Vehicle-Grid Integration Communications Protocol Working Group

December 1, 2017

WebEx

Webex link: https://energy.webex.com
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Call in: 1-866-469-3239
Meeting ID for WebEx and phone: 924 054 812

Start Time	Topic	Presenter
8:30 am	Roll Call & Summary of Previous Meeting	Justin Regnier, Facilitator
8:35 am	Presentation of amended hardware proposal	Stephanie Palmer, CARB
8:45 am	Discussion on amended hardware proposal • Understanding that hardware alone can't enable VGI, do the amended hardware requirements support VGI software enabling multiple protocols? • How can the hardware proposal be applied to the IOU proposals the CPUC is currently reviewing? (Please see attached summaries) • Should all of the hardware requirements apply to both multi-use (public, workplace, and MUD common areas) and residential charging stations? • Should site hosts be allowed to utilize an external protocol converter to serve as the processor/memory for multiple EVSE? • What kind of documentation should EVSE vendor/OEM provide to show compliance with hardware requirements? • Does Appendix A of the proposal accurately capture the use of the protocols? How can the working group's efforts to identify protocols be best documented, preserved, and built upon?	All
10:00 am	Discussion of DC use cases • Were AC use cases found to have more potential value? If so, why? • Should the working group proposal include any specific DC hardware or software requirements?	All
10:45 am	Additional issues that should be considered for inclusion in working group's recommendation to the CPUC • If no protocol requirements are recommended, how could a discussion of the protocols be best incorporated? • What other outcomes of the working group should be documented in the recommendation?	All
11:00 am	Identify discussion topics for final, in-person meeting	All
11:15 am	Wrap-up and Next Steps	Justin Regnier, Facilitator
11:30 am	Adjourn	All

SB 350 Standard Review Light-Duty Vehicle Proposals

SDG&E Residential Charging Program

SDG&E is proposing to spend $226 million to install, own, maintain and operate an estimated 90,000 Level 2 electric vehicle service equipment (EVSE) in residential customers' homes over a five- to six-year period. The 90,000 target is based on the utility's share of the state's overall zero-emissions vehicle goal, minus the number of electric vehicles that are already expected to be adopted without the proposed program.[1]

SDG&E is estimating that the average installation cost (not including the EVSE) will be $1,425, including all materials and labor,[2] and it plans to cap the amount it spends on an individual EVSE installation based on customer type. Each EVSE installation would include a separate service meter.

PG&E Fast Charge Program

PG&E proposes to implement a make-ready infrastructure program for customers interested in hosting direct current fast chargers (DCFC) for light-duty vehicle use. The proposed Fast Charge Program could cost $22.4 million over five years to deploy make-ready infrastructure for DCFC at up to 52 sites, or 234 charging points.[3]

PG&E states that fast charging plazas can provide charging options those that may not have access to home or workplace charging and also facilitate longer trips by allowing EV drivers faster opportunities to recharge away from home.[4] It aims to improve the business case for investing in DCFCs by owning and operating the make-ready infrastructure.

Each site where PG&E installs a DCFC make-ready will include a separate meter from the site host's existing service for the charging equipment.

PG&E is assuming it could install make ready infrastructure at about 8-12 sites per year over the five-year program, and the power available through the charging points could range from 50kW to 350kW, based on the needs of site hosts and charging network developers. Each site will be required to offer at least one CHAdeMO and one CCS charging connector to help maximize site utilization.

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[1] SDG&E Testimony in Support of its SB 350 Application, A.17-01-020, Chapter 4, pg. RS-6-7

[2] SDG&E Testimony in Support of its SB 350 Application, A.17-01-020, Chapter 4, pg. RS-5

[3] PG&E Testimony in Support of its SB 350 Application, A.17-01-022, pg. 4-1. PG&E notes that the costs for the DCFC program are uncertain, due to uncertainties regarding the size and pace of market demand and the precise sites and vehicles that will need make-ready infrastructure over the limited 5-year program period. PG&E states that the forecast costs for the program and estimated demand for the project should not be considered forecasts of the actual market demand for make-ready infrastructure and DCFC infrastructure sites that will be served by the program. *Id*., pg. 4-12.

[4] PG&E Testimony in Support of its SB 350 Application, A.17-01-022, pg. 4-4