BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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In the Matter of the Application of Pacific Gas and Electric Company for Approval of Electric Vehicle Infrastructure and Education Program (U39E).	Application 15-02-009 (Filed February 9, 2015)

OPENING BRIEF OF THE ELECTRIC VEHICLE CHARGING ASSOCIATION REGARDING PACIFIC GAS AND ELECTRIC'S ELECTRIC VEHICLE INFRASTRUCTURE AND EDUCATION PROGRAM

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Pursuant to Rule 13.11 of the Commission's Rules of Practice and Procedure and to Administrative Law Judge Farrar's order of April 28, 2016 setting a briefing schedule, the Electric Vehicle Charging Association ("EVCA") respectfully submits this Opening Brief regarding PG&E's Application for Approval of its Electric Vehicle Infrastructure and Education Program.

I. INTRODUCTION

The Electric Vehicle Charging Association represents a vibrant, rapidly-growing sector of companies manufacturing, marketing, installing and servicing electric vehicle ("EV") charging solutions and equipment in California. Our members include ABM, ChargePoint, Clean Fuel Connection, Cyber Switching, EV Connect, Envision Solar, EVgo, Plugless Power, Seawave Battery and Volta.[1] Our members have developed new charging technologies and business models such as sponsorship-based free charging; fast-charging; inductive or "plugless" charging; mobile, solar-powered units; and networking and management technologies to optimize infrastructure use. They continue to innovate relentlessly. Our industry has attracted hundreds of millions of dollars of investment and grown the number of EV charging stations in California by more than 560 percent over the last five years. We have surpassed 20,000 charging ports installed across the state.[2]

[1] Exh. EVCA-221, p.2, 2-4.
[2] Exh. EVCA-221, p.3: 4-5

The competitive EV charging sector represents an important economic opportunity for California. As noted in our *State of the Charge* report cited in our testimony[3], all of our members are headquartered or significantly present in the state. Assuming that California retains a 40 percent share of the national EV market, data from Navigant suggests that California's EV charging sector has the potential to generate thousands of new jobs and $4.5 billion in new sales and services revenue through 2023.[4] This progress depends on the continuation of public policies in this state that have supported market competition, innovation and customer choice.

EVCA, whose members welcome the opportunity to partner with utilities in growing EV charging, strongly supports the EV charging model adopted by Southern California Edison. Under this "make ready" model, the utility provides the utility-side electrical wiring, panels and conduit needed to deliver electricity to a charging station selected by the site host (and potentially a rebate to the customer for charging equipment/services provided by a third party) on a competitively neutral basis. Allowing the consumer to select the charging equipment or services best suited to his or her individual needs provides maximum value to consumers, leverages market forces to keep prices low and encourages innovation. EVCA is concerned that the PG&E proposal places the utility in a competitive, rather than a complementary, position with respect to nonutility EV charging providers. EVCA urges the Commission to authorize PG&E to implement a Phase I electric vehicle infrastructure program, but to do so conditioned on its adoption of changes that reduce its substantial risks to the competitive market and unnecessary ratepayer burdens. EVCA does not support the "settlement agreement" submitted by PG&E to the Commission because it fails to address concerns raised by EVCA in our testimony about the program's competitiveness, concerns we further explain below.

Under the PG&E proposal, EVCA's members would face direct competition from a utility and risk being driven from one of the industry's most important markets. This "one-step forward, two-steps backward" approach risks more harm to the state's effort to transition to EV charging than benefit. EVCA agrees with California leaders and other stakeholders that there is a need for further support to deploy additional EV charging just as California is providing hundreds of millions of dollars to spur electric vehicle sales. However, the direct ownership framework advanced by PG&E can and must be restructured and narrowed so that its risks to

[3] Exh. EVCA-221, p. 2; 20-21
[4] Exh. EVCA-221, p. 3: 11-14 – 4: 1-2.

competition are mitigated and so that the proposed program supports and complements -- rather than displaces – nonutility EV charging infrastructure and services.

A. Procedural History

On February 9, 2015, PG&E submitted Application 15-02-009 to build and own 25,000 Level 2 EV charging stations and 100 Direct Current Fast Chargers ("DCFC"). On September 4, 2015, the Assigned Commissioner and Administrative Law Judge issued a Joint Assigned Commissioner and Administrative Law Judges' Scoping Memo and Ruling ("Scoping Memo and Ruling") stating that they would "not consider the EV program as proposed by PG&E because it does not allow for adequate review and evaluation to determine whether its costs are just and reasonable, whether it results in ratepayer benefits and whether potential anticompetitive impacts are adequately prevented or mitigated."[5] The Scoping Memo and Ruling directed PG&E to file a supplement to its application that included (1) an initial deployment phase limited to a maximum of "10% of the originally-proposed number of charging stations, to be deployed over no more than 24 months," (2) a transition plan providing at least 18 months of data for evaluation by the Commission and (3) addressing the Commission's questions about ratepayer cost and competitive impact.[6]

