Study states that the following question was asked of all survey respondents near the beginning and toward the end of the survey: “Overall, would you prefer a simpler EV charging rate that offers more consistency and predictability in your monthly electric bill, or a more dynamic rate that offers more opportunity to save on electric costs?”<sup>57</sup> The EPRI Study reports that “there was no clear overall preference across respondents,” and that while delivery and transit fleet operators favored simpler rates, some operators “indicated that with better control technology and experience, they could potentially benefit from the more complex rate options that provide additional savings opportunities over time.”<sup>58</sup>

Despite the fact that some respondents to the EPRI Study indicated a preference for dynamic rates, PG&E did not propose a dynamic rate option for CEV customers. Instead, PG&E focused on a simpler rate design consisting of a subscription that varies by kW capacity and energy charges that only vary by TOU period rather than dynamically every hour of the day.

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<sup>56</sup> Exh. PGE-1, Chapter 1 at 19.

<sup>57</sup> Exh. PGE-1, Appendix B at 3-1.

<sup>58</sup> Exh. PGE-1, Appendix B at 3-1 and 3-2.

EDF opposed PG&E's approach in their initial response to PG&E's application and in their opening testimony. In its initial response, EDF proposed an optional dynamic rate for those medium and heavy-duty CEV customers that believe they would benefit from such a rate.<sup>59</sup> EDF asserts that there would be cost savings and environmental benefits by testing such an optional dynamic rate that warrant its inclusion in PG&E's proposed CEV rate class.<sup>60</sup>

Specifically, EDF proposes that an optional dynamic rate should resemble a proposal made by San Diego Gas & Electric (SDG&E) in Application (A.) 14-04-014, where hourly energy prices varied according to the day-ahead prices for wholesale energy recorded by the California Independent System Operator (CAISO).<sup>61</sup> EDF stresses that an effective ME&O campaign by PG&E would be necessary to successfully test a dynamic rate, and that the needs of risk-averse CEV customers should be accounted for.<sup>62</sup> EDF notes that this form of dynamic rate has not yet been tested in California for medium and heavy-duty CEV customers.<sup>63</sup>

In its rebuttal testimony PG&E asserts that there "is not sufficient customer research, interest, or technology to support the inclusion of dynamic (i.e., hourly) rates at this time."<sup>64</sup> PG&E also argues that there would be billing and metering

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<sup>59</sup> EDF Response at 3-4.

<sup>60</sup> EDF Response at 3-4.

<sup>61</sup> Exh. EDF-1 at 4.

<sup>62</sup> Exh. EDF-1 at 6.

<sup>63</sup> Exh. EDF-2 at 4.

<sup>64</sup> Exh. PGE-2 at 18.

costs associated with the deployment of a dynamic rate that have not been accounted for in PG&E's application.<sup>65</sup>

PG&E's assertion that there is not sufficient customer interest in a dynamic rate is not supported by the findings of the EPRI Study that demonstrated that some customers are interested in more dynamic rate options, including fleet operators that may take advantage of better control technology.<sup>66</sup> At a minimum, the EPRI Study concluded that choice and flexibility in rate designs were important to CEV customers and as PG&E's states in its testimony there is no "one-size-fits-all" solution.<sup>67</sup>

The record therefore supports a finding that there are at least some CEV customers interested in such a rate, and that rate choices for CEV customers are inherently desirable. Furthermore, EDF's general position that a dynamic CEV rate may create environmental benefits is uncontested. Therefore, there appears to be benefit in exploring an optional dynamic rate for CEV customers to take advantage of if they believe the rate would support their operations.

EDF proposes that SDG&E's vehicle-grid integration (VGI) pilot rate, as proposed in SDG&E's prepared testimony in A.14-04-014, be used as a model for a dynamic rate offered by PG&E.<sup>68</sup> This proposed rate was modified by a settlement in that proceeding, and the settlement was in turn broken by a proposed decision in that proceeding.<sup>69</sup> The VGI pilot rate as originally

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<sup>65</sup> *Id.*

<sup>66</sup> Exh. PGE-1, Appendix B at 3-1 and 3-2.

<sup>67</sup> Exh. PGE-1, Chapter 1 at 20.

<sup>68</sup> Exh. EDF-1 at 4.

<sup>69</sup> D.16-01-045 at 2-3.

proposed by SDG&E appears to be more complex than the illustrative dynamic rate utilized by EPRI to test customer acceptance of a dynamic rate as the original VGI rate includes additional hourly charges for the year's most expensive generation and distribution marginal cost hours. The original VGI rate also appears to not include a fixed charge or demand charge, resulting in hourly energy charges that are higher than those proposed for the CEV rates.<sup>70</sup> This leads to a concern that the original VGI rate may not provide as robust a fuel switching incentive as the CEV rates.

There are no other proposals by the parties in this proceeding for a dynamic rate offering. Critically, there is no specific proposal in this proceeding that resolves the following questions that should be addressed before the Commission orders PG&E to implement such a rate for its customers:

- Assuming that any dynamic rate must utilize CAISO wholesale market price data, how will the dynamic rate utilize such data? Will the rate use day-ahead prices only, or will it use day-of and real-time CAISO prices as well?
- Are there data other than CAISO data, such as a greenhouse gas (GHG) signal data, that should be used as the basis for a dynamic rate instead?
- What time interval should be utilized for the rate? If a longer interval is utilized (e.g., a one-hour retail rate price) than the wholesale price data used to inform the retail rate (e.g., 15-minute or five-minute CAISO real-time market data), how will the differences in temporal granularity be reconciled?

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<sup>70</sup> Prepared Direct Testimony of Cynthia Fang on behalf of San Diego Gas & Electric Company, served April 11, 2014 in A.14-04-014, at Attachments A.1-A.5.



- Will the dynamic rate focus solely on periods of overgeneration where CAISO wholesale prices are negative, or will dynamic rates seek to send critical peak price signals as well?
- Given that overgeneration events may be either system-wide or limited to a transmission constrained area, should a dynamic rate available to all customers only signal system-wide events?
- At what level of spatial granularity should wholesale prices be sourced? Should it be the default load aggregation point, the sub-load aggregation point (sub-LAP), price node (Pnode), or circuit substation-level? What challenges would the use of any sub-system level of granularity present? For example, if 16 sub-LAPs exist in PG&E's territory, and if a dynamic rate is designed to reflect a particular sub-LAP's wholesale prices, then how will the rate be communicated to customers in 16 different sub-LAPs simultaneously?
- How should distribution rates be treated in a dynamic rate scheme? Should distribution capacity costs be included in a dynamic rate?
- What technical and operational challenges must PG&E overcome in order to make a dynamic rate using CAISO price data available to customers? What is the estimated cost of that work?
- Do EVSE customers or EVs currently have the technology available to automatically take advantage of a dynamic rate? How will a dynamic rate interact with and support the work of various technical working groups currently organized under Rulemaking (R.) 18-12-006?
- If most adjustments in a dynamic rate take place within the generation component of the rate, then how will CCAs operationalize the rate (if at all)? Are CCAs capable of mirroring or otherwise designing a dynamic rate that their customers can take advantage of? What operational challenges do the CCAs face with such a rate?

In light of the lack of a dynamic rate proposal that begins to address these critical questions, EDF's request for a dynamic rate is not ripe for approval in this

proceeding. However, the record does reflect some CEV customer interest in a dynamic rate with fluctuating hourly prices, and it is important that CEV customers be given a variety of rates to choose from that help lower their costs. This is in accord with the Commission's previous guidance in D.17-01-006 and state policy generally that seeks to incent widespread transportation electrification and lower the costs of EV ownership and fueling.

Therefore, PG&E is ordered to file an application for a dynamic rate option for CEV-S and CEV-L customers no later than 12 months after the effective date of this decision.<sup>71</sup> It is recommended that PG&E address the questions listed above in its application in order to most expeditiously consider a dynamic rate.

### **3.8. Is the Inclusion of a generation component in the subscription charge reasonable?**

PG&E originally proposed to include a generation component in the subscription charge.<sup>72</sup> Public Advocates opposed this element of the CEV rate design.<sup>73</sup> After discussing the issue with Public Advocates, PG&E stipulated to remove the generation component of the subscription charge for CEV customers.<sup>74</sup> This issue is therefore moot. For the sake of clarity, this decision endorses the approach outlined in the joint stipulation to collect non-peak

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<sup>71</sup> This should give PG&E enough time to prepare and file its 2020 GRC Phase 2 application before preparing a dynamic CEV rate proposal.

<sup>72</sup> Exh. PGE-2 at 19.

<sup>73</sup> Public Advocates opening brief at 9.

<sup>74</sup> Exh. JS-01 at 5.

generation costs on a per kWh basis in the off-peak and super off-peak energy charges instead of the subscription charge.<sup>75</sup>

### **3.9. Annual Rate Changes for CEV Rates Before 2025**

PG&E and Public Advocates agree that there should be rules that apply to any annual changes to the CEV rates required by adjustments in the revenue requirement for the CEV class. These rules would apply until CEV rates are revised in PG&E's 2023 GRC Phase 2 proceeding and come into effect sometime in 2025. Specifically, those parties agree on using an equal cents per kWh adder (or credit) to increase (or decrease) generation energy charges sufficient to recover increases (or decreases) to the generation revenue requirement.<sup>76</sup> This approach is reasonable and shall be used by PG&E when adjusting CEV rates to account for changes to the generation revenue requirement.

