

UCAN DATA REQUEST
UCAN-SDG&E-DR-03
SDG&E VEHICLE GRID INTEGRATION PROJECT
A.14-04-014
SDG&E RESPONSE
DATE RECEIVED: OCTOBER 1, 2014
DATE RESPONDED: OCTOBER 14, 2014

1. Please provide cost effectiveness results based on the Prepared Direct Testimony of J.C. Martin, revised July 29, 2014 which assumed an average of 6 incremental EV adoptions per VGI site installation – 10 for MuD and 2 for Workplace BY assuming the EV purchases are reduced as follows:
 - a. **FIVE instead of ten** incremental EV purchase due to each MuD VGI Pilot Program installation and **ONE instead of two** incremental EV purchases due to each workplace VGI installation;

(NOTE: This reduces the SDG&E assumption in the July 29, 2014 testimony by 50 percent with the goal of determining how sensitive the positive cost effectiveness results are to the EV adoption assumptions in the revised J. C. Martin testimony. The previous data request did not satisfy the intent of the data request to reduce both the MuD and workplace purchases due to each VGI pilot program installation in the April 11, 2014 testimony).

SDG&E Response:

Please see SDG&E's Response to question 2 of UCAN's DR-02 (Date Responded: September 22). DR-02, Question 2 response provides a range of sensitivities for a 1:2 ratio of MuD to Workplace VGI installations. The Question 2 sensitivity analysis shows how sensitive the positive cost effectiveness results are to the EV adoption assumptions in the revised J. C. Martin testimony, even with no incremental EV additions. The Question 2 sensitivity results shows that all cost test results for both scenarios are positive even with no incremental EV additions. Therefore a 5:1 ratio of EV additions will also have positive cost effectiveness results. Please see UCAN DR-02 Question 2 response for all 1:2 ratio sensitivity cost effectiveness results, including a written summary of results.

- b. What is the basis of the change in the EV assumptions from the April 11, 2014 testimony to the July 29, 2014 testimony of J. C. Martin?

(In the April 11, 2014 testimony, the incremental EV were four for MuD and eight for the workplace. The July 29, 2014 testimony assumptions are clearly substantially different.)

SDG&E Response:

EV adoption due to the presence of workplace and MuD charging is a hypothesis to be tested by SDG&E's VGI Pilot Program.¹ Chapter 6 testimony includes an additional 3,300 EVs added to the CalETC forecast, in recognition that a workplace and MuD charging project of the size proposed in the SDG&E VGI Pilot application will result in additional EV adoptions by drivers.

¹ Please see Revised Chapter 6, footnote 11 (p. JCM-16). This same footnote appears in the April 11, 2014 testimony.

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Response to Question 1b (Continued):

Expected EV adoptions by drivers is part of SDG&E's site selection criteria to evaluate and prioritize VGI Pilot Program siting.² SDG&E's Research Plan intends to replace hypothesized assumptions used in the illustrative cost effectiveness results with observed results in order to more rigorously evaluate the cost-effectiveness of SDG&E's VGI Pilot Program.³

During the Chapter 6 testimony update, the ratio of MuD to Workplace incremental EV additions of 4:8 stated in April 11, 2014 testimony required refinement due to two countervailing modeling assumptions. One, the MuD population of EVs is assumed to be zero due to very low deployment of EV charging facilities at these locations. Two, the pilot charger utilization (the number of EVs that utilize the EV charging equipment each day) is assumed to be 1 in the EV Market Scenarios analyzed.⁴ Therefore MuD located VGI installations with 10 chargers require 10 incremental EVs to achieve a pilot charger utilization of one. Two incremental EVs are attributed to Workplace locations to maintain the 3,300 total incremental EV additions included in the April 11 testimony.

² Please see Chapter 2, Section III.B Site Selection Criteria "...Current and expected volume of EV drivers..." (RS-7).

³ Please see Revised Chapter 6, Section V. Research Plan – Data Collection and Analysis "The following data collection and analysis is planned for the VGI Pilot Program...Estimated percentage of EV purchases related to the VGI Pilot Program (gathered through surveys of EV customers using the VGI facilities);..." (p. JCM-36).