

ORA DATA REQUEST
ORA-SDG&E-DR-005
SDG&E VEHICLE GRID INTEGRATION PROJECT
A.14-04-014
SDG&E RESPONSE
DATE RECEIVED: AUGUST 14, 2014
DATE RESPONDED: AUGUST 28, 2014

1. Please provide the results of all sensitivity cost-effective model runs conducted up to date for the proposed pilot program.

SDG&E Response:

The attached files contain all sensitivity cost-effectiveness model runs conducted up to date for SDG&E's VGI Application:

The first file contains sensitivity runs related to JC Martin's original prepared direct testimony, Chapter 6.

The second file contains sensitivity runs related to JC Martin's revised prepared direct testimony, Chapter 6.



SDG&E VGI Model CE
Results (original testi



SDG&E VGI Model CE
Results (revised testin

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2. What is the basis for the number of chargers assumed in the cost-effectiveness model to be installed from 10,000 in 2014 to 200,000 in 2028? How does this assumption impact the results and what is its relationship to the 5500 chargers included in the proposed pilot project?

SDG&E Response:

The numbers of chargers in the cost-effectiveness model grow in proportion with the EV forecast in Table 6-5. The basis for the number of chargers assumed is an assumption that each EV has a Single Family residence charging unit and commercial charging units are estimated at 0.2 per EV in service.

The Single Family residence charging unit assumptions impact Customer Charger Costs for the Single Family residence chargers, and commercial charging unit assumptions impact Third Party Charger and Admin Costs.

There is no direct relationship between these charging units and the 5,500 chargers included in SDG&E's VGI Pilot Application. An indirect relationship exists that affects the Estimated EV Charging Load Impacts, since load impacts are influenced by available prices at different locations. The Single Family residence locations and preexisting workplace charging locations are charging locations used in the cost optimization approach to estimate EV charging load impacts.

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3. Please provide the current average rate for residential customers. Explain the difference between this rate and the one used in the optimization tab shown in the residential flat rate graph (30 to 36 cents).

SDG&E Response:

The class average \$/kWh rate for residential customers at the time of filing, effective April 1, 2014, was \$0.20624 with the California Climate Credit included, and \$0.21757 without the California Climate Credit. The class average rate for residential customers, effective August 1, 2014, is \$0.20515 with the California Climate Credit and \$0.20647 without the California Climate Credit.

The prices in the optimization tab shown in the graph (Flat Rate Scenario-Residential Rate: Flat) represent results from JC Martin's original Chapter 6 testimony. The approximate 30 cent price is the winter average \$/kWh price for home EV charging under SDG&E's default tiered DR rate, and the approximate 36 cent price is the average \$/kWh price for commercial EV charging under the non-utility flat fee.

The winter average \$/kWh price for home EV charging under SDG&E's default tiered DR rate was updated from \$0.2981, as shown in the graph, to \$0.2833 in JC Martin's updated Chapter 6 testimony. This updated price represents an average marginal price for EV charging under SDG&E's tiered winter Schedule DR rate effective April 1, 2014. The marginal price is calculated based on the assumed percentages of customers charging at home on their top (marginal) DR rate tier with 20% of customers charging in tier 1, 20% in tier 2, 30% in tier 3 and 30% in tier 4.

The difference between the current average rate for residential customers and the prices used in the optimization tab are mainly two fold. First, the 36 cent price does not represent an SDG&E residential rate, but an assumed average price for commercial EV charging under a non-utility flat fee. Second, the \$0.2833/kWh represents an average price for marginal EV charging costs; it is not intended to represent a residential class average price.

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4. Please provide the following sensitivity runs, if not conducted in response to Question 1.
- a. Assume no tax credit starting in 2016.
 - b. 75% flat TOU (non-tiered) rates.
 - c. Charger utilization rate of 0.5 per day.
 - d. EVSE costs 25% higher than base case.
 - e. Shareholder benefits based on the base case run.
 - f. Shareholder benefits based on EVSE costs paid for and 100% owned by shareholders.

SDG&E Response:

After discussion with TURN and ORA, SDG&E agreed to direct E3 to run sensitivities agreed to during the discussion. SDG&E will inform ORA when E3 will complete the agreed to sensitivity runs.