## **4. Does PG&E's proposal reasonably accommodate the customer experience and state policy goals?**

The scoping memo set out several specific criteria for judging whether PG&E's proposed CEV rates reasonably accommodated the customer experience and supported state policy goals around transportation electrification. Each of those criteria are considered below.

### **4.1. Will the proposed CEV rates incent greater adoption of EVs?**

No party provided evidence that the proposed CEV rates would fail to incent greater adoption of EVs. As discussed previously in this decision, most

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<sup>75</sup> Public Advocates opening brief at 9-10.

<sup>76</sup> Public Advocates opening brief at 15.

parties argued that the proposed CEV rates would lower the cost of charging EVs compared to currently available PG&E rates, which would provide greater fuel switching incentives for consumers to purchase EVs. It is therefore reasonable for this decision to find that the proposed CEV rates will incent greater adoption of EVs by lowering the costs of operating an EV when compared to PG&E's current commercial rates.

**4.2. How will it be ensured that the end-user of the EV sees the fuel switching benefit presented by the proposed CEV rates?**

For some CEV customers the end user of the EV is the customer that will take service on the CEV rate, meaning that those customers will directly experience the rate's fuel switching incentives. These customers include transit fleet operators and other medium- and heavy-duty EV fleet operators that will charge their vehicles at sites where they take service from PG&E.

Some other EV end users will not directly experience the fuel switching benefit presented by the proposed CEV rates. This is particularly true of DCFC users, where the customer of record taking service on the CEV rate will not be the same individual that charges their EV at the DCFC station.<sup>77</sup> DCFC operators like Tesla and EVgo claim that they are under no obligation to pass through the rate provided by PG&E to the EV drivers using their DCFC stations. Tesla resists

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<sup>77</sup> This is also the case with workplace use case. EV drivers that park at a workplace may be charged an amount set by the workplace EVSE owner and operator. This may also occur in the MUD use case, where the tenants of the MUD that seek to charge their EVs at home may face prices set by the MUD owner (i.e., their landlord). Exh. PGE-2 at 20.

the notion that they should be forced to do so for a variety of reasons, and asserts the right to charge customers whatever they want for use of a DCFC station.<sup>78</sup>

The Commission seeks to support state policy goals by incenting transportation electrification through the creation of electricity rates that provide fuel switching incentives. If those incentives are not realized by the end user of the EV, then the Commission's objectives may not be met and this may not be acceptable in the long-term. For example, if a DCFC operator charges a customer a flat 60 cents/kWh regardless of the time of day, the fuel switching incentive will not be realized<sup>79</sup> and no peak period signal will be delivered to the EV driver to disincentivize charging during peak periods. As EDF points out, EVSE operators on a CEV rate that do not manage their load with the price signals adopted in this decision may fail to maximize the environmental and grid benefits of widespread transportation electrification.<sup>80</sup>

If one assumes that the Commission has no authority to set the prices charged by DCFC operators, workplace EVSE operators, or MUD EVSE operators for their provision of an EV charging service, then this means that the Commission must hope that these EVSE operators will pass along some of the savings and time-varying price signals they realize on the CEV rates to the EV driver that uses their charging equipment.

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<sup>78</sup> Tesla opening brief at 5-7.

<sup>79</sup> Assuming a rule of thumb that 10 cents/kWh is roughly equivalent to paying \$1/gallon of gasoline. This means that a 60 cents/kWh rate is equivalent to \$6/gallon of gasoline. At that price, the EV owner would be better off using an internal combustion engine-powered vehicle and buying gasoline at \$3 or \$4/gallon.

<sup>80</sup> EDF opening brief at 9.

While this problematic dissonance in incentives is not addressed now, attention must be paid to the issue so that the Commission may determine in the future if the state's policy goals are being frustrated. To that end, PG&E shall conduct a representative survey of the prices offered by DCFC operators, workplace EVSE operators, and MUD operators taking service on PG&E's CEV rates authorized by this decision.<sup>81</sup> The survey results should be presented at the data collection workshop ordered later in this decision. The results of the survey may be used by the Commission in a future proceeding to determine if additional steps should be taken to address the dissonance between the CEV rates and the pricing schemes of the third party EVSE operators.

**4.3. What is the appropriate marketing, education, and outreach that should accompany the new rates, and how should the costs for that be recovered?**

PG&E proposes to fund an ME&O program to popularize the CEV rates in conjunction with other approved EV programs currently underway.<sup>82</sup> PG&E plans to leverage its websites, customer account managers, and other contacts with customers in the existing EV programs to increase awareness of the CEV rates.<sup>83</sup> EDF asserts that PG&E's planned ME&O effort needs to be robust and well-designed to ensure successful take-up of the new optional CEV rates, and

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<sup>81</sup> As prices may vary by time and date, PG&E shall make their best effort to provide representative information for such varying prices.

<sup>82</sup> Exh. PGE-1, Chapter 1 at 30. PG&E would apparently fund ME&O costs through approved budgets for its existing EV infrastructure programs and/or GRC funding for EV-related customer education.

<sup>83</sup> PG&E opening brief at 17.

criticizes PG&E's existing plan as not concrete enough and lacking in detail.<sup>84</sup> SBUA also highlights the need to leverage other ME&O programs, and to provide targeted outreach to small businesses, which may need additional assistance choosing the proper subscription level.<sup>85</sup>

The Commission agrees with EDF and SBUA that a robust ME&O plan is necessary to successfully implement the new CEV rates. The work of the parties and the Commission in this proceeding would be wasted if PG&E's commercial customers were unaware of the rate and failed to take service on it if they utilize EVSEs.

Therefore, to maximize customer uptake and optimization of the CEV rates, PG&E shall develop an ME&O plan and submit it to the Commission's Energy Division as a Tier 2 advice letter within 90 days of the issuance of this decision. The advice letter shall also be served on the service list of this proceeding and R.18-12-006. The ME&O plan shall include, at minimum:

- A plan for leveraging ongoing ME&O activities, including activities led by PG&E (e.g., EV Fleet program, EV Charge Network) and activities led by other entities (e.g., Veloz, California Energy Commission's California Electric Vehicle Infrastructure Project, California Air Resources Board's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project).
- A plan for targeting specific market segments and customer types including small businesses, MUDs, local governments, transit agencies, and community-based organizations. The plan shall detail the kinds of strategies to be utilized to reach these various audiences.

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<sup>84</sup> Exh. EDF-2 at 4; EDF opening brief at 5-6.

<sup>85</sup> SBUA opening brief at 10-11.

- A strategy for ensuring that segments with fewer resources to devote to questions around electricity rate planning receive additional ME&O (e.g., a hotline or technical assistance for small businesses; PG&E staff liaisons to transit agencies).
- Consideration of recruiting Community-Based Organizations and other trade/business organizations (e.g., CALSTART) to serve as decentralized disseminators of CEV rate information.
- A timeline for implementation that describes how ME&O efforts will be concentrated on the first three years of the CEV rates' availability, while ensuring that ME&O is ongoing.

A detailed budget that includes justification for additional staff necessary to develop and provide outreach, including a description of duties, and a description of the impacts on the budgets for existing EV infrastructure programs and/or GRC funding for EV-related customer education.

#### **4.4. Are the customer eligibility rules proposed by PG&E reasonable?**

PG&E proposes several rules to determine if a customer is eligible for service on a CEV rate. These are:

- Any retail customer that would otherwise take service on existing commercial or industrial rate schedules, including A-1, A-6, A-10, E-19, and E-20, and including customers with existing services dedicated to EV charging, are eligible for a CEV rate.
- Eligible types of customer load will comport with the definition of transportation electrification to allow all types of EVs, vessels, trains, boats, or other equipment that are mobile sources of air pollution and GHG emissions.
- CCA and direct access customers are eligible.
- All customers taking service on a CEV rate are required to have EV charging separately metered from existing building or facility loads. No other loads, except those directly associated with EV charging (such as energy storage), would be permitted to take service on the CEV rates.



- CEV customers would be eligible for typical allowances under Rules 15 and 16, and would not be subject to the special facilities charges that typically apply when retail customers install a second utility service connection.<sup>86</sup>

Parties did not generally object to these requirements, but VTA and CALSTART express concern with the requirement that CEV customers have their EV charging separately metered. VTA explains that some of its charging equipment is not currently on a separate meter, and therefore VTA faces extra costs to install separate metering that may lessen the savings provided by the CEV rates. PG&E acknowledges that VTA's concern is valid; but believes that the Rule 15 and 16 allowances for new service connections typically reduces "much or most of the upfront cost of service connections to customers."<sup>87</sup>

The Commission believes that it is important that transit agencies, in particular, are provided an easy path toward taking service on PG&E's CEV rates. This is because transit agencies in California are subject to certain zero-emission fleet purchase requirements.<sup>88</sup> The state has prioritized and mandated transit agencies' transition to zero-emission vehicles, and it is therefore fair that the Commission explore how they can most easily take service on rates that incentivize fuel switching and lower the cost of fleet electrification.

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<sup>86</sup> Exh. PGE-1, Chapter 1 at 26.

<sup>87</sup> Exh. PGE-2 at 22.