On October 12, 2015, PG&E submitted a supplement to its application consisting of two options.[7] The first, termed by PG&E as a "compliant" proposal"[8] proposed 2,460 Level 2 chargers and 50 DCFC, at a cost of $87 million. A second "enhanced" proposal favored by PG&E included 7,430 Level 2 chargers and 100 DCFC, at a cost of $222 million. [9]

The Electric Vehicle Charging Association ("EVCA"), which announced its formation as a new organization in October 2015, filed for party status in this proceeding on November 23, 2015. EVCA submitted intervenor testimony in this proceeding November 30, 2015, along with other parties. Rebuttal testimony was served December 21, 2015. Evidentiary hearings were scheduled to begin February 8, 2016 but were postponed after PG&E requested an opportunity to

[5] Joint Assigned Commissioner and Administrative Law Judges' Scoping Memo and Ruling, Application 15-02-009, September 4, 2015, p. 4.
[6] Id., pp. 7-8.
[7] Exh. PG&E-03, p. 1.
[8] Exh. PG&E-03, pp. 4-8. EVCA does not believe the proposal was compliant because it failed to reduce DCFC chargers to the 10% of the original level proposed, as directed by the Commission.
[9] Exh. PG&E-03, pp.10-13

pursue settlement negotiations.

In these settlement discussions, PG&E did not reach agreement with any of the parties that had contested any issues, other than Marin Clean Energy ("MCE") whose issues focus on narrower concerns not central to the contested issues. On March 21, 2016, PG&E and other parties – all of whom other than MCE had not opposed the original proposal – submitted a joint motion for adoption of the "settlement agreement" based largely on amendments of the noncompliant proposal that proposed to reduce the cost of the enhanced proposal to $160 million, deploy 7,500 Level 2 and 100 DCFC, and adopt some programmatic changes resembling, though not identical to, the San Diego Gas and Electric agreement.[10] These changes do not adequately address the concerns raised by EVCA in its testimony or those of the non-settling parties other than MCE ("settlement agreement").

On April 1, 2016, the non-settling parties -- Office of Ratepayer Advocates, The Utility Reform Network, Joint Minority Parties, Electric Vehicle Charging Association, the Technology Network ("TechNet"), Vote Solar and ChargePoint filed a response opposing the "settlement agreement." Evidentiary hearings, in which EVCA participated, occurred the week of April 25.

II. BURDEN OF PROOF AND LEGAL STANDARDS

A. PG&E must demonstrate that its Proposal is fair to ratepayers and that its competitive harm does not outweigh its benefits.

As part of the state's policy defining the utility role in expanding vehicle electrification infrastructure, the Legislature and this Commission require investor-owned utility EV infrastructure programs to demonstrate both that (1) their higher rates are just and reasonable and in the ratepayers' interest[11] and (2) that "utilities do not unfairly compete with nonutility enterprises.[12]" Specifically, Section 740.3 requires that the Commission, when authorizing utilities to develop electric vehicle equipment or infrastructure, "shall ensure that the costs and expenses of those programs are not passed through to ratepayers unless the Commission finds and determines that those programs are in the ratepayers' interest." For the purposes of the utility programs, ratepayer interests "mean direct benefits that are specific to ratepayers, consistent with

[10] Exh. Joint Settling Parties-1, pp. 2-3
[11] PU Codes Sections 451, 454; Joint Assigned Commissioner and Administrative Law Judges' Scoping Memo and Ruling, September 4, 2015, p. 9.
[12] PU Code Section 740.3

both of the following:

> (a) Safer, more reliable, or less costly gas or electrical service, consistent with [Public Utilities Code] Section 451, including electrical service that is safer, more reliable, or less costly due to either improved use of the electric system or improved integration of renewable energy generation.
>
> (b) Any one of the following:
>
> (1) Improvement in energy efficiency of travel.
>
> (2) Reduction of health and environmental impacts from air pollution.
>
> (3) Reduction of greenhouse gas emissions related to electricity and natural gas production and use.
>
> (4) Increased use of alternative fuels.
>
> (5) Creating high-quality jobs or other economic benefits, including in disadvantaged communities identified pursuant to Section 39711 of the Health and Safety Code.[13] In achieving these objectives, the Commission should also take note of the Legislature's objectives including, ensuring that EV charging programs "should stimulate innovation and competition, enable consumer options in charging equipment and services, attract private capital investments, and create high-quality jobs for Californians, where technologically feasible."[14]

Public Utilities Code Section 740.3 further requires the Commission's policies to "ensure that utilities do not unfairly compete with nonutility enterprises." The Commission's standards for evaluation of the competitive impacts of utility proposals, set forth in Decisions D.11-07-029 and D.14-12-079, require "a factual inquiry, including at a minimum, examination of the following:

1. "the nature of the proposed utility program and its elements, for example, whether the utility proposes to own or provide charging infrastructure, billing services, metering or customer information and education"
2. Examination of the degree to which the market into which the utility program would enter is competitive, and in what level of concentration;
3. Identification of potential unfair utility advantages, if any.
4. If the potential for the utility to unfairly compete is identified, the commission will determine if rules, conditions or regulatory protections are needed to effectively mitigate the anticompetitive impacts or unfair advantages held by the utility." [15]

The Scoping Memo determined that PG&E's initial application did not met these requirements. In its supplemental proposal and "settlement agreement," PG&E therefore must carry the burden of presenting a factual analysis of the impact of its proposal on competition in

[13] PU Code Section 740.8
[14] PU Code Section 740.12(f)
[15] D.14-12-079, p. 8-9

the relevant EVSE market in its service territory. A proposal that fails to undertake a case-specific analysis of the relevant market and identify and address or adequately mitigate the anticompetitive elements of ownership – for example by referencing prior commission approval of other utility proposals -- does not satisfy the criteria for Commission approval.

