



Brian K. Cherry
Vice President
Regulatory Relations

Pacific Gas and Electric Company
77 Beale St., Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

Fax: 415-973-7226

January 17, 2013

Energy Division Tariff Unit
California Public Utilities Commission
505 Van Ness Avenue, Room 4005
San Francisco, CA 94102

Re: Reply to Protest of the Division of Ratepayer Advocates on Pacific Gas and Electric's Advice Letter 4077-E-A on the Plug-In Electric Vehicle Workplace Charging Pilot in Compliance with Decision 12-04-045

Dear Energy Division Tariff Unit:

Pacific Gas and Electric Company (PG&E) hereby responds to the protest of Division of Ratepayer Advocates (DRA) to PG&E's Advice Letter 4077-E-A.

On June 29, 2012, PG&E filed Advice Letter (AL) 4077-E that included a plan for its Intermittent Renewable Resource Management (IRM2), Transmission and Distribution (T&D), and Electric Vehicle (EV) pilots in compliance with Decision (D.) 12-04-045. PG&E requested that the California Public Utilities Commission (CPUC or Commission) approve the detailed plan included in AL 4077-E.

On July 19, 2012, DRA filed a protest to PG&E's AL 4077-E arguing that more information was needed for PG&E's Plug-in Electric Vehicle (PEV) pilot before the Commission can make an informed decision regarding the pilot.

On July 24, 2012, PG&E filed a response to DRA's protest on AL 4077-E.

On July 27, 2012, the Commission's Energy Division (ED) suspended AL 4077-E for 120 days.

On November 5, 2012, the ED submitted a data request to PG&E requesting additional information on PG&E's EV pilot plan and whether PG&E can incorporate EV second life batteries as part of this pilot.

On November 20, 2012, AL 4077-E was suspended again for 45 days.

On December 21, 2012, PG&E responded to ED's data request for a plan to include EV second life batteries in the proposed EV pilot.

On January 10, 2013, DRA protested PG&E's AL 4077-E-A.

On January 11, 2013, the Commission's Energy Division (ED) extended the suspension to AL 4077-E-A for 120 days.

EV Pilot

DRA had the following set of questions. PG&E's responses are included below each question.

- Q1.** *PG&E does not provide any information on how it plans to enroll PEV customers in its pilot. Will they primarily be PG&E's own employees or PEV owners at large?*
- A1.** PG&E plans to enroll EV customers at large.
- Q2.** *Will PG&E be purchasing and installing any charging stations as part of the pilot?*
- A2.** PG&E anticipates that the vendors participating under this pilot will purchase and install any EV charging stations required. PG&E will endeavor to engage with vendors that already have the required infrastructure, if possible. To the extent that vendors with the appropriate charging stations cannot be found, PG&E may provide incentives for such technology development if the infrastructure is not established.
- Q3.** *PG&E shows a budget of \$600,000 for marketing and incentives but does not explain how incentives would be structured. Will PG&E be offering any incentives to PEV owners to participate in the pilot?*
- A3.** PG&E plans on engaging with automobile manufacturers, EV charging vendors, and other relevant experts to construct an incentive framework that would benefit the PEV owners participating in the pilot.
- Q4.** *If PEV customers are enrolled from general population of PEV owners, will PG&E's ratepayers be responsible for any liabilities resulting from the proposed PEV pilot?*
- A4.** PG&E and its vendors would enter into a pilot memorandum of understanding (agreement) with the customer that delineates the terms and conditions of any actions that PG&E and/or its vendors would perform with them. To the extent that the operations that PG&E and/or its vendors performs is within the agreed upon terms in the contract, PG&E's ratepayers should not be responsible for any liabilities from the EV pilot.

Q5. *PG&E identifies various tasks involved in the two phases of the pilot but does not identify budget allocation for each task.*

A5. PG&E has provided a detailed breakdown of the costs involved in AL 4077-E-A to perform the pilot. The vast majority of the pilot dollars will be spent on testing use cases, incentivizing customers, and providing the relevant communication infrastructure needed. This is given in the response to Question 6.

Actual expenditures on the EV pilot will be given to ED on a quarterly basis.

Q6. *PG&E does not provide a justification for how the various PEV budget line items identified for this pilot program will be spent. This budget totals to about \$3 million. For example, a large portion (\$600,000) of this proposed budget is related to IT development, and customer care (\$500,000). PG&E provides no information supporting these budget items. It is not clear what the IT development entails, and whether it is for a limited number of users during the pilot or can be utilized for the whole company for other purposes. It is not clear what activities "customer care" includes. Other items are not as large but there is still no justification for them.*

PG&E must provide a much more detailed plan and the basis for derivation of the requested various amounts that go into the proposed \$3 million ratepayer funded pilot program.