<sup>88</sup> See California Air Resources Board's (CARB) Innovative Clean Transit (ICT) Regulation, adopted December 2018. Available at: <https://ww3.arb.ca.gov/regact/2018/ict2018/ictfro.pdf>. Last accessed July 24, 2019.

Rather than removing the requirement for separate metering, this decision adopts and modifies CALSTART's recommendation<sup>89</sup> that funding be provided to transit agencies for the installation of separate meters by ordering PG&E to provide an 80% rebate to transit agencies for the cost of installing a separate meter in a similar manner to PG&E's EV Fleet rebate program.<sup>90</sup> PG&E shall utilize the already-authorized funding for the EV Fleet program to pay for the 80% rebate for new meters for transit agency<sup>91</sup> CEV customers. This rebate for new metering is only available to transit agency CEV customers.

This decision also recognizes the role that submetering can play in resolving the issues faced by PG&E and those CEV customers that would otherwise be required to install a separate meter. If submetering becomes an approved and accepted means of metering EVSE load, then 1) a separate meter should no longer be required to take service on a CEV rate and therefore 2) no additional rebates will be provided to transit agencies for separate meters upon the implementation of submetering.

**4.5. How long should the rates remain available before they are reconsidered in a subsequent proceeding?**

PG&E proposes to maintain the CEV rate design outlined in this proceeding until it is reconsidered in PG&E's 2023 GRC Phase 2. The CEV rate class would be included in the revenue allocation discussions in that proceeding,

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<sup>89</sup> CALSTART reply brief at 6.

<sup>90</sup> See D.18-05-040.

<sup>91</sup> As defined in CARB's ICT regulation, "transit agency" has the same meaning as defined in title 13, California Code of Regulations, section 2020(b). A transit agency does not mean a correctional facility, airport, college or university, national park, tour bus service providers, or an entity that provide shuttle services solely for patrons of its organization.

and the CEV rates that would arise in that proceeding could be expected to be available some time in 2025. PG&E's reasoning is that it will take several years to collect enough data on customer behavior on CEV rates to usefully discuss whether the rate designs should be modified in any way.<sup>92</sup>

Parties did not generally dispute this approach. Indeed, some parties such as VTA and Tesla specifically seek rate stability in the long-term in order to successfully utilize the CEV rates. It is therefore reasonable to approve the CEV rates as outlined in this decision until they are reconsidered in PG&E's 2023 GRC Phase 2 proceeding. PG&E may delay reconsideration of the CEV rates until a proceeding after its 2023 GRC Phase 2 if it chooses to do so.<sup>93</sup>

**5. Is PG&E's proposal to create a new rate class for customers taking service on the new CEV rates reasonable?**

PG&E's proposal to create a new rate class of customers taking service on the CEV rates is generally supported by the parties, although Tesla is concerned with potential, unknown long-term implications.<sup>94</sup> This decision briefly reviews the history of rate class proposals and modifications approved by the Commission to determine if there is a standard that should be used to evaluate PG&E's proposal.

The Commission derives authority to establish new electric rate classes under Public Utilities Code Section 729, which provides that

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<sup>92</sup> Exh. PGE-2 at 22.

<sup>93</sup> Exh. PGE-2 at 22 (“[s]hould additional time beyond the [2023 GRC Phase 2] be warranted, the rates could also be addressed in a RDW proceeding”).

<sup>94</sup> Tesla opening brief at 1, fn 2.

[t]he commission may, upon a hearing, investigate a single rate, classification, rule, contract, or practice, or any number thereof, or the entire schedule or schedules of rates, classifications, rules, contracts, and practices, or any thereof, of any public utility, and *may establish new rates, classifications, rules, contracts, or practices or schedule or schedules in lieu thereof* (emphasis added).

The main rate classes in California are residential, commercial and industrial, agricultural, and street lighting. These classes have been used for electric pricing since at least 1916,<sup>95</sup> with a separate “saloon” rate class being used as early as 1912.<sup>96</sup> Historically, the Commission used flexible policy in affirming and creating new classes of service. Past decisions confirm that rate classes may be proposed by the utilities themselves, and in other cases were designed by the Commission.

The first decision in which the Commission created a new rate class for PG&E dates back to 1922 in D.11457. While not specifically referred to as such, in fact this decision resolved PG&E’s first general rate case before the Commission. At the time, PG&E utilized 58 different rate schedules, 25 of which were inherited by PG&E through the purchase of other power companies.<sup>97</sup> In revising these schedules and establishing new rate classes, the Commission’s guiding methodology was the principle that “schedules should be simplified and reduced in number in so far as possible and still maintain flexibility.”<sup>98</sup>

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<sup>95</sup> See D.3624.

<sup>96</sup> See D.143.

<sup>97</sup> *Opinions and Orders of the R.C.C.*, Vol. 22, D.11457, Dec. 30, 1922 at 783.

<sup>98</sup> D.11457 at 788.

In addition to simplification, and a reduction from 58 different schedules to 16, D.11457 also established a new rate class for street railway service despite there being a large variation in the amount of electricity used by different sized railways. Similar to the instant proposal for CEV rates, the Commission authorized a single rate class for differently sized railway customers reasoning that “the requirements for power are fixed largely by the demand of the public for transportation and are not within the control of the street railway company.”<sup>99</sup>

D.11457 outlined a loose framework of considerations when revising schedules, concluding that “[t]he fixing of rates and the equitable division of charges on a system as extensive as the applicant is a problem in the solution of which *no exact rule or formula can be used*” (emphasis added).<sup>100</sup> This relaxed approach in creating new rate classes is apparent in Commission decisions as far back as 1912. D.134 was published only four months after the Commission was given regulatory authority over electric power companies. The applicant was charging flat rates for electric service based three different customer classes: Business, Residential, and “Saloon, or all Night Rate.”<sup>101</sup> In D.134, the Commission created new rate classes and rates that were ordered to “prevail

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<sup>99</sup> D.11457 at 788. *See also* D.88-12-031 in which discussion of bringing back the railway class was illustrated more recently, addressing whether or not the Bay Area Rapid Transit District (BART) should be treated as a separate customer class for purposes of revenue allocation. In response to BART’s request for the Commission to affirm a new railway customer class, the Commission held that “[w]hether BART is classified as a separate class... is a question of mere semantics, in our view.” This decision supports the principle that the Commission has discretion under Pub. Util. Code § 729 to establish, or not establish, customer classes.

<sup>100</sup> *Id.*

<sup>101</sup> D.134.

until either by complaint of the patrons, application of the utility or in this Commission's own initiative, the matter shall be investigated thoroughly and the proper rates determined, if... it is possible to determine what is a proper rate."<sup>102</sup> The decision pays heightened attention to how the new schedules will affect the rates paid by all customers stating that "the only question to be considered is whether or not the change amounts to an advance in rates in a material number of cases."<sup>103</sup>

A more recent example of the analysis and methodology the Commission follows before ruling on the creation of a new rate class can be found in D.17-08-030. In SDG&E's 2015 GRC Phase 2, there was unresolved discussion regarding the creation of a new "schools only" rate class. No resolution could be reached by close of the proceeding, so the Commission ordered that:

San Diego Gas & Electric Company must develop a schools-only rate based on considering the schools as a rate class separate from the Medium/Large Commercial and Industrial class. This analysis includes developing billing determinants for the schools, developing a marginal customer cost for schools, equal percentage of marginal cost allocations of distribution and generation revenue, and appropriate rate design for net energy metering and non-net-energy metering members of this class. San Diego Gas & Electric Company must also, in parallel, develop rates based on inclusion of schools in the Medium/Large Commercial and Industrial class, consistent with current practice.<sup>104</sup>

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<sup>102</sup> D.134 at 316. Also demonstrating that the question of a "proper" rate has always vexed the Commission.

<sup>103</sup> *Id.* at 323.

<sup>104</sup> D.17-08-030, Ordering Paragraph 36.

In creating or authorizing new electric rate classes, the Commission has consistently employed a flexible approach that prioritizes simplification and considers the impact that the division of customer classes will have overall on the rates charged by the utility. This decision follows this historic approach, while noting the holding of D.11457 that no exact rule or formula can be used to set rate classifications.

The creation of a new rate class for CEV customers does not enhance simplicity on a prima facie basis. Instead it somewhat adds to the complexity of PG&E's rates and classifications by providing more rate and class options for commercial customers. On the other hand, the new CEV rate class would bundle various commercial customers spread amongst several different rates and classifications into a single class based on the purpose of their electrical usage (i.e., transportation electrification). This will simplify the class structure from the perspective of CEV customers in that they may choose between two EV-specific rates to serve their EVSE load.

It is therefore arguable that the new CEV rate class enhances simplicity by reducing the rate options for commercial customers that seek out EV-specific rates to serve their EVSE load. Additionally, the rates themselves are less complex than other commercial rates and promote state policy goals regarding transportation electrification. For these reasons, the Commission finds that the new CEV rate class promotes rate simplification for CEV customers and should be approved.

The second historic consideration when setting a new rate class is the impact on pre-existing rate classes. The scoping memo for this proceeding calls for consideration of the impact of the formation of a CEV rate class on other rate classes. This decision addresses that issue, and it is determined that the

formation of the CEV rate class has beneficial effects in the short-term for other rate classes. Thus, the holding of D.143 that the formation of the new rate class should not increase rates “in a material number of cases” is fulfilled.<sup>105</sup> This decision therefore approves the formation of a new CEV rate class.

