

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding
Microgrids Pursuant to Senate Bill 1339
and Resiliency Strategies.

Rulemaking 19-09-009
(Filed September 12, 2019)

**COMMENTS OF THE VEHICLE-GRID INTEGRATION COUNCIL ON TRACK 2
MICROGRID AND RESILIENCY STRATEGIES STAFF PROPOSAL**

Edward Burgess
Policy Director

Zach Woogen
Senior Analyst

VEHICLE-GRID INTEGRATION COUNCIL
2150 Allston Way, Suite 400
Berkeley, California 94704
Telephone: (941) 266-0017
Email: vgicregulatory@vgicouncil.org

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In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Vehicle-Grid Integration Council (“VGIC”)¹ hereby submits comments on *Staff Proposal for Facilitating the Commercialization of Microgrids Pursuant to Senate Bill 1339* (“Staff Proposal”) submitted in Rulemaking 19-09-009. Pursuant to *Administrative Law Judge’s Ruling Requesting Comment on Track 2 Microgrid and Resiliency Strategies Staff Proposal, Facilitating the Commercialization of Microgrids Pursuant to Senate Bill 1339*, issued by Administrative Law Judge Colin Rizzo on July 23, 2020, VGIC timely files these comments on August 14, 2020 in R. 19-09-009. VGIC was granted party status in this proceeding on February 4, 2020.

I. INTRODUCTION

VGIC is a 501(c)6 membership-based advocacy group committed to advancing the role of plug-in electric vehicles (“PEVs”) and vehicle-grid integration (“VGI”) through policy development, education, outreach, and research. VGIC supports the transition to a decarbonized

¹ The views expressed in these Comments are those of VGIC, and do not necessarily reflect the views of all of the individual VGIC member companies or supporters. (<https://www.vgicouncil.org/>).

transportation and electric sector by ensuring the value from PEV deployments and flexible PEV charging and discharging is recognized and compensated in support of achieving a more reliable, affordable, and efficient electric grid. VGIC appreciates the opportunity to participate in this proceeding and contribute to the development of a market for microgrids and resiliency solutions. VGIC commends the considerable effort made by Energy Division Staff to develop a thoughtful and detailed Track 2 Staff Proposal. Our comments focus primarily on Staff's Proposal 5, which VGIC supports. We also provide comments on Proposal 1.

II. COMMENTS ON PROPOSAL 5

VGIC would like to thank the Staff for considering Options to implement Proposal 5, which we believe if adopted would represent the single most meaningful action taken by the Commission and investor-owned utilities ("IOUs") to promote vehicle-to-building power solutions ("V2B"), including backup power use cases in support of vehicle-to-home (V2H), multi-unit dwellings, workplace, commercial and industrial locations, and, where appropriate, Public Safety Power Shutoffs ("PSPS") – all in collaboration with California's IOUs. **VGIC strongly supports Proposal 5, Option 2.** VGIC posits Proposal 5 to "direct utilities to conduct pilot studies of low-cost, reliable electrical isolation methods"² represents a remarkable and innovative opportunity to implement shovel-ready, near-term bi-directional VGI strategies. Staff accurately assessed that Option 2 is preferable to Option 1 as it would include a broader set of technology options, which staff states:

² Staff Proposal at 23.

“can provide increased flexibility for end-use customers to provide and configure their own sources of backup power or to reduce the costs of incorporating battery energy storage systems for backup power with new or existing solar PV systems.”³

However, VGIC requests the Commission clarify that “battery energy storage systems” include both stationary energy storage systems and VGI energy storage systems, i.e. VGI-enabled PEVs. Indeed, the growing population of VGI energy storage systems will represent the most versatile solution available in terms of dispatchable DER capacity. VGIC recommends the Commission adopt Option 2 under Proposal 5 and include the requested clarification regarding the definition of battery energy storage systems.

VGIC also requests the Commission specify that while the pilot program should be implemented by IOUs in partnership with technology and service providers, which may include automotive original equipment manufacturers (“OEM”), the behind-the-meter (“BTM”) solutions themselves should not be restricted to IOU-owned assets, IOU-approved technologies, or any specific technology so long as the solutions meet specific performance criteria. In its proposal Staff recommended the following criteria:

“Be low-cost relative to an island-capable inverter or a transfer switch. Low-cost includes avoiding installation labor or any reconfiguration of existing electrical equipment that would be required using other approaches to provide electrical isolation; Meet all necessary safety requirements, including the ability to obtain Underwriters Laboratory listing when applicable; Meet any pre-deployment safety testing and acceptance criteria established by IOUs.”⁴

VGIC largely agrees with this recommendation, with the exception of the specific reference to the “ability to obtain Underwriters Laboratory listing.” VGIC believes a specific reliance on UL listing could preclude other viable approaches that achieve the same safety requirements,

³ Staff Proposal at 27.

⁴ Staff Proposal at 25.

particularly for AC V2G pilots. This issue is addressed at length in VGIC's January 6, 2020 Comments on the V2G AC Interconnection Subgroup Report in R.17-07-007.