IV. SUMMARY OF RECOMMENDATIONS

EVCA strongly supports utility investment to further develop California's electric vehicle charging infrastructure. We have publicly supported, for example, Southern California Edison's make ready plan previously approved by the Commission. Unfortunately, the direct ownership and infrastructure/services provision model proposed by PG&E poses a substantial risk of damaging the EV charging services market in Northern California, one of the most important EV charging markets in the country.[16] PG&E's proposal has a high risk of hindering, rather than advancing, the development of the robust charging infrastructure needed to achieve California's vehicle electrification goals. Specifically relevant to this proceeding, the PG&E proposal still does not provide the case-specific analysis or meet the four part test the Commission directed it to meet under D.14-12-079.[17]

The Commission should therefore reject PG&E's proposal as presented and require PG&E, as a condition of approval, to adopt the following changes:

1. Comply with the parameters established in the September 4, 2015 Joint Assigned Commissioner and Administrative Law Judges' Scoping Memo and Ruling. PG&E should be explicitly required to meet these criteria in its Phase II proposal.
2. Focus on the underserved market segments of multi-unit dwellings ("MUDs") and disadvantaged communities, including a *minimum* of 50 percent of its total investment in MUDs.
3. Limit Phase I deployment to 2,500 Level 2 chargers and 10 Direct Current Fast Charger ("DCFC") ports, in compliance with the Scoping Memo and Ruling's requirement that initial deployments be limited to 10 percent of the size of those in the original proposal.

[16] Exh. ChargePoint-62: Testimony of Charles Cicchetti, p. 7: 2-3.
[17] Joint Assigned Commissioner and Administrative Law Judges' Scoping Memo and Ruling, September 4, 2015 ("Scoping Memo and Ruling"), p. 6-7.

4. Ensure the budget complies with the requirements of the Scoping Memo and Ruling, not exceeding $87 million. Limiting the DCFC deployment to 10 ports will yield significant savings that EVCA believes can be reinvested in other additional charging infrastructure.
5. Provide an open and unconstrained process for site hosts to choose equipment and network services.
6. Allow site hosts to determine the rate structure and amount charged to drivers for EV charging services, subject to PG&E's obligation to implement a load management plan reflecting best practices.
7. Allow PG&E to rate base make ready infrastructure up to but not including the EVSE.
8. Limit the scope of the PG&E program to the underserved markets of MUDs and disadvantaged communities, should the Commission choose to permit any utility ownership.
9. Require site hosts to make a more meaningful participation payment to ensure that PG&E's competition does not represent an unfair advantage over nonutility enterprises.
10. Define disadvantaged communities as the top quartile of disadvantaged communities as defined by CalEnviroScreen 2.0 with the understanding that a full participation payment waiver is available only to MUDs.
11. Coordinate with and leverage PG&E's Distribution Resources Plan ("DRP") and related programs. This includes PG&E's DRP Integration Capacity Analysis for integrating distributed energy resources, including EVs, onto PG&E's grid at optimal locations to maximize grid benefits. PG&E should further leverage other forms of Distributed Energy Resources to minimize infrastructure costs, provide necessary grid services and maximize net benefits for all customers in compliance with Public Utilities Code 769.

V. PHASE 1 PROGRAM ELEMENTS AND ISSUES:

A. PROGRAM SCOPE, DURATION AND COST.

1. The September 4, 2015 Joint Assigned Commissioner and Administrative Law Judges' Scoping Memo and Ruling requires PG&E to limit its Phase I program to 2,510 chargers.

Observing that PG&E had not provided the Commission with sufficient detail or analysis to justify its original application, the Scoping Memo and Ruling directed PG&E to limit its Phase I proposal to "a maximum of 10% of the total originally-proposed number of charging

stations…"[18] Based on its original proposal of 25,000 Level 2 and 100 DCFC, PG&E should be permitted to install no more than 2,500 Level 1 or Level 2 chargers, though EVCA would support allowing these chargers to be dual-port.