### **5.1. Revenue allocation for the new CEV rate class**

Ancillary to the creation of a new rate class is the approval of a given revenue allocation for the new rate class. Normally this is conducted in a GRC Phase 2 proceeding where the revenue allocations to various rate classes are conducted simultaneously. In this proceeding that is not contemplated.

Creating a class and collecting revenue from that class without the benefit of an official revenue allocation leads to an interesting effect, as noted by PG&E, that *any* revenue collected from the new class beyond the marginal cost to serve them is an overcollection.<sup>106</sup> PG&E proposes to redistribute any revenue collected from the new CEV class beyond the marginal cost to serve them to other rate classes.<sup>107</sup> This means that, as originally proposed by PG&E, approximately two-thirds of the distribution and generation revenue collected from the CEV class may be redistributed to other rate classes.

When asked why the new CEV rates were not designed to collect merely the marginal cost to serve the new class, PG&E expressed apprehension with presenting customers with rates based only on marginal revenue that would lead

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<sup>105</sup> PG&E’s application in this case, sadly, does not describe the specific impact of the CEV rate class on saloons in its territory.

<sup>106</sup> Exh. PGE-1, Chapter 2 at 15.

<sup>107</sup> Exh. PGE-2 at 26.



to an “unrealistic expectation” that would be dashed by increased CEV rates that would likely go into effect in 2025.<sup>108</sup>

While rate shock is to be avoided if possible, PG&E’s reasoning relies on the assumption that the CEV rate class will pay far more than the marginal cost to serve them in 2025 and beyond. This is not assured. To make that assumption would be to prejudice the outcome of the revenue allocation negotiations in PG&E’s 2023 GRC Phase 2 proceeding and the Commission’s review of those negotiations.

Because the de facto revenue allocation proposed by PG&E for the new CEV class would lead to overcollections to be redistributed to other classes, it is not reasonable to require CEV customers to subsidize other rate classes without a sufficient justification. The prospect of future rate shock is speculative and not a sufficient justification.

This decision orders PG&E to collect only marginal distribution revenue from the CEV rate class, and not distribution revenue that would have been collected pursuant to the application of the distribution equal percent marginal cost scaler. PG&E shall otherwise apply the rate designs proposed in this proceeding as modified in exhibit Joint-01. Generation, transmission, and non-bypassable charge (NBC) revenue collection and rate design are unaffected by this order.

After reviewing PG&E’s workpapers in this proceeding, the primary effect of this order is to substantially reduce the subscription charges in the three CEV

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<sup>108</sup> RT 184:7-18. In other words, rates set only to collect marginal costs would need to be substantially increased if the CEV rate class were assigned non-marginal, embedded costs in several years.

rates.<sup>109</sup> Energy rates are also reduced; but only slightly.<sup>110</sup> This modification of PG&E's rate design is therefore in accord with SB 1000, as reflected in Public Utilities Code Section 740.15(a)(2), that requires the Commission to explore policies and rates that "reduce the effects of demand charges on electric vehicle drivers and fleets."<sup>111</sup>

## **5.2. Is the proposed 100-kilowatt cutoff between CEV rate schedules reasonable?**

PG&E's proposal to create a 100kW cutoff between CEV rate schedules is not opposed. Given the absence of record indicating that the proposal is unreasonable, this decision finds that the proposed 100kW cutoff between CEV rate schedules is reasonable. However, Tesla and SBUA raise concerns about the operation of the kW cutoffs in the CEV class and those concerns are addressed below.

Tesla recommended the exploration of an extra-large CEV rate for higher capacity DCFC sites.<sup>112</sup> PG&E opposes the proposal due to a lack of data on

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<sup>109</sup> In the workpapers used by PG&E and Public Advocates to develop the illustrative rates based on their joint stipulation, removal of the "Fixed Cost Portion" of distribution revenue (i.e., that revenue that is non-marginal) reduces the illustrative subscription charge from \$21.17/10kW to \$12.41/10kW for CEV-S; from \$167.75/50kW to \$95.56/50kW for CEV-L-S; and from \$153.41/50kW to \$85.98/50kW for CEV-L-P. The workpapers were provided to the Commission's Energy Division in response to an Energy Division data request on June 4, 2019. PG&E responded to the data request named "ED\_002-Q01" attaching the workpapers on June 7, 2019.

<sup>110</sup> For example, the illustrative peak energy charge for schedule CEV-S is reduced from 32.166 cents/kWh to 31.736 cents/kWh.

<sup>111</sup> Because PG&E's CEV rate proposal essentially converts demand charges into subscription charges, a reduction in the proposed subscription charge helps to meet the goals of SB 1000. This is additional to PG&E's reduction of demand charge impacts through the use of subscription charges in the first place.

<sup>112</sup> Exh. Tesla-1 at 18-19.

customers that would take service on such a rate.<sup>113</sup> Given the uncertainties in creating new rates and revenue requirements for a new class, at this time it is reasonable to create the two rates for the CEV class proposed by PG&E and endorsed by many of the parties. Consideration of a “CEV-XL” rate should be undertaken by the parties in PG&E’s 2023 GRC Phase 2 when more data about that particular group of customers is available.

SBUA notes that a customer that moves from being a 100kW customer to a 101kW customer would move from paying \$251/month in subscription charges to \$551.58/month in subscription charges. SBUA insists this is unfair and charges the customer well above cost for the extra kW in demand per month. SBUA therefore argues for a medium CEV rate that would apply to customers around the 100kW threshold, or adopting other measures such as charging in 1kW blocks, reducing the subscription charge generally, or allowing customers between 101-200kW in demand to access 10kW subscription blocks.<sup>114</sup>

SBUA’s concerns are noted; but this decision accepts as reasonable the 100kW cutoff as proposed by PG&E. The adjustments made to PG&E’s ME&O program and the elimination of the overage charge in this decision may assist CEV customers at or near 100kW in peak demand to choose the best rate option.

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<sup>113</sup> Exh. PGE-2 at 25.

<sup>114</sup> SBUA opening brief at 8-9.

**5.3. How should any potential cost shift between classes be measured, and if cost shifts are discovered should they be recovered and how should that recovery be accomplished?**

There is no pre-existing, Commission-authorized revenue requirement for the new CEV class. Any non-marginal costs collected from the CEV rate class will be considered overcollections and will be redistributed to other classes. This means that a cost shift from the CEV class to existing rate classes is impossible.

PG&E and Public Advocates agreed in their joint stipulation to track the revenues received from the CEV class against “shadow rates” that would seek to estimate any theoretical lack of contributions to costs made by the CEV class. The results of the analysis of the performance of the CEV class on the shadow rates will help parties in their deliberations on CEV class rate design in PG&E’s 2023 GRC Phase 2.

**5.4. What is the rate impact on other rate classes if the new CEV rate class is created as proposed?**

In the near-term, the only impact on other rate classes will be to potentially reduce the rates of other classes. This is because there is no pre-existing, Commission-authorized revenue requirement for the new CEV class, while all other existing PG&E rate classes are allocated 100% of PG&E’s authorized revenue requirement. This means that the new CEV rate class is under no existing obligation to pay for any amount of PG&E’s authorized revenue requirement. In practice it means that any revenue collected from the new rate class will be additional to PG&E’s existing revenue requirement and therefore an overcollection. PG&E is not allowed to collect more than its authorized revenue requirement, and overcollections are refunded to ratepayers through a true-up mechanism. Therefore any revenue collected from the new CEV class will

ultimately offset revenue that needs to be collected from other classes, potentially lowering the rates of other classes.<sup>115</sup>

In the long-term the rate impact on other classes is uncertain and unaddressed by the record of this proceeding.

**5.5. Are the cost allocators used to create the CEV rate class reasonable?**

PG&E and Public Advocates differed on the cost allocators used to create the revenue requirements for the CEV class. Those differences were resolved in the joint stipulation, and this decision accepts the cost allocators used in the joint stipulation as reasonable. This determination is non-precedential, and does not impact the determination elsewhere in this decision that the CEV class revenue requirement shall not include non-marginal distribution costs.

**5.6. Optionality of CEV rate class membership**

The Commission notes that PG&E stipulated that the CEV rates would be optional, and that potential CEV customers could take service on otherwise applicable commercial rates if desired.<sup>116</sup> Therefore, at this time customers taking service on CEV rates may instead take service on any otherwise applicable PG&E tariff for which they qualify.

**6. Are the interactions of PG&E's proposal with CCAs reasonable?**

This decision considers whether PG&E's proposal for a non-time differentiated PCIA charge of a given amount for CEV customers is reasonable.

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<sup>115</sup> Exh. PGE-1, Chapter 2 at 15.

<sup>116</sup> See EVgo opening brief at 15.

For the reasons discussed below, PG&E's proposed treatment of CCA CEV customers is reasonable and approved.