A6. As included in Advice Letter 4077-E-A, the EV Pilot Budget Breakdown is given below and delineates pilot activities and corresponding budget.

PG&E	Justification	Budgeted Expense
<i>Project Management</i>	For 1 full time employee (FTE) to manage the EV pilot.	\$225,000
<i>Transmission & Distribution Planning and Operations</i>	For 0.75 FTE from transmission and distribution planning and operations to participate in the EV pilot and provide the expertise needed.	\$150,000
<i>Energy Procurement</i>	For 0.3 FTE from energy procurement to bid the EVs into the CAISO market.	\$60,000
<i>Policy and Integrated Planning</i>	For 0.3 FTE to support the regulatory functions required for the EV pilot.	\$90,000
<i>Marketing & Incentives</i>	For PG&E to enroll up to 100 customers into the EV pilot.	\$600,000
<i>Customer Care Services Operations</i>	For PG&E to install the required revenue quality metering equipment, perform the manual billing and metering processes required for any settlements on this pilot	\$500,000
Vendor or PG&E		
<i>Telemetry and Forecasting Service</i>	For PG&E to be able to provide real-time visibility of the EV charging to the CAISO and distribution operations.	\$150,000
<i>Enabling Technologies</i>	Allocated to install EV networked enabled smart chargers, if needed.	\$200,000
<i>Customer Engagement Option Provisioning</i>	For PG&E or partners to test and develop different financial and incentive structures to evaluate customer enrollment behavior.	\$100,000
<i>IT Development</i>	Allocated to allow vendors to develop new functionality as required to support the dynamic aggregations and new control strategies that PG&E will test to support both the local distribution grid and the CAISO market and for PG&E to build some of the basic functionality to interface with vendors providing the grid services.	\$600,000
<i>Battery Management and Integration Services</i>	Allocated to the expenses required to maintain and operate second life batteries and any battery integration challenges if more than one battery type is used.	\$150,000
<i>Customer Research</i>	Allocated to allow studies of customer response to different control strategies and payment options for providing different grid services.	\$173,000

Conclusion

PG&E believes that the supplemental filing for the PEV pilot will provide California stakeholders with a better sense on what the challenges and opportunities to integrating PEVs into the electric grid in the near term. DRA generally supports the goals and objectives of PG&E's proposed EV pilot program on incorporating Demand Response (DR) from PEV's in both the CAISO and PG&E's distribution level planning and operations:

"[A]lthough DRA believes the proposed PEV battery "second life" plan is a good idea, it is too soon to start a pilot program on what to do with PEV batteries after they have served their useful life in vehicles. Most, if not all, PEVs come with a 100,000 mile or eight year warranty. So, the expected "second life" will not begin to show up until about 2019-2020 timeframe. DRA thinks it is premature to start the proposed pilot this early in the PEVs' life cycle. It is not even clear where PG&E would get sufficient number of second-hand batteries before 2019-2020 timeframe."

PG&E respectfully disagrees with DRA's assessment. Although "second life" batteries may not necessarily show up physically before the 2019 – 2020 timeframe, PG&E, the Original Equipment Manufacturers (OEMs), EV vendors and other external parties will need to conduct pilots and investigate the various technical characteristics "second life" presents, such as grid integration issues, possible constructs for a future retail program, and the value, if any, this technology provides to PEV customers and ratepayers in general. Engagement in this new and developing area with automobile manufacturers and customers will take time. PG&E foresees ongoing efforts in the PEV space from now until the 2016-2017 timeframe. At which point, PG&E anticipates a possible request for a full "second life" or PEV program as part of the 2018 – 2020 DR Cycle.

PG&E requests that the Commission expeditiously approve Advice Letter 4077-E-A.

Sincerely,

Handwritten signature of Brian Cherry in cursive script.

Brian K. Cherry
Vice President, Regulatory Relations

cc: Edward Randolph, Director, Energy Division
General Counsel F. Lindh
Chief Administrative Judge K. Clopton
Adam Langton, Energy Division
Chris Danforth, DRA
Christopher Ungson, DRA
Michael Campbell, DRA
Sudheer Gokhale, DRA
Farzad Ghazzagh, DRA
Lisa-Marie Salvacion, DRA