

UCAN DATA REQUEST
UCAN-SDG&E-DR-05
SDG&E VEHICLE GRID INTEGRATION PROJECT
A.14-04-014
SDG&E RESPONSE
DATE RECEIVED: JUNE 15, 2015
DATE RESPONDED: JUNE 29, 2015

1. In this proceeding SDG&E has advanced 2 rationales in support of utility ownership of the electric vehicle service equipment (EVSE) in its proposed pilot: 1) that it was necessary to ensure the electric vehicle (EV) driver received the Vehicle Grid Integration (VGI) rate and price signal, and 2) because SDG&E has a mandate to maintain any equipment in ratebase as used and useful, SDG&E would ensure its continued operation. The proposed settlement provides that the site host will determine if the VGI price signal is to be received by the site host or the EV driver.

A. Should the settlement be adopted is SDG&E's only supporting rationale for utility ownership of the EVSE that the equipment will be maintained by SDG&E as used and useful?

B. Has SDG&E ever considered a contractual approach to require that any participant in SDG&E's pilot must maintain the equipment in good working order, rather than SDG&E needing to own the equipment to ensure it is kept used and useful.

UCAN would note that in some of SDG&E's other contracts, in PPA's for example, there are often contract terms requiring a generating facility to maintain their equipment in good working order, i.e., using Good Utility Practice. To date SDG&E has never provided a reason why it could not require program participants to be contractually obligated to SDG&E to maintain the equipment in good working order instead of needing to own the equipment to ensure the equipment is maintained.

C. If the CPUC modified the SDG&E pilot settlement to deny SDG&E ownership but would allow SDG&E to administer the program to test their VGI rate, would SDG&E agree to administer such a pilot program?

i. If so, and the CPUC required SDG&E to maintain the equipment in good working order, would the fact that the EVSE would not be utility owned prevent SDG&E from maintaining the equipment in good working order?

SDG&E Response 01:

1. A. The settlement does not change the rationale conveyed throughout SDG&E's testimony. For example, SDG&E Ex. 8 (Avery) p. JPA-5 lines 7 – 24, describes how end-to-end ownership of the VGI Facility protects all ratepayers by ensuring that the assets remain used and useful in order to ensure that the proposed benefits are realized; utility

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SDG&E Response 01:-Continued

ownership of these assets under the Commission's oversight further ensures this protection of all ratepayers.

Third party or hosts do not have this obligation, and the Commission lacks any oversight powers of these entities – SDG&E's ownership ensures that the assets remain used and useful over the asset life to the benefit of all its ratepayers. This rationale is embodied in and further reinforced in the Guiding Principles agreed to by the settlement parties.

- 1.B. Under such conditions, should that "participant" no longer be able to fulfill such a contract, for example during a bankruptcy, the equipment could be subject to liens, court proceedings and disputes between stakeholders (as stated in SDG&E Ex. 8 (Avery) p. JPA-5 lines 9 – 17). As such, ratepayers are not protected, the asset usefulness is compromised, and benefits to EV drivers (VGI Facility users) and all ratepayers will not be realized; the settlement is consistent with this view.
- 1.C. No, this is not what is envisioned in the settlement.
- 1.C.i. Please see prior response.

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2. The settlement does not offer any changes to the size (5,500 EVSE), capital cost (\$59 million), overall cost (\$103 million), or years to cost recovery of the EVSE proposal. In testimony SDG&E noted that pilots size, length and requirement for utility ownership were necessary conditions to make sure the VGI price signal was passed onto the EV driver and that proper circuit level testing of the grid benefits of its VGI rate could occur across the SDG&E's various grid circuits. In SDG&E's application the site owner does not own the pilot chargers. Yet in the settlement it gives the host the choice whether to allow the utility to charge the EV owner directly for EV charging services or to take service directly and pay the VGI Pilot rate and then charge the EV owner that rate or a different rate of its own choosing subject to a host-filed load management plan.
- a. Please explain how giving the site hosts this option helps manage the grid.
 - b. If the settlement is adopted and the site host determines who gets the VGI price signal (either the site host or the EV driver) how does SDG&E plan to test the VGI rate at the circuit level?
 - c. If the settlement is adopted, what is SDG&E's rationale for the need to have 5,500 charging stations at 550 sites in its service territory?
 - d. If the settlement is adopted does SDG&E anticipate having the site selection criteria include a requirement that a certain percentage of sites will be reserved where the VGI price signal is given to the driver and alternatively given to the site host? If so, what percentage does SDG&E foresee?