**6.1. Is the calculation and assignment of the PCIA reasonable?**

For the CEV class, PG&E seeks to employ a flat PCIA charge per kWh of usage, with no differentiation in the price of the PCIA component based on the TOU period. This is consistent with the way in which the PCIA is designed for all other PG&E customers that take generation service from a CCA. PG&E's original proposal was to use the PCIA values from the existing A-6 rate for CEV-S customers and the existing E-19 rate for CEV-L customers.<sup>117</sup> In briefs, PG&E suggested that it would revise this proposal and base the CEV PCIA rates on a comparison of the forecasted generation revenues for CEV customers to those of existing commercial classes, giving the CEV PCIA values the same generation allocation treatment as is approved for other classes.<sup>118</sup> For the sake of clarity, PG&E shall use the forecasted generation revenue method outlined in its opening brief when setting the CEV PCIA rates.

In order to ensure that all of PG&E's CCAs customers, including CEV customers, pay the correct amount of total PCIA costs, PG&E proposes to use its Portfolio Allocation Balancing Account (PABA) to ensure that all utility-wide under or over collections of the PCIA are accounted for.<sup>119</sup>

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<sup>117</sup> Exh. Joint CCA-1 at 8.

<sup>118</sup> PG&E opening brief at 18.

<sup>119</sup> Exh. Joint CCA-1 at 14.

### 6.1.1. Time variance in the PCIA

The Joint CCAs seek two changes to PG&E's proposal. First, the Joint CCAs assert that the PCIA charge should be differentiated by TOU period in order to increase the ratio of peak to off-peak prices in the CEV rates. The Joint CCAs argue that this increased ratio would incent more CEV charging at times that would lead to greater fuel cost savings for CEV customers when compared to gasoline costs,<sup>120</sup> and that such modification is justified by PG&E's assignment of other fixed generation costs to various TOU periods using peak capacity allocation factor allocators.<sup>121</sup>

PG&E rejects this proposal by the Joint CCAs, claiming that introducing time-variance to the PCIA is outside of the scope of this proceeding and unnecessary. PG&E holds that introducing time-variance to the PCIA (i.e., PCIA charges that would be higher during the peak period than in the off-peak period) would enable some customers to shift load away from peak periods and avoid paying their share of the PCIA. PG&E also argues that its non-bypassable charges, including the PCIA, do not vary by TOU period on any other rate schedule and therefore the PCIA should not vary by TOU period on the CEV rate schedules.<sup>122</sup> PG&E also asserts that the Joint CCAs have not offered evidence to justify increasing the cost of the PCIA during peak periods.<sup>123</sup>

Finally, PG&E points out that CCAs are able to determine their own generation rates and generation rate differentials, and may therefore achieve the

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<sup>120</sup> Exh. Joint CCA-1 at 9.

<sup>121</sup> Exh. Joint CCA-1 at 16-17.

<sup>122</sup> Exh. PGE-2 at 28-29.

<sup>123</sup> Exh. PGE-2 at 29.

rate design goal they have in mind for the PCIA (i.e., steeper peak to off-peak price differentials) using their own ability to set generation rates.<sup>124</sup> In essence, PG&E argues that there are other ways for the Joint CCAs to achieve their goals without varying the PCIA rate by TOU period.

For its part, Tesla broadly criticizes the proposal by the Joint CCAs to time differentiate the PCIA and states that doing so “will not spur additional investment in charging infrastructure, particularly in low load factor locations, and [sic] or lead to additional EV adoption.”<sup>125</sup>

This decision agrees with PG&E that CCAs may set their generation rates in whatever form they choose. If a CCA wishes to increase the peak to off-peak price differential to further incent EV ownership and EV charging during off-peak hours, then the CCA is free to do so through its generation rate. It is not necessary to introduce time variance to the PCIA in order to do so.

Joint CCAs also argue that establishing optional CEV rates with a time varying PCIA would also allow the Commission to evaluate the performance of CEV customers on various forms of CEV rates with different peak to off-peak price differentials.<sup>126</sup> However, the same logic applies as above. The Commission may compare various price differentials if a CCA chooses to vary its generation rate. It is not necessary to introduce time variance to the PCIA to attain that goal.

Joint CCAs contend that PG&E’s reliance on the PABA to account for PCIA revenues on a class-wide basis means any individual customer arbitrage of a

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<sup>124</sup> Exh. PGE-2 at 29-30.

<sup>125</sup> Tesla reply brief at 5.

<sup>126</sup> Joint CCAs opening brief at 10.



time varying PCIA, which PG&E claims is a threat to PCIA revenue collection, is irrelevant as the entire class will eventually pay the PCIA revenue requirement for that class.<sup>127</sup>

Ultimately, the principle that generally guides whether a rate element should be time varying is whether that element has a marginal cost component that is temporally variable. The record does not show that the PCIA has marginal costs that are temporally variable. The opening testimony of the Joint CCAs restates PG&E's assertion that "PG&E has described the above-market costs collected through the PCIA as effectively being a fixed cost that scales with kilowatt-hours of generation."<sup>128</sup> Furthermore, PG&E's rebuttal testimony maintains that "[t]he Joint CCAs do not present a cost basis for time differentiating the PCIA rate...".<sup>129</sup> The Joint CCAs do not respond to this argument, or assert that the PCIA has time-varying marginal costs, in their brief. The record therefore reflects that the PCIA does not have temporally variable marginal costs.

However, Joint CCAs argue that the PCIA should be time varied because PG&E time varies some of its fixed generation costs for the CEV class, reasoning that even if the PCIA is a fixed generation cost element it should be placed in the peak generation rate to amplify the marginal generation cost signal.<sup>130</sup>

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<sup>127</sup> Joint CCAs opening brief at 10-11.

<sup>128</sup> Exh. Joint CCA-1 at 16; 7 (restating PG&E's assertion that fixed generation costs include PCIA costs).

<sup>129</sup> Exh. PGE-2 at 29.

<sup>130</sup> Exh. Joint CCA-1 at 16-17.

PG&E's workpapers submitted subsequent to the entry of the joint stipulation indicate that the PCIA is accounted for as a component of the generation energy charge for CEV customers, rather than as an NBC.<sup>131</sup> The joint stipulation's overall NBC for CEV-S customers is \$0.02165/kWh, while the peak generation energy charge is \$0.25411/kWh.

The NBC includes the following charges: \$0.01337/kWh for public purpose programs, \$0.00020/kWh for nuclear decommissioning (ND), \$0.00097/kWh for a competition transition charge (CTC), \$0.00549/kWh for Department of Water Resources (DWR) bonds, \$0.00167/kWh for new system generation charges (NSGC), and a credit of \$0.00005/kWh for an Energy Cost Recovery Amount (ECRA). Summing these charges and the ECRA credit leads to a figure of \$0.02165/kWh, the value of the NBC proposed by PG&E.

The peak generation energy charge includes the following components: \$0.02235/kWh for fixed generation costs, \$0.06457/kWh for marginal energy costs, \$0.00283/kWh for marginal capacity costs, \$0.02466/kWh for the PCIA,<sup>132</sup> and an adjustment adding \$0.12401/kWh of fixed generation costs and \$0.01569/kWh of marginal generation costs in the peak rate. This leads to a total peak generation energy charge of \$0.25411/kWh.

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<sup>131</sup> The workpapers were provided to the Commission's Energy Division in response to an Energy Division data request on June 4, 2019. PG&E responded to the data request named "ED\_002-Q01" attaching the workpapers on June 7, 2019.

<sup>132</sup> It is unclear why PG&E includes the PCIA as a component of the generation energy charge and not the aggregate NBC charge in its workpapers while insisting that the PCIA is actually an NBC. As noted by Joint CCAs in their brief, PG&E's rate design essentially creates a flat generation price across all TOU periods for both bundled and unbundled customers by assessing a PCIA that is not time-variant. (Joint CCAs opening brief at 11-12.)

A review of the workpapers shows that PG&E is significantly amplifying the marginal generation cost signal in the peak rate by collecting nearly all of its self-described fixed generation costs in the peak energy charge. PG&E's aim is to increase the difference between the peak and off-peak energy price so that incentives for fuel switching are heightened.<sup>133</sup> This is a laudable goal that helps to achieve state policy goals around transportation electrification.

PG&E argues that the Commission should regard the PCIA as an NBC, which by tradition means that it should not vary by time and should be collected on a straight per kWh basis as other NBCs. However, if one changes perspective and regards the PCIA as a form of fixed generation cost, then as a matter of equity there is merit to the Joint CCAs' argument that they should be allowed to include it in the peak generation energy charge for their CEV customers just as PG&E does with their fixed generation costs.

Complicating the analysis is the difficulty in distinguishing between NBCs and fixed generation costs. Several of the NBC components relate to sunk generation costs. The ND, CTC, DWR Bond, and NSGC charges all relate to some form of sunk (and therefore fixed) costs related to generation infrastructure or past energy purchases. Arguably PG&E is not collecting all of its fixed generation revenue in the peak generation energy charge, if one regards the NBCs as including fixed generation costs.

This decision sides with PG&E and holds that for the purpose of the CEV rates at issue in this proceeding the PCIA is an NBC that should be assessed on a per kWh basis without time differentiation. Several of PG&E's NBCs relate to

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<sup>133</sup> Exh. PGE-1, Chapter 2 at 11 ("E-CEV-S volumetric rates have been designed to send significant price signals to customers to consume in the non-peak hours").

fixed generation costs, and it is therefore reasonable to consider the PCIA a non-time-variant NBC. This maintains the traditional approach whereby the PCIA is assessed on a per kWh basis without time differentiation. This tradition is supported by the fact that the PCIA does not include a marginal cost component that is temporally variable and thus meriting a time variant price.