PG&E expresses the concern that its "compliant" proposal does not deploy the number of charging sites it believes are necessary to achieve the state's deployment goals.[19] EVCA suggests that the proper remedy is to adopt a program that invests proportionately more in a make ready approach. The cost to ratepayers of the PG&E "compliant" proposal -- $87.4 million for 2,510 stations – means that the ratepayer cost per station under the PG&E program is $34,661 per station, substantially higher than other utility proposals (though this amount drops to about $30,400 once the capital and operating costs associated with the PG&E proposal's inclusion of DCFC are excluded).[20] In contrast, the per station cost to ratepayers of the Southern California Edison Phase 1 make ready program for Level 2 chargers, which is approximately $22 million to deploy 1,500 stations, is $14,666.[21] The cost per port of chargers funded by the Energy Commission – which is made available on a technology- and vendor-neutral basis – is approximately $4,414 per port.[22] As a rough approximation, substituting the make-ready approach or a competitive rebate program for PG&E's direct ownership model could therefore result in thousands of additional stations, while supporting competitive markets that provide consumers with much wider choices and improve the experience for EV drivers. Unfortunately, PG&E testified that it never extensively considered alternatives to its ownership model.[23]

2. The number of DCFC should be limited to 10 percent of the number originally proposed, as directed by Scoping Memo and Ruling.

The "settlement agreement" proposes 100 DCFC stations, and PG&E states each shall have one port.[24] EVCA recommends that the number of such DCFC be limited to 10, which is 10 percent of the amount in PG&E's proposal, as required by the Scoping Memo and Ruling.

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[18] Scoping Memo and Ruling, p. 7.
[19] Exh. PG&E-3, p.1:12-15
[20] EVCA calculation. Excluding the $11,921,000 in DCFC capital costs and $568,000 in DCFC expenses, the cost per Level 2 charger is approximately $30,400, ($74,918,000 divided by 2,460 Level 2 stations).
[21] Decision 16-01-023, January 14, 2016. This program does not include DCFC.
[22] Exh. TURN-49, p. 13, these are EVCA's calculations based on Energy Commission's funding of 8,653 charging ports for $38.2 million.
[23] Tr. Vol. 5 (PG&E/Almeida), p. 478:17
[24] Exh. Joint Settling Parties 1: Tr. Vol. 3 (PG&E/Pease), p. 241.

The Scoping Memo and Ruling directed PG&E to address what "benefits, if any, does PG&E's installation of DCFC offer that are not already being offered by other market participants through their service territory? Do these benefits merit the incremental cost of DCFC within the program? What is the current state of competition and concentration in the DCFC market?"[25]

By adding 40 additional unauthorized DCFC chargers, with a capital cost of approximately $238,000 each, PG&E increases the net capital cost of its $87 million "compliant" proposal by $8.8 million.[26] Several factors undermine PG&E's case for this substantial investment in DCFC. First, PG&E's DCFC proposal remains largely undefined. For example it failed to provide detail as to where or how it would deploy DCFC, except to say that these would go into highway corridors or to address the MUD sector.[27] PG&E's witness admitted in cross examination that it had not prepared or relied on any studies or research to determine an appropriate number of DCFCs.[28]

Second, DCFCs present a higher risk of stranded costs.[29] DCFCs are substantially more expensive, typically costing 1200% more than Level 2 chargers.[30] Equipment is much larger and heavier resulting in higher installation costs, increase site design and preparation, trenching, permitting and other construction activity. The risks of stranded ratepayer investments are magnified under PG&E's proposal because the ratepayer per station capital cost of $238,000 for each DCFC is substantially more expensive than the average ratepayer cost of $150,000 per fast charger for 2016 under the California Energy Commission's competitive solicitation for fast charging grant program.[31]

Third, substantial investments are already being made in DCFC in California. As of

[25] Scoping Memo and Ruling, p. 8.
[26] The "compliant" proposal includes 50 DCFC with a capital cost of $11,921,000, for a per station capital expenditure alone of $238,000. The capital cost of Level 2 chargers alone is $45,311,000 per station for 2,460 stations, equaling $18,419 per station. Reducing the number of DCFC by 40 (and increasing the number of Level 2 by 40 so that the total remains 2,510, reduces the DCFC portion of the cost by $9.536 million and increases the Level 2 costs by about $.737 million, yielding a net savings of approximately $8.8 million.
[27] Tr. Vol. 2 (PG&E/Corey), p. 133.
[28] Tr. Vol. 4 (PG&E/Corey), p. 203.
[29] NRG Energy Comments on Questions Regarding Possible Phasing, July 2, 2015, p. 2.
[30] Exh. EVCA-221, p 7.
[31] Tr. Vol. 2 (PG&E/Pease), p. 184.

December 2015, almost 700 DCFC operate statewide.[32] NRG, for example, has committed to 200 sites with 400 chargers, of which 126 had been installed by December 2015[33] and plans to deploy DCFC in 330 locations by December 2018. The Energy Commission is investing substantially in a statewide network from San Diego to the Oregon border: its April 2016 round of grants alone funded 61 new DCFC, capable of supporting both major standards in wide use, at 41 sites for $9 million in 17 corridors in PG&E territory. Another $17 million is committed for EV charging infrastructure in 2017.[34] In addition, Japan's New Energy and Industrial Technology Development Organization has committed to install another 30-50 DCFC on routes from Monterey to Tahoe,[35] and air quality management districts in the Bay Area and San Joaquin County are supporting additional DCFC funding.[36]

Fourth, DCFC technology and standards continue to be an area of rapid change, creating significant market risk and, for ratepayers, further magnifying the risk of asset stranding.[37] There are multiple standards, including the CHAdeMO and SAE CCS standards. The level of power provided through fast charging stations also continues to evolve rapidly. PG&E has testified that the maximum charging rate of its DCFC is 50kW[38], but stations are becoming more powerful, capable of delivering 100kW or even 150kW.[39] Battery technology and vehicle range have also been evolving, which could influence the optimal location of charging stations.