SDG&E Response 02:

- 2.a. The settlement provides that the VGI price signal will be sent to the site host under the "VGI Rate-to-Host" option, providing an economic incentive for site hosts to manage load, and that site hosts will submit a load management plan as a condition of participation. A load management action or measure, when executed, generally leads to modified charging behavior, consistent with those modeled in SDG&E's testimony that is, avoiding charging during hours of the day with high pricing, and preferring to charge during times of low pricing. This pricing as detailed in Ex. SDG&E-3 (Fang).
- 2.b. Regardless if the site host chooses the VGI Rate-to-Host or the VGI Rate-to-EV Driver option, the VGI Rate will be calculated based on the circuit where the VGI Facility is located.
- 2.c. SDG&E's rationale is unchanged (please see Ex. SDG&E-7 (Martin/Schimka) p. ST-46 lines 1 – 13, Appendix A).
- 2.d. There are no quotas set for each VGI Rate/billing option.

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3. Given that the proposed settlement changes many aspects of SDG&E's EVSE proposal i.e., a site host participation fee, no assurance the VGI price signal will reach the EV driver, and the site host being allowed to charge additional fees, the settlement may affect how many charges per station per day SDG&E can expect. Will SDG&E be performing any new cost effectiveness analysis of the settlement proposal?
 - a. If so, please explain what, if any changes to the cost effectiveness analysis SDG&E intends to make.

SDG&E Response 3:

The cost effectiveness analysis in Ex. SDG&E-6 testimony of JC Martin captures the range of possible outcomes under the Agreement and thus no additional modeling analysis is needed. The analysis in SDG&E-6 contains two scenarios – EV charging with the VGI rate, and EV charging based on a flat rate. The Agreement adds an option for the site host to choose a VGI Rate-to-Host option (to the originally proposed option of VGI Rate-to-EV Driver). The Agreement's option allows the pilot to explore other approaches to encourage off-peak charging and charging at times of day when the price per hour is low. The data yielded by the pilot should reveal customer preferences and the effectiveness of the VGI rate to affect driver charging behavior under both options in the Agreement.

- 3.a. No changes to the cost effectiveness analysis as proposed in Ex. SDG&E-6 testimony of JC Martin are anticipated, other than adding data and analysis reflecting the impact of the VGI Rate-to Host option.

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4. Given SDG&E's concerns about grid management in the absence of utility ownership of the EV charging equipment:
- a. How does SDG&E expect to manage the grid initially if it "gives away" control of pricing?
 - b. As the EV and EVSE markets grow and SDG&E owns a smaller and smaller share of the EV chargers serving the EV market, including those in single-family homes, multi-unit dwellings and workplaces, how does SDG&E expect or plan to manage the grid?
 - c. How does the settlement offer any opportunities to test SDG&E's ability to manage the grid, even if the utility owns all the EV charging equipment, if the control of who gets the VGI price signal is given to the site host?
 - d. What is the most concerning charging location to SDG&E regarding managing the grid: single-family homes? Multi-unit dwellings? Workplaces? Please explain.

SDG&E Response 4:

- 4.a. SDG&E does not intend to "give away" control of pricing, but instead will send the price signal to the site host and monitor pricing and load management tactics under the VGI Rate-to-Host option.
- 4.b. SDG&E's VGI Program will help inform Commission policy regarding grid-integrated charging in the future.
- 4.c. As described in the answer to question 2 (above), the additional VGI Rate-to-Host option allows for the evaluation of various approaches to address the grid-integrated charging objectives of the VGI Program. The range of load management tactics expected is best answered and demonstrated by a combination of site hosts and EV service providers who qualify to participate in the program.
- 4.d. SDG&E does not understand what is meant by "the most concerning charging location".

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5. If the “make ready” approach was implemented, could contract terms be arranged to make sure that in return for the site host receiving a subsidy for infrastructure to the stub, charging services could be restricted to time periods that would avoid contributing to the peak? Please explain.

SDG&E Response 5:

SDG&E’s VGI Pilot Program Application and Settlement does not include any reference to or consideration of a “make ready” approach.