### **6.1.2. Setting the CEV Class PCIA Rates**

PG&E originally proposed to use the PCIA values from the existing A-6 rate for CEV-S customers and the existing E-19 rate for CEV-L customers.<sup>134</sup> The Joint CCAs claimed that the use of the A-6 and E-19 PCIA values for CEV rates risks over or under collections of the PCIA from CEV customers, given that the PCIA values for A-6 and E-19 customers were developed for customers with different load profiles and cost bases than CEV customers.<sup>135</sup> To the Joint CCAs, over or under collection would lead to deleterious effects such as reduced transportation electrification and potential unauthorized burdening of CEV customers with PCIA costs.<sup>136</sup>

The Joint CCAs seek to address these concerns through the creation of a balancing account specific to the new CEV rate class that would track PCIA collections until a future proceeding (presumably the 2023 GRC Phase 2) where new PCIA collections for the CEV class would be definitively created. Once the balancing account is established, the collections that occurred in the past would

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<sup>134</sup> Exh. Joint CCA-1 at 8. PG&E slightly modified its proposed PCIA calculation during the course of the proceeding, as described in their briefs, and it is this revised PCIA calculation methodology that this decision considers.

<sup>135</sup> Exh. Joint CCA-1 at 11-13.

<sup>136</sup> Exh. Joint CCA-1 at 12; 20.

be compared to the “accurate PCIA rates” set for the CEV class and any positive or negative balances would be “disposed.”<sup>137</sup>

PG&E opposes this approach. It argues that the PCIA rates proposed for the CEV class in this proceeding are inherently appropriate, and that therefore there is no need to retrospectively judge whether the PCIA was over or under collected from CEV ratepayers several years from now.<sup>138</sup> In essence, PG&E contends that the PCIA values as proposed are the right values and should not be adjusted in an ex post fashion.

The Joint CCAs maintain that the law requires that the PCIA only collect the above-market costs owed by CCA customers, “no more and no less.”<sup>139</sup> If they pay more than they should, then a balancing account should be used to refund them their overpayment instead of distributing that overpayment to all other customers in the form of a PCIA refund using the PABA.<sup>140</sup>

What a particular customer owes and pays via the PCIA is the subject of expansive debate before the Commission. The history of that debate is not revisited here. However, it is clear that CCA CEV customers must pay some form of PCIA, just as they must pay for generation, distribution, and other non-bypassable expenses. The question is how much.

Rates, including the PCIA, must be calculated for the new CEV class somehow and with some basis in the estimated costs those customers impose (or imposed, in the case of the PCIA). Indeed, as the Joint CCAs themselves point

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<sup>137</sup> Exh. Joint CCA-1 at 21.

<sup>138</sup> Exh. PGE-2 at 30.

<sup>139</sup> Joint CCAs opening brief at 6.

<sup>140</sup> Joint CCAs opening brief at 7.

out, “PG&E cannot be expected to get all of the C-EV rate allocations perfect without sufficient historical load data.”<sup>141</sup>

In the absence of historic load data on which to refine an estimate of the PCIA, PG&E’s proposed methodology for calculating the PCIA as described in their briefs is a reasonable manner through which to set the initial PCIA rates for the CEV class. It is undisputed that PG&E will continue to collect only the amount of total PCIA revenue authorized by the Commission from its unbundled ratepayers even if PG&E’s CEV proposal is adopted. Therefore, there will be no overcollection of PCIA revenue in the aggregate across all rate classes.

**6.2. How will it be ensured that CCA customers will be able to take advantage of the CEV rates?**

Parties did not discuss this issue in detail, and appeared to grant that CCA customers will be able to take advantage of the unbundled portion of the CEV rates.<sup>142</sup> What that means is that a CCA customer may enroll in a CEV rate and will experience all of the non-generation components of the CEV rate, while the CCA sets the generation portion of the CEV rate.

The Commission has no power to regulate the generation rates set by CCAs, and so the Commission cannot ensure that CCA customers will be able to take advantage of rates identical to those offered by PG&E. Joint CCAs aver in their brief that they “generally support the proposed rates because they align with our agencies’ core missions to reduce greenhouse gas emissions and offer

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<sup>141</sup> Joint CCAs opening brief at 8.

<sup>142</sup> Exh. PGE-2 at 31.

customers more choices.”<sup>143</sup> This suggests that the Joint CCAs will use their judgment to advance the goals promoted by the new CEV rates.

### **6.3. How will CCA customers experience the proposed generation component of the subscription charge?**

PG&E originally proposed to include a generation component in the subscription charge. Several parties opposed this rate design. After discussing the issue with other parties, PG&E stipulated to remove the generation component of the subscription charge for CEV customers. This issue is therefore moot.

## **7. CEV evaluations and methodology**

Parties generally agreed that an evaluation of CEV customers’ behavior on the CEV rates is warranted. PG&E states that it believes “it is worthwhile to align evaluation with SB 350 programs, where applicable, as well as any potential evaluation resulting from [R.18-12-006].”<sup>144</sup> PG&E recommends that any costs for CEV evaluations be included in the budgets already approved for PG&E’s EV infrastructure programs.<sup>145</sup>

PG&E and Public Advocates agreed in their joint stipulation that the below activities would provide opportunities for data collection, data sharing, and party input to help inform a CEV evaluation:

- An informal workshop presenting data on the CEV customers’ performance on their rate, revenues collected, costs incurred, and

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<sup>143</sup> Joint CCAs’ opening brief at 2.

<sup>144</sup> Exh. PGE-2 at 32.

<sup>145</sup> Exh. PGE-2 at 33.

usage trends after one year's worth of data is collected on the rate.

- Annual reports identifying the recorded revenues and “shadow rate” revenues from the CEV class, until the CEV rate class is incorporated into PG&E's 2023 GRC Phase 2 total revenue requirement.
- Providing annual data updates as a compliance filing to the parties of this and related service lists, or within an appropriate EV-reporting venue if one becomes available (such as R.18-12-006).<sup>146</sup>

The proposals contained in the joint stipulation are reasonable and adopted. PG&E shall convene an informal workshop to share data on CEV rate class performance no later than March 1, 2021. At this workshop, PG&E shall present anonymized data from actual customers in the five use cases utilized to develop the CEV rates that reveal: hourly energy and demand, monthly bills based on that energy and demand data, impacts of customer usage on the local distribution network, and a representative survey of customers in the five use case categories regarding their experience on the CEV rate, their satisfaction with the rate, and their satisfaction with PG&E generally.<sup>147</sup>

The workshop presentation shall also describe recorded revenues and “shadow rate”<sup>148</sup> revenues from the CEV rate class, including a disaggregation of

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<sup>146</sup> Exh. JS-01 at 8.

<sup>147</sup> EDF opening brief at 3-4 (providing suggestions on customer data to be collected by PG&E given lack of specifics spelled out in testimony).

<sup>148</sup> Including a seasonal component.



those CEV revenues that are from new, incremental CEV customers and those that are from customers that switch from an existing commercial rate.<sup>149</sup>

PG&E shall also serve an annual tier 1, information-only advice letter on the service list of this proceeding, and R.18-12-006, containing an annual report on CEV rate class performance including the data required for presentation at the workshop as described above. The annual advice letter shall be filed on January 1 of 2022, 2023, 2024, and 2025. Parties to PG&E's 2023 GRC Phase 2 proceeding may advise the Commission on whether it is necessary to continue the annual advice letter filing after 2025.

Pursuant to the joint stipulation, PG&E shall also collect data on the CEV class's final line transformer-related revenues and present this information in its 2023 GRC Phase 2 application.<sup>150</sup>

As proposed by PG&E, the costs of the evaluation activities shall be paid for using budgets already approved for PG&E's EV infrastructure programs. PG&E shall collect the relevant data using the SB 350 reporting templates.<sup>151</sup>

## **8. Timing of CEV rate implementation**

PG&E states that it will implement the CEV rates sometime in 2020. As noted by Tesla, potential CEV customers may desire a specific start date for the CEV rates.<sup>152</sup> It is reasonable to set a start date that CEV customers may use for planning and financing purposes. PG&E shall make its CEV rates, as approved by this decision, available no later than March 1, 2020.

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<sup>149</sup> As proposed by EVgo in their opening brief at 15.

<sup>150</sup> Exh. JS-01 at 4-5.

<sup>151</sup> See <http://www.cpuc.ca.gov/sb350te>.

<sup>152</sup> Tesla reply brief at 8.

**9. Comments on Proposed Decision**

The proposed decision of Administrative Law Judge (ALJ) Doherty in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on \_\_\_\_\_, and reply comments were filed on \_\_\_\_\_ by \_\_\_\_\_.

**10. Assignment of Proceeding**

Clifford Rechtschaffen is the assigned Commissioner and Patrick Doherty is the assigned ALJ in this proceeding.