Fifth, the risk of harm to competitive markets under the PG&E DCFC proposal is high. Under the PG&E DCFC proposal, PG&E will choose the equipment for site hosts and will require no site host participation payment – meaning that nonutility companies providing DCFC outside of PG&E's program will have to compete with a zero-cost product. These provisions

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[32] Exh. TURN-54: 2015 Annual Report: Settlement Year 3 Progress Report to California Public Utilities Commission, March 7, 2016, p. 1. Some of these are Tesla stations, available just to Tesla owners.
[33] Id.
[34] Exh. TURN-55: California Energy Commission Notice of Proposed Award
[35] Leslie Baroody, California Energy Commission, Overview of California's Electric Vehicle Infrastructure Planning and Investment, December 7, 2015, Slide 24.
[36] http://www.baaqmd.gov/grant-funding/public-agencies/ev-charger-demonstration; http://www.valleyair.org/grants/chargeup.htm
[37] Tr. Vol. 4 (EVCA/Hawley), p. 428.
[38] Tr. Vol. 3 (PG&E/Pease), p. 264.
[39] Steve Hanley, 150 kW CHAdeMO EV Charging In The Works. Yay!, Cleantechnica, June 8, 2016, http://cleantechnica.com/2016/06/08/150-chademo-ev-charging-works-yay/

pose significant threats to the competitive market. Finally PG&E has not explained how it will achieve one apparent benefit of utility ownership – grid optimization – through its DCFC investment. Because DCFC must deliver power at the times required by the consumer, the opportunity for grid optimization using DCFC is therefore quite uncertain compared to that for Level 2 chargers at locations with long dwell times where managers have flexibility when to deliver power.

In summary, PG&E's DCFC model poses an acute risk to competition and innovation in an evolving market. PG&E's higher costs and the rapid technological changes in the field lead to a higher risk of stranded ratepayer assets. Significant resources are already being invested in DCFC in PG&E territory along intermodal routes and PG&E has not clearly articulated the grid optimization benefits of its DCFC proposal. For these reasons, PG&E's DCFC program should be limited to 10 stations and the other parameters established in the Scoping Memo and Ruling, and site hosts should be required to invest a participation payment to reduce PG&E's marketplace advantage over nonutility participants.

B. UTILITY OWNERSHIP.

1. PG&E's proposal will damage the competitive market and innovation in EV charging services.

ChargePoint witness Charles Cicchetti and ORA witness Anand Durvasula provided testimony on the anticompetitive aspects of PG&E's October 12 supplement. EVCA very much shares these concerns which may be summarized as the following:

1. PG&E will not charge hosts to install EV charging stations, eschewing regulatory principles of cost causality and user pays;
2. PG&E will offer an existing competitive market offering a product and services that others in the market are already selling, at a price of zero;
3. PG&E will not compete on a level playing field because it does not need to recover the costs of the infrastructure from the users – it recovers costs from ratepayers.
4. The PG&E proposal will likely make it impossible for non-utility firms to compete in the geographical and product markets that PG&E has entered. PG&E would likely push successful firms out of the market and cause others not to enter the market.
5. PG&E provides no logic or evidence supporting the notion that EV charging station

ownership and operation is a natural monopoly or candidate for cost of service regulation as a franchise monopoly.

6. PG&E's approach effectively monopolizes the EV charging market in a manner that creates a bad precedent for other home products (efficient light bulbs, water heaters, etc.) and distributed energy resources ("DER") such as solar, wind and storage. This outcome is inconsistent with the general trend– and this commission's work in particular -- to expand the role of DERs to promote more innovation and affordable clean energy choices.[40]

EVCA and its members are concerned that PG&E's unsupported assertion that "a rising tide will essentially "lift all boats""[41] does not consider the competitive disparity between PG&E and non-utility players not in its program. Even considering the addition of the 20 percent (10 percent for MUDs) site host payment in PG&E's "settlement agreement," 80 to 90% of PG&E's charging station costs would still be a utility investment funded mostly by ratepayers, not site hosts, an issue mitigated, though not fully resolved, even with higher participation payments.[42] Low participation payment rates give PG&E would a huge cost advantage over nonutility EVSE equipment and service providers not participating in the program.[43] The result is a high likelihood that site hosts would sign up for PG&E's program rather than considering those of third parties.[44] PG&E's proposed minimal site host payment thus offers only slight mitigation of the threat to competitive markets in its proposal. In contrast, the make ready/rebate approach, in offering all market participants comparable incentives, provides consumers a competitively-neutral choice in equipment and services.