Aside from these details, VGIC believes Proposal 5 will enable customers to leverage existing and future PEVs for resiliency functions, which could represent a significant step forward in establishing a market for products and services that can help mitigate the impact of future power outages with only a modest impact on VGI-enabled vehicle cost. VGIC commends the Commission's special consideration of these short-term opportunities to achieve overall resiliency goals through increased provision and intelligent integration of PEVs. VGIC believes that, if successful, solutions piloted under Proposal 5 can be scaled up into much larger intelligent V2B power programs in future years. Furthermore, Proposal 5 is consistent with both the intent and statutory requirements established by SB 1339 as well as California's overall clean energy and transportation policy goals, such as those set in SB 350.

Given the current state of technology, including the capabilities of smart meters, PEVs, and EV supply equipment ("EVSE"), VGIC believes that pursuing V2B power solutions through Proposal 5 could result in project implementation as early as Fall 2021 wildfire season. Several automotive manufacturers ("OEMs") and EVSE companies, some of which are VGIC members or supporters, have recently demonstrated or indicated the technological readiness of PEVs to provide V2B functionality either through an on-board inverter (i.e. AC interconnection) or through an external device (i.e. DC interconnection). While there are some existing regulatory barriers to the broader implementation of V2G solutions through an AC approach due to current interconnection rules (i.e. Rule 21) and technical standards, VGIC believes these solutions could build upon California demonstrations at Los Angeles Air Force Base, UC Davis and UC San

Diego and are ready to be pursued now for IOU collaborations on a limited pilot scale.⁵

Additionally, there are fewer barriers to V2B solutions through a DC interconnection approach which could be readily implemented now. Specifically, VGIC auto members are intent on pursuing opportunities to partner with IOUs in V2B pilots enabled by Proposal 5. VGIC is available to facilitate informal discussions, as needed, between individual VGIC automotive OEM members, Energy Division staff, and the IOUs.

Additionally, VGIC recommends Proposal 5 be modified to include a \$4 million per IOU cap, rather than \$1 million. This change would make the pilot funding amount consistent with other EV-focused pilots and the guidance laid out in the 2016 Assigned Commissioner's Ruling on transportation electrification ("TE") in accordance with SB 350.⁶ VGIC believes the alignment with TE pilot budgets is justified because Proposal 5 is implicitly geared toward enabling V2B solutions.

VGIC would like to emphasize that V2B solutions represent only a subset of VGI applications that could aid the deployment of microgrids and resiliency solutions. As such, VGIC would like to continue discussion on pathways to deploying VGI solutions more broadly and beyond the Track 2 Staff Proposal.

⁵ The VGI Working Group (established within R.18-12-006) and the Vehicle to Grid Alternating Current Interconnection Technical Subgroup (in both R.17-07-007 and R.18-12-006) have provided thorough exploration into the ease of implementation of these solutions in the short-term.

⁶ *Assigned Commissioner's Ruling Regarding the Filing of the Transportation Electrification Applications Pursuant to Senate Bill 350* (September 14, 2016) in R.13-11-007
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M167/K099/167099725.PDF>

III. COMMENTS ON PROPOSAL 1

VGIC believes that Proposal 1 regarding amendments to the IOUs' respective Rule 2 tariffs offers a valuable set up for broadly applicable applications and implementation of BTM technologies for microgrids and resiliency strategies. In fact, Rule 2 provides a logical starting place for broader consideration – beyond microgrids applications – of how loads should be assessed for interconnection, prior to downstream processes to determine upgrades, cost responsibility, and opportunities for non-wires alternatives per Rules 15 and 16, General Rate Cases, and the Distribution Investment Deferral Framework. Notably, certain versions of Rule 2 define “connected load” as “the sum of the rated capacities of all of the customer's electric utilization equipment that is served through one metering point and that may be operated at the same time.”⁷ A more focused examination of Rule 2 could take into account microgrids, the variety of resources and loads they will utilize, as well as VGI and load management more generally. Importantly, VGIC believes this effort could result in a more nuanced representation of the critical difference between load measured at Point of Common Coupling (“PCC”) and load defined as the sum of each BTM device. VGIC believes Rule 2 merits further consideration, and recommends the Commission explore opportunities to link a focused Rule 2 conversation with the instant proceeding, Rule 21 Interconnection (R.17-07-007), Distribution Resource Planning (R.14-08-013), California Energy Commission’s Load Management (19-OIR-1), DRIVE OIR (R.18-12-006), and/or any new OIRs that may implicitly depend on Rule 2 definitions of “connected loads.” Primarily, these definitions should be updated to align with the current state of Distributed Energy Resources (“DER”), as the IOUs' Rule 2 have not been revised since before the recent wave of DER deployment began. VGIC acknowledges the Commission and

⁷ See, e.g., PG&E Rule 2, Section H. Connected Load Ratings, https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_2.pdf

Energy Division Staff are subject to considerable resource constraints. As such, we are interested in discussing this recommendation further with staff to explore options to advance high-priority Rule 2 conversations in recognition of Commission and Staff resource limitations.

IV. CONCLUSION

VGIC appreciates the opportunity to submit these comments in response to Track 2 Microgrid and Resiliency Strategies Staff Proposal. We look forward to further collaboration with the Commission and stakeholders on this initiative.

Respectfully submitted,



Edward Burgess
Policy Director
VEHICLE-GRID INTEGRATION COUNCIL
2150 Allston Way, Suite 400
Berkeley, California 94704
Telephone: (941) 266-0017
Email: vgicregulatory@vgicouncil.org

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