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6. "Participation fees" are rather vague and not really the same as having "skin in the game." These fees appear to be designed to offset program *expenses* and not a contribution to capital or investment.
- a. Did SDG&E consider any "skin in the game" opportunities for site hosts that involved shared investment opportunities rather than just a "participation fee as an offset to operating expenses, e.g., make-ready subsidies?
 - b. The "make-ready" approach was a shared investment opportunity that places the technology risk with the owner of the charging equipment and the infrastructure cost to the stub risk with the utility ratepayer. What is SDG&E's objection to this form of "skin in the game" or sharing of investment (capital) costs?
 - c. Concerning the participation fee:
 - 1. What exactly is the participation fee?
 - 2. It is anticipated that the participation fee would offset only program expenses or would it also offset installation and equipment costs?
 - 3. What is the size of the participation fee based upon, e.g., cost of trenching, other costs associated with infrastructure to the stub OR a more market-based fee? Explain.

SDG&E Response 6:

- 6.a. A number of parties to the proceeding wanted to explore the concept of the inclusion of a participant payment. These parties had a range of alternatives to consider. As stated in the settlement agreement provisions paragraph D, a recommendation will be developed in consultation with the Program Advisory Council (PAC), and SDG&E shall file for approval of the proposed participation payment by way of a Tier 2 advice letter, subject to protest by any party, after consulting with the PAC (as described in the settlement). It is anticipated that proceeds from the payment will be credited to the program balancing account.
- 6.b. As stated in Question 5 (above), VGI Pilot Program Application and Settlement does not include any reference to or consideration of a "make ready" approach.
- 6.c.
- 6.c.1. Answered in Question 6.a. above.
 - 6.c.2. Answered in Question 6.a. above.
 - 6.c.3. As stated in the settlement agreement provisions paragraph D in developing the proposed participation payment, factors that will be considered include, but are not limited, to the following: customer commitment, avoiding adverse impacts to deployment, total VGI Facility cost and customer segment. The roles and responsibilities of the PAC are described in Appendix A of the settlement.

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7. SDG&E has expressed concern that without utility ownership, the utility loses control over how charging services are priced and therefore when electric vehicles are charged: Cynthia Fang states: “EVSPs are not subject to the same regulation by the Commission in the way that SDG&E and the other California investor-owned utilities are. Thus, there is no mechanism that would ensure that the EVSPs and/or site owners are required to provide the VGI dynamic hourly rate to the charging customers, which would likely reduce any potential grid and system benefits, as well as limit the potential benefits to charging customers.” (Fang, Rebuttal, CF-5)
- a. Given the settlement provisions that retain utility ownership of charging stations, on the one hand, but loss of control over how charging services are priced, on the other:
- (1) How do these two features of the settlement balance in terms of grid management?
- (2) As the market grows, how will this pilot expand our understanding in knowing how to manage the grid under both utility ownership and third party ownership of EVSE? Please explain.

SDG&E Response 7:

- 7.a.1. Settlement agreement provision in paragraph B describes how the implementation of the VGI Rate-to-Host option provides controls and monitoring features to the benefit of the overall VGI Program objectives:

“Where the VGI Facility site host opts to receive the VGI Rate (i.e., the VGI Rate-to-Host pricing plan), the site host, or its selected vendor, will be required to submit to SDG&E the load management tactics it will implement at its VGI Facility, including the incremental costs and equipment required to implement the load management tactics, the prices or fees that it intends to levy on VGI Facility users (EV drivers)⁵, and any vehicle or EVSE communication systems necessary to implement the load management tactics. Site hosts that do not submit load management plans consistent with the Guiding Principles will be asked by SDG&E to revise accordingly and will be ineligible to participate in the Program until SDG&E determines that the load management plan is consistent with the Guiding Principles. Participation in the VGI Rate-to-Host option will not be unreasonably withheld. As with VGI Facility site hosts that opt for the VGI Rate-to-EV Driver pricing plan, site usage patterns will be monitored, and in addition, site host determined prices or fees (to use the VGI Facility) will be tracked for those site hosts that opt for the VGI Rate-to-Host pricing plan.

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Response to Question 7 (Continued)

These data will be used to inform Commission policy.” Appendix A and B to the settlement provides additional detail that supplements the Research Plan (Data Collection and Analysis) described in SDG&E’s prepared direct testimony Ex. SDG&E-6 (Martin) p. JCM-35 line 9 – p. 37 line 13.

SDG&E Response 7:

- 7.a.2. The VGI Pilot Program will “expand our understanding” of the effectiveness of SDG&E’s approach to grid-integrated EV charging, that is, introducing a time-variant rate with enabling technology and operating systems to efficiently integrated EV loads with the grid. SDG&E expects that the Commission will evaluate the results of this pilot alongside other programs and models currently being considered or implemented in California.