PG&E has offered the opportunity to allow third party equipment, qualified on an annual basis by PG&E,[45] to participate in its program. EVCA finds this to be an inadequate remedy. First, an annual qualification process disadvantages new technologies and new market entrants who may who wish to participate but would be discouraged by a wait of months or up to a year. It is in contrast to the more nimble, ongoing rolling vendor qualification process that San Diego

[40] Exh. ChargePoint-62: pp. 9-10.
[41] Exh. PG&E-04, p. 11
[42] Tr. Vol. 4 (ChargePoint/Cicchetti), p. 359-360.
[43] Tr. Vol. 4 (ChargePoint/Cicchetti), p. 377.
[44] Tr. Vol. 5 (ORA/Durvasula), p. 538.
[45] Exh. Joint Settling Parties- 1:14.

Gas and Electric committed to as part of its Vehicle Grid Integration Proposal.[46] Second, as noted by expert witness Cicchetti, industry participants who become suppliers to the monopoly instead of the customer will likely focus their products on PG&E's RFP specifications rather than needs of the customer.[47] In both cases, the result will be to inhibit market innovation. This is harmful for consumers and to the growth and technology leadership of a significant segment of California's clean energy economy.

A potential example is "wireless" or inductive charging--an area of significant interest to manufacturers like Mercedes which has said it will include wireless charging in its 2017 S Class plug-in.[48] If the PG&E program were adopted, new technologies like wireless, which PG&E has indicated it has no plans to explore,[49] would be required to compete with incumbent infrastructure with a near-zero cost, making new technologies less attractive on a relative basis and slowing adoption of more innovative approaches.

2. PG&E's anticompetitive impacts are not sufficiently analyzed or addressed.

As previously noted the PG&E proposal is required to describe not only the nature of its program, including its ownership of stations and provision of equipment and services in competition with nonutility enterprises, but also provide case-specific analysis examining the other three parts of the Commission test. These are: (2) the degree to which the market is competitive; (3) the utility's potential unfair advantages and (4) rules, conditions or regulatory protections are needed to mitigate the anticompetitive impacts or unfair advantages of the utility. PG&E's proposal fails to include an adequate analysis of these issues.

First, PG&E's characterization of the relevant market as "at least national and probably global"[50] – which allows it to claim a lower market share -- is flawed. Such a formulation would characterize even total PG&E control of EV charging in its service territory as a small fraction of the national or global market. The relevant market is the Northern California area served by

[46] Decision 16-01-045, January 28, 2016 (Attachment 2, p. 15)
[47] Exh. ChargePoint-62: pp. 12: 14-23 -13: 1-6.
[48] Exh. ORA-28: Wireless EV Charger With 20 Kilowatt Capacity, 90 Percent Efficiency Developed at ORNL.
[49] Tr. Vol. 3 (PG&E/Corey), p. 280.
[50] Exh. PG&E-03, p. 23; Exh. PG&E-04, p.23

PG&E and the relevant segment is the sale of equipment and services to consumers.[51] When the market is defined properly, the size of PG&E's contemplated deployments, in light of its ability to undercut non-ratepayer backed offerings and business models, would position it as a formidable and ultimately dominant market participant.

Second, while PG&E was required to identify "potential unfair utility advantages" and identify "rules, conditions or regulatory protections … needed to effectively mitigate the anticompetitive impacts or unfair advantages held by the utility,"[52] PG&E's supplement offers no such identification, analysis or recommendation. PG&E states merely that it will not "provide preferential or discriminatory treatment to customers or their EVSE suppliers or site hosts…" and that its use of "open and competitive procurement of EVSE equipment and services" will ensure that it does not accrue any unfair advantages of nonutility suppliers and service providers.[53] These mere two paragraphs of discussion, merely reiterated in PG&E's rebuttal,[54] simply overlook the impact of its ability to rely on ratepayer funding and its ability to undercut nonutility actors. While PG&E's rebuttal testimony suggests that PG&E's proposal "simply represents another model" and that PG&E will not "directly compete with EVSE market participants, as PG&E will be procuring from" them,[55] PG&E will most certainly compete with EVCA's members who market and sell EV charging equipment and services to site hosts who will now also be targeted by PG&E' program. PG&E thus fails to address the core unfair competition test in the Scoping Memo and Ruling.

3. A "make-ready" approach provides the most competitively-neutral method of stimulating the market for EV charging.

EVCA agrees with PG&E's reasons for desiring to expand charging in order to meet the state's goal of supporting 1 million EVs and ultimately transitioning all or most of the state's entire fleet to zero-emission. The hundreds of millions of dollars being provided by the state for EV purchases need to be matched with active support for EVSE infrastructure.

To ensure that its program is truly the "rising tide that lift all boats" that it claims to be, PG&E should adopt a make-ready program. By providing utility-side infrastructure to site hosts

[51] Exh. ChargePoint-62: pp. 29: 2-21 – 32: 1-2
[52] Scoping Memo and Ruling, p. 8
[53] Exh. PG&E-03, p. 26: 9-15
[54] Exh. PG&E-04, p. 26
[55] Exh. PG&E-4, p. 22

and allowing them to select their EVSE equipment, a make-ready strategy offers the best opportunity to lower the cost of EV charging to ratepayers and do so in a competitively-neutral manner. As such, this strategy can enable PG&E to substantially expand availability of EV charging infrastructure in its territory in a way that adds to, rather than displacing, the work of the existing nonutility EVSE sector.