**Findings of Fact**

1. PG&E's CEV rate proposal provides adequate fuel switching incentives when compared to the costs for fueling both traditional internal combustion engine-powered vehicles and hybrid vehicles.
2. PG&E's load forecasting used to develop the CEV rates is uncertain and necessarily speculative, but this decision finds that the load forecasts are nevertheless reasonable until further research is conducted.
3. Most parties agreed that the proposed CEV rates will provide adequate fuel switching incentives for EV owners.
4. Given that this decision alters the revenue allocation to the new CEV rate class such that the illustrative subscription charges provided by PG&E are substantially lowered, it is reasonable to conclude based on the record that the proposed EV rates will provide fuel switching incentives to the PG&E customer of record.
5. The revised proposal by PG&E for a 4:00 p.m. - 9:00 p.m. peak period is a reasonable approximation of the high cost hours faced by PG&E and tracks the new peak period established for PG&E's residential and commercial customers.

6. The EPRI Study of EV customer rate preferences forms the basis for PG&E's proposals in this proceeding.

7. The EPRI Study reports that there was no clear overall preference across respondents, and that while delivery and transit fleet operators favored simpler rates, some operators indicated that with better control technology and experience, they could potentially benefit from the more complex rate options that provide additional savings opportunities over time.

8. The EPRI Study concluded that choice and flexibility in rate designs were important to CEV customers and that there is no universal rate design solution.

9. There are at least some potential CEV customers interested in a dynamic rate, and rate choices for CEV customers are inherently desirable.

10. EDF's general position that a dynamic CEV rate may create environmental benefits is uncontested.

11. There appears to be benefit in exploring an optional dynamic rate for CEV customers to take advantage of if they believe the rate would support their operations.

12. There is no specific dynamic rate proposal in this proceeding.

13. Certain critical questions should be addressed before the Commission orders PG&E to implement a dynamic rate for its CEV customers.

14. No party provided evidence that the proposed CEV rates would fail to incent greater adoption of EVs.

15. The proposed CEV rates will incent greater adoption of EVs by lowering the costs of operating an EV when compared to PG&E's current commercial rates.

16. Some EV end users will not directly experience the fuel switching benefit presented by the proposed CEV rates. This is particularly true of DCFC users,

where the customer of record taking service on the CEV rate will not be the same individual that charges an EV at the DCFC station.

17. The main rate classes in California are residential, commercial and industrial, agricultural, and street lighting. These classes have been used for electric pricing since at least 1916, with a separate “saloon” rate class being used as early as 1912.

18. Historically, the Commission used flexible policy in affirming and creating new classes of service. Past decisions confirm that rate classes may be proposed by the utilities themselves, and in other cases were designed by the Commission.

19. In revising PG&E’s rate schedules and establishing new rate classes in 1922, the Commission’s guiding methodology was the principle that schedules should be simplified and reduced in number in so far as possible and still maintain flexibility.

20. The Commission previously authorized a single rate class for differently sized railway customers in PG&E’s territory, reasoning that the requirements for power are fixed largely by the demand of the public for transportation and are not within the control of the street railway company.

21. D.11457 outlined a loose framework of considerations when revising rate schedules, concluding that no exact rule or formula can be used.

22. The new CEV rate class would swathe various commercial customers spread amongst several different rates and classifications into a single class based on the purpose of their electrical usage (i.e., transportation electrification). This will simplify the class structure from the perspective of CEV customers in that they may choose between two EV-specific rates to serve their EVSE load.

23. The new CEV rate class enhances simplicity by reducing the rate options for commercial customers that seek out EV-specific rates to serve their EVSE load.

24. There is no pre-existing, Commission-authorized revenue requirement for the new CEV class.

25. The formation of the CEV rate class has beneficial effects in the short-term for other rate classes.

26. Creating a class and collecting revenue from that class without the benefit of an official revenue allocation means that any revenue collected from the new class beyond the marginal cost to serve them is an overcollection.

27. The primary effect of the order to collect only marginal distribution revenue from CEV customers is to substantially reduce the subscription charges in the three CEV rates.

28. PG&E's proposal to create a 100kW cutoff between CEV rate schedules is not opposed.

29. Any non-marginal costs collected from the CEV rate class will be considered overcollections and will be redistributed to other classes.

30. A cost shift from the CEV class to existing rate classes is impossible.

31. In the near-term, the only impact on other rate classes from the formation of the CEV rate class will be to potentially reduce the rates of other classes.

32. PG&E and Public Advocates differed on the cost allocators used to create the revenue requirements for the CEV class. Those differences were resolved in the joint stipulation.

33. A customer that takes service on a CEV rate for which they are eligible may instead take service on any otherwise applicable PG&E tariff for which they are eligible.

34. The record reflects that the PCIA does not have temporally variable marginal costs.

35. Several of PG&E's NBCs relate to fixed generation costs.

36. The traditional approach is that the PCIA is assessed on a per kWh basis without time differentiation.

37. It is undisputed that PG&E will continue to collect only the amount of total PCIA revenue authorized by the Commission from its unbundled ratepayers even if PG&E's CEV proposal is adopted. Therefore, there will be no overcollection of PCIA revenue in the aggregate across all rate classes.

38. Parties generally agreed that an evaluation of CEV customers' behavior on the CEV rates is warranted.

### **Conclusions of Law**

1. Several sections of the Public Utilities Code added by SB 350 codify PG&E's obligation to help California attain widespread transportation electrification, and specifically to increase access to the use of electricity as a transportation fuel.

2. PG&E's CEV rate proposal as modified by this decision complies with the requirements of SB 350 on a prima facie basis.

3. SB 1000 added a section to the Public Utilities Code that requires the Commission to consider rate strategies that can reduce the effects of demand charges on electric vehicle drivers and fleets, and help accelerate the adoption of electric vehicles.

4. By considering PG&E's CEV rate proposal the Commission's duty under Public Utilities Code Section 740.15(a)(2) and (a)(3), as created by SB 1000, is discharged with respect to PG&E's service territory.

5. The Commission is obligated in any rate design proceeding to consider whether the proposed rates are just and reasonable per Public Utilities Code Section 451.

6. Public Utilities Code Section 454 requires PG&E to show that its CEV rate proposal is justified, and that the Commission must find that the CEV rate proposal is justified.

7. Because the CEV rates as modified by this decision comply with the requirements of SB 350, and because in the near-term they will potentially lower the rates of other customer classes, the Commission finds that the CEV rates as modified by this decision are just and reasonable, and also justified under Public Utilities Code Section 454.

8. Use of the fuel switching incentive to gauge the reasonableness of EV rate proposals was adopted explicitly in D.18-11-027 with respect to SCE's residential EV rate and implicitly in D.18-05-040 with respect to SCE's commercial EV rates.

9. PG&E's CEV rate proposal is reasonable on the grounds that it provides a fuel switching incentive for EV drivers through the use of lower off-peak and super off-peak volumetric energy charges and the elimination of a demand charge.

10. The general rate design principles that apply to any electric rate design proceeding before the Commission are well-established, and the Commission finds that PG&E's CEV rate proposal as modified by this decision supports these principles.

11. In D.17-01-006 the Commission expressed a preference for stability in core TOU periods so that customers are not constantly confronted by changing peak periods.

12. The core 4:00 p.m. – 9:00 p.m. peak period adopted for residential and commercial customers in PG&E’s territory is only now coming into existence from the customer’s perspective, and it would be contrary to the policy of TOU period stability to change that peak period at this time.

13. While seasonal differentiation is a standard element of TOU rates generally, simplicity and consistency in CEV rates are valuable at this nascent stage of transportation electrification so that EVSE operators have the benefit of stable and consistent rates for several years.

14. Evaluating seasonality in the shadow CEV rates may be helpful in evaluating the cost basis of the CEV rates in the future.

15. PG&E has met its burden of demonstrating that the subscription charge rate design is generally in compliance with relevant law and Commission decisions, and the Commission agrees that the subscription charge approach is reasonable, even for low utilization customers.

16. A punitive overage charge without a well-defined grace period is not the proper method to avert a hypothetical scenario where a CEV customer games the subscription charge, particularly given the difficulty some customers may have in accurately selecting their initial subscription level, thus potentially punishing less sophisticated or experienced customers.

17. The Commission’s previous guidance in D.17-01-006, and state policy generally that seeks to incent widespread transportation electrification and lowering of the costs of EV ownership and fueling, support giving CEV customers a variety of rates to choose from that help lower their costs.

18. The Commission seeks to support state policy goals by incenting transportation electrification through the creation of electricity rates that provide fuel switching incentives. If those incentives are not realized by the end user of



the EV, then the Commission's objectives may not be met and this may not be acceptable in the long-term.

19. Attention must be paid to the issue of EV end users not experiencing the fuel switching incentives inherent in the CEV rates so that the Commission may determine in the future if the state's policy goals are being frustrated.

20. A robust ME&O plan is necessary to successfully implement the new CEV rates. The work of the parties and the Commission in this proceeding would be wasted if PG&E's commercial customers were unaware of the CEV rates and failed to take service on it if they utilize EVSEs.

21. It is important that transit agencies, in particular, are provided an easy path toward taking service on PG&E's CEV rates. This is because transit agencies in California are subject to certain zero-emission fleet purchase requirements.

22. The state has prioritized and mandated transit agencies' transition to zero-emission vehicles, and it is therefore fair that the Commission explore how they can most easily take service on rates that incentivize fuel switching and lower the cost of fleet electrification.