The critical issue in this proceeding is that the benefits of the PG&E program can largely, if not completely, be achieved through an incentive program that is competitively neutral and achieves similar or larger deployments at less ratepayer cost. While all parties agree that EV charging infrastructure should be accelerated, PG&E has not identified any uniquely compelling benefits of utility ownership or why regulated utilities should own EV charging stations or provide services financed with ratepayer money in competition with non-utility suppliers.[56] For example, PG&E's claims that its proposal will result in public benefits such as enabling communication of TOU prices and facilitating grid integration benefits, overlook the fundamental point that competitively supplied charging equipment can also accomplish these objectives.[57]

PG&E has not made a sufficient case to justify its own ownership of facilities. However if the Commission were to determine that ownership is a model it wants explore, such a program should focus on this segments underserved by the market: specifically MUDs and disadvantaged communities. EVCA agrees with NRDC about the need to expand EV charging in MUDs – home to one third of the population in the PG&E service territory.[58] PG&E has indicated that its surveys show home charging to be the dominant preference for drivers.[59] Given these points, to address this gap in MUDs and avoid damage to other competitive markets served by nonutility players, PG&E's program should focus on MUD facilities and disadvantaged communities.

The final Commission order approving the San Diego Gas and Electric requires that "between 40% and 60% of all site installations and charging stations are to be deployed at MUDs, with a target of approximately 50%."[60] PG&E proposes a similar number as a

[56] Exh. ChargePoint-62: p. 4: 7-23, 32: 9-18, Tr. Vol. 4 (ChargePoint/Cicchetti) p. 358-9.
[57] Exh. ChargePoint-62: pp. 32
[58] Tr. Vol. 2 (PG&E/Corey), p. 123.
[59] Tr. Vol. 2 (PG&E/Corey), p. 125.
[60] D.16-01-045, p. 142

nonbinding maximum target,[61] but with a much lower required minimum of 20%.[62] Because of the higher poverty and CalEnviroScreen scores in many Central Valley, coastal and inner-city communities in the PG&E service territory, EVCA recommends that PG&E program be required to invest a minimum of 50% of its program funds in MUD deployments, with a focus on disadvantaged communities.

In addressing these sectors, EVCA urges that some portion of the PG&E program – with incentive and investment levels comparable to those undertaken by PG&E itself -- be reserved for make-ready investments. This will offer the Commission the opportunity to evaluate the performance of utility and non-utility MUD investments when placed on an equal footing, in a study. Such a study would provide the Commission with data to make a more informed decision in the next phase of the deployment.

C. COST V. RATEPAYER BENEFITS.

1. PG&E has not shown that its proposal is either just or reasonable or that its benefits outweigh the harm to competitive markets.

EVCA agrees with PG&E that expanded investment in EV charging offers significant ratepayer benefits. The PG&E proposal, for example, cites the health benefits of electric vehicles generally, noting that vehicle electrification results in an 85 percent reduction in emissions of ozone precursors and deeper GHG reductions relative to conventional vehicles. The PG&E proposal also claims as benefits its use of "licensed electrical contractors with EV infrastructure training certification," "load management strategies that shift EV load to hours of the day when there is spare capacity in the grid" and the ability to leverage its Distributed Resource Plan to "improve site selection."[63]

The evidence on the record is that these benefits can be attained without utility ownership and under a model that fosters, rather than risks significant damage to what is one of the strongest markets for EV charging in the world.[64] The incremental effect of direct ownership of EV charging facilities therefore is likely *negative* compared to the make-ready alternative. Further, notwithstanding PG&E's changes to its proposal in the "settlement agreement," the

[61] Tr. Vol. 2 (PG&E/Corey), p. 120-121.
[62] Exh. Joint Settling Parties-1: p. 10.
[63] Exh. Joint Settling Parties-1: pp. 3-4.
[64] Exh. ChargePoint-62:p. 32

ratepayer costs under PG&E's proposal for both Level 2 and fast charging stations remain significantly higher than those in the competitive market or compared to other utility programs. As such the "settlement agreement" in its current form fails the reasonableness test in PU Code Section 451 and the balancing test for anticompetitive impacts and overall net benefits established under the Public Utilities Code Sections 740.3 and 740.8 and by the Commission.

If the goal of utility pilots is to try new approaches, PG&E's proposal also offers little to be learned in areas like grid optimization beyond that which will learned from the SDG&E pilot. Given PG&E's failure to adequately address the serious competitive issues raised by its proposal in its territory, the Commission should focus on (1) remedying where market gaps exist: MUDs, particularly in disadvantaged communities, and/or (2) requiring adoption of a make ready approach that grows the general market in a manner that does not unfairly compete with nonutility companies and lowers ratepayer costs. EVCA recommends an approach that would focus PG&E's program on MUDs and employ a mixture of its proposed and a make-ready model so the two approaches can be evaluated.

D. CHOICE AND SELECTION OF EVSE AND NETWORK SERVICES; SUPPLIER DIVERSITY.

Providing customers a wide range of choices so that they can select the equipment best suited to their needs is critical to driving market innovation and the development of compelling new products and services. EVCA is concerned that in critical respects, the PG&E proposal fails to embrace customer choice and innovation as other utility programs, particularly Southern California Edison's, have.

1. The PG&E proposal does not ensure customer choice of EVSE products and services.

In its "settlement agreement" PG&E amended its program to allow site hosts to select Level 2 EVSE and services from a list of pre-qualified vendors that meet the goals of this program, including "providing for base charging functionality and load management capability, a positive driver experience, and prudent expenditure of taxpayer funds."[65] PG&E indicates that it

[65] Exh. Joint Settling Parties-1: 14; Charge Smart and Save Settlement Agreement Regarding PG&E Electric Vehicle Infrastructure and Education Program Application, March 21, 2016, p. 5.

will establish an "annual qualification process" for vendors to foster innovation and competition.[66]

EVCA has several concerns with this proposal and recommends that it be amended. First, establishing opaque, subjective criteria for vendor participation such as "a positive driver experience" and a "prudent expenditure of taxpayer funds" would position PG&E in a significant gatekeeper role, with substantial discretion to exclude market participants. EVCA recommends that criteria for participation be objective – e.g. capability to support widely adopted industry standards – and that customers be provided the opportunity for maximum choice of equipment and services meeting those standards. For example, an example of an objective standard is simply the ability to support both fast charging standards, CHAdeMO and SAE CCS, an approach adopted by the Energy Commission.[67] Second, because of the rapid rate of innovation in the EVSE sector and the importance of consumers having the ability to choose the most compelling products and services, EVCA is concerned that an annual vendor qualification process could delay the entry of new innovations into the market for months, potentially up to nearly a year. Given that a principle objective of this program is to accelerate adoption of EV technologies, EVCA recommends that the PG&E qualification process adopt a rolling basis process like that required under the SDG&E program, and transparent, objective criteria for participation.[68]

2. PG&E's DCFC proposal should be amended to permit customer choice and reduce the risk of unfair competition.

PG&E's DCFC program does not adopt even the principal mitigating changes proposed for PG&E's Level 2 charging program. First, under its "settlement agreement," PG&E proposes to select the DCFC site equipment and network providers, meaning that site hosts will have no choice of equipment.[69] The "settlement agreement" then references intent to establish a "competitive solicitation process" but provides no commitment to a pre-qualification process that is transparent and based on objective criteria such as adherence to widely-adopted standards. Second, as previously noted, PG&E does not propose any site host payment for its DCFC,

[66] Id., pp 5, 12.
[67] Exh. TURN-56, p. 7.
[68] D. 16-01-045, Attachment 2, p. 15
[69] Exh. Joint Settling Parties-1, Charge Smart and Save Settlement Agreement regarding PG&E's Electric Vehicle Infrastructure and Education Program Application, A.15-02-009, p. 5.

providing no mitigation of its risks to nonutility competitors. Given the tremendous innovation occurring in the DCFC sector, these restrictions represent major missed opportunities to leverage market competition and deliver value to site hosts. PG&E's proposals to restrict choice and not impose any financial requirements for DCFC on site hosts therefore should be rejected and amended to allow customer choice and a site host payment, as with Level 2 chargers.

VII. CONCLUSION

EVCA agrees with the need for broader collaboration to accelerate EV charging deployment but remains concerned that the PG&E "settlement agreement" as proposed has as much potential to harm the existing EV charging sector that has already deployed 20,000 ports as to advance EV charging in the state.

Compared to this collaborative approach being implemented by Southern California Edison, the PG&E "settlement agreement" would deploy stations at a substantially higher per-station cost to ratepayers. Moreover, PG&E's proposal failed to take the opportunity provided by the Scoping Memo and Ruling to adequately address the actual risks it poses of unfair competition. There remains insufficient identification or analysis of the substantial risks to market competition posed by utility ownership in the Northern California region and the mitigation proposed in the "settlement agreement" fails to address the concerns raised by the EV charging sector and other non-settling parties. EVCA urges the Commission to authorize PG&E to implement a Phase I electric vehicle infrastructure program, but conditioned on its adoption of changes that reduce its substantial risks to the competitive market and unnecessary ratepayer burden noted in Section 4 of our brief.

The "make-ready" model adopted by Southern California Edison offers a productive partnership between utilities and nonutility companies to deploy more stations at less cost to ratepayers. In sustaining competition and customer choice, this approach maximizes private non-utility investment and fosters continued technology leadership in one of California's key clean energy sectors. Unfortunately, the record shows PG&E never seriously considered this approach.

Should the Commission decide that consideration of the ownership model is warranted, EVCA urges adoption of an approach that focuses PG&E's station ownership on underserved segments of the market, particularly MUDs and disadvantaged communities. Under such an

approach, it is important that the budget and deployments under PG&E's program be compliant with the Scoping Memo and Order, and that mitigation of certain competitive impacts as described in our recommendations above be undertaken to reduce concerns about damage to competitive markets and reduce ratepayer burdens.

EVCA appreciates the Commission's consideration of these points and urges adoption of the "settlement agreement" with the amendments as proposed by EVCA.

Respectfully submitted,

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