23. It is reasonable to approve the CEV rates as outlined in this decision until they are reconsidered in PG&E's 2023 GRC Phase 2 proceeding, at the earliest.

24. The Commission has authority to establish new electric rate classes under Public Utilities Code Section 729.

25. In creating or authorizing new electric rate classes, the Commission has consistently employed a flexible approach that prioritizes simplification and considers the impact that the division of customer classes will have overall on the rates charged by the utility. This decision follows this historic approach, while

noting the holding of D.11457 that no exact rule or formula can be used to set rate classifications.

26. The CEV rates themselves are less complex than other commercial rates and promote state policy goals regarding transportation electrification.

27. The creation of a new CEV rate class promotes rate simplification for CEV customers and should be approved.

28. The principle that the formation of the new rate class should not increase rates in a material number of cases is fulfilled by the approval of the formation of a new CEV rate class in this proceeding.

29. Because the de facto revenue allocation proposed by PG&E for the new CEV class would lead to overcollections to be redistributed to other classes, it is not reasonable to require CEV customers to subsidize other rate classes without a sufficient justification. The prospect of future rate shock is speculative and not a sufficient justification.

30. The modification of PG&E's rate design to eliminate the collection of non-marginal distribution revenue from CEV customers is in accord with SB 1000's requirement that the Commission explore policies and rates that reduce the effects of demand charges on electric vehicle drivers and fleets.

31. Given the absence of record indicating that the proposal is unreasonable, this decision finds that the proposed 100kW cutoff between CEV rate schedules is reasonable.

32. Given the uncertainties in creating new rates and revenue requirements for a new class, at this time it is reasonable to create the two rates for the CEV class proposed by PG&E and endorsed by many of the parties.

33. This decision accepts the cost allocators used in the joint stipulation as reasonable, on a strictly non-precedential basis.

34. For the purpose of the CEV rates at issue in this proceeding, the PCIA is an NBC that should be assessed on a per kWh basis without time differentiation.

35. CCA CEV customers must pay some form of PCIA, just as they must pay for generation, distribution, and other non-bypassable expenses.

36. In the absence of historic load data on which to refine an estimate of the PCIA, PG&E's proposed methodology for calculating the PCIA as described in their briefs is a reasonable manner through which to set the initial PCIA rates for the CEV class

37. PG&E's proposed treatment of CCA CEV customers is reasonable and should be approved.

38. The CEV rate evaluation proposals contained in the joint stipulation are reasonable and should be adopted.

## **O R D E R**

### **IT IS ORDERED** that:

1. Pacific Gas and Electric Company (PG&E) shall implement the commercial electric vehicle rate designs as proposed by PG&E and Public Advocates Office of the California Public Utilities Commission in their joint stipulation, subject to the modifications made by this decision.

2. Pacific Gas and Electric Company shall include seasonal differentiation in its shadow rates for the commercial electric vehicle class.

3. Pacific Gas and Electric Company must apply the revenue allocation for the new commercial electric vehicle (CEV) class mandated by this decision when setting the prices for the CEV-S subscription charge.

4. Pacific Gas and Electric Company must apply the revenue allocation for the new commercial electric vehicle (CEV) class as mandated in this decision when setting the prices for the CEV-L subscription charge.

5. In the event a commercial electric vehicle (CEV) customer exceeds their subscribed demand, Pacific Gas and Electric Company shall not apply an overage charge and instead shall:

- a. provide warnings to the CEV customer via their electricity bills and other means (e.g., e-mails or automated phone calls or text messages) that their demand has exceeded their subscription level;
- b. provide the CEV customer an opportunity to adjust their subscription level (or their demand) over the next two billing cycles;
- c. automatically adjust subscription levels to match the CEV customer's actual demand on the third bill of the overage period if they have not chosen an appropriate subscription level; and
- d. bill a CEV customer at the automatically set subscription level for three consecutive billing cycles before a CEV customer could be eligible to lower their subscription level.

6. If a commercial electric vehicle (CEV) customer were to non-consecutively exceed their subscribed demand six times in a rolling 12-month period, Pacific Gas and Electric Company shall immediately set the CEV customer's subscription level to correspond with their highest monthly demand on the sixth occurrence, and notify the CEV customer of the change. Following such an increase, the CEV customer is required to exhibit a lower peak demand for six consecutive months before it is permitted to lower its subscription level.

7. Pacific Gas and Electric Company shall file an application for a dynamic rate option for CEV-S and CEV-L customers no later than 12 months after the effective date of this decision.

8. Pacific Gas and Electric Company shall use the approach outlined in its joint stipulation with the Public Advocates Office of the California Public Utilities Commission when adjusting commercial electric vehicle rates to account for changes to the generation revenue requirement.

9. Pacific Gas and Electric Company shall use the forecasted generation revenue method outlined in its opening brief when setting the commercial electric vehicle Power Charge Indifference Adjustment rates.

10. Pacific Gas and Electric Company (PG&E) shall conduct a representative survey of the prices offered by direct current fast charger operators, workplace electric vehicle service equipment (EVSE) operators, and multi-unit dwelling EVSE operators taking service on PG&E's commercial electric vehicle rates authorized by this decision. The survey results should be presented at the data collection workshop ordered by this decision.

11. Pacific Gas and Electric Company (PG&E) shall develop a marketing, education, and outreach (ME&O) plan and submit it to the Commission's Energy Division as a Tier 2 advice letter within 90 days of the issuance of this decision. The advice letter shall also be served on the service list of this proceeding and Rulemaking 18-12-006. The ME&O plan shall include, at minimum:

- a. A plan for leveraging ongoing ME&O activities, including activities led by PG&E (e.g., EV Fleet program, EV Charge Network) and activities led by other entities (e.g., Veloz, California Energy Commission's California Electric Vehicle Infrastructure Project, California Air Resources Board's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project).
- b. A plan for targeting specific market segments and customer types including small businesses, multi-unit dwellings, local governments, transit agencies, and community-based organizations. The plan shall detail the kinds of strategies to be utilized to reach these various audiences.

- c. A strategy for ensuring that segments with fewer resources to devote to questions around electricity rate planning receive additional ME&O (e.g., a hotline or technical assistance for small businesses; PG&E staff liaisons to transit agencies).
- d. Consideration of recruiting Community-Based Organizations and other trade/business organizations (e.g., CALSTART) to serve as decentralized disseminators of commercial electric vehicle (CEV) rate information.
- e. A timeline for implementation that describes how ME&O efforts will be concentrated on the first three years of the CEV rates' availability, while ensuring that ME&O is ongoing.
- f. A detailed budget that includes justification for additional staff necessary to develop and provide outreach, including a description of duties, and a description of the impacts on the budgets for existing electric vehicle (EV) infrastructure programs and/or General Rate Case funding for EV-related customer education.

12. Pacific Gas and Electric Company (PG&E) shall provide an 80% rebate to transit agencies for the cost of installing a separate meter in a similar manner to PG&E's EV Fleet rebate program. PG&E shall utilize the already-authorized funding for the EV Fleet program to pay for the 80% rebate for new meters for transit agency commercial electric vehicle (CEV) customers. This rebate for new metering is only available to transit agency CEV customers.

13. Pacific Gas and Electric Company (PG&E) shall collect only marginal distribution revenue from the commercial electric vehicle rate class, and not distribution revenue that would have been collected pursuant to the application of the distribution equal percent marginal cost scaler. PG&E shall otherwise apply the rate designs proposed in this proceeding as modified in Exhibit Joint-01. Generation, transmission, and non-bypassable charge revenue collection and rate design are unaffected by this order.

14. Pacific Gas and Electric Company (PG&E) shall convene an informal workshop to share data on commercial electric vehicle (CEV) rate class performance no later than March 1, 2021. At this workshop, PG&E shall present anonymized data from actual customers in the five use cases utilized to develop the CEV rates that reveal: hourly energy and demand, monthly bills based on that energy and demand data, impacts of customer usage on the local distribution network, and a representative survey of customers in the five use case categories regarding their experience on the CEV rate, their satisfaction with the rate, and their satisfaction with PG&E generally. The workshop presentation shall also describe recorded revenues and shadow rate revenues from the CEV rate class, including a disaggregation of those CEV revenues that are from new, incremental CEV customers and those that are from customers that switch from an existing commercial rate.

15. Pacific Gas and Electric Company shall serve an annual Tier 1, information-only advice letter on the Commission's Energy Division, the service list of this proceeding, and Rulemaking 18-12-006 containing an annual report on commercial electric vehicle rate class performance including the data required for presentation at the workshop ordered by this decision. The annual advice letter shall be filed on January 1 of 2022, 2023, 2024, and 2025.

16. Pacific Gas and Electric Company shall collect data on the commercial electric vehicle class's final line transformer-related revenues and present this information in its 2023 General Rate Case Phase 2 application.

17. Pacific Gas and Electric Company (PG&E) shall pay for the costs of the commercial electric vehicle rate evaluation activities using budgets already approved for PG&E's electric vehicle infrastructure programs. PG&E shall

collect the relevant data using the Senate Bill 350 reporting templates already approved for PG&E.

18. Pacific Gas and Electric Company shall make its commercial electric vehicle rates, as approved by this decision, available no later than March 1, 2020.

19. Application 18-11-003 is closed.

This order is effective today.

Dated \_\_\_\_\_, at Redding, California.