BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue the Development of Rates and Infrastructure for Vehicle Electrification.	Rulemaking 18-12-006 (Filed December 13, 2018)

COMMENTS OF THE VEHICLE-GRID INTEGRATION COUNCIL ON THE ENERGY DIVISION STAFF PROPOSAL TO ESTABLISH TRANSPORTATION ELECTRIFICATION FUNDING CYCLES AND STATEWIDE BEHIND-THE-METER PROGRAM

Edward Burgess
Senior Policy Director

Zach Woogen
Policy Specialist

VEHICLE-GRID INTEGRATION COUNCIL
2150 Allston Way, Suite 400
Berkeley, California 94704
Telephone: (510) 665-7811
Email: vgicregulatory@vgicouncil.org

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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission"), the Vehicle-Grid Integration Council ("VGIC") [1] hereby submits these comments on the *Energy Division Staff Proposal to Establish Transportation Electrification Funding Cycles and Statewide Behind-the-Meter Program* ("Staff Proposal"), issued on February 25, 2022.

I. INTRODUCTION.

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

[1] VGIC member companies and supporters include American Honda Motor Co., Inc., dcbel, Enel X North America, Inc., ENGIE NA, Fermata Energy, FlexCharging, Flo/AddEnergie, Ford Motor Company, General Motors Company, Nissan Group of North America, Nuvve Holding Corporation, Sacramento Municipal Utility District, Stellantis N.V., Sunrun, The Mobility House, Toyota Motor North America, Inc., Veloce Energy, Inc., Wallbox USA Inc., and WeaveGrid. The views expressed in these Comments are those of VGIC, and do not necessarily reflect the views of all individual VGIC member companies or supporters. (https://www.vgicouncil.org/).

and electric sector by ensuring the value from EV deployments and flexible EV charging and discharging is recognized and compensated in support of achieving a more reliable, affordable, and efficient electric grid.

VGIC commends Energy Division Staff for its efforts to develop the Staff Proposal, including the elements that would reduce administrative complexity, increase program flexibility, and – most importantly – eliminate the gap in program activity that would have likely emerged from the protracted timeline originally proposed in the draft transportation electrification framework ("2020 Draft TEF").[2] However, VGIC is disappointed that VGI strategies, heralded as a key to advancing TE by the Commission upon its unanimous adoption of D.20-12-029, are almost entirely absent from the Staff Proposal. It is well-established that VGI strategies can reduce the total cost of ownership of EVs and provide non-monetary benefits (i.e., backup power). VGI activities can also support the reliability of California's grid and aid in the rapid transformation it is undergoing to achieve power sector decarbonization. Given the opportunity for VGI to accelerate TE and grid decarbonization, VGIC believes it would be a significant misstep to establish TE funding cycles and statewide behind-the-meter ("BTM") program that does not incorporate VGI as a guiding tenet and integral design component. VGIC offers several key enhancements detailing how the program administrators and investor-owned utilities ("IOU") should be required to promote VGI options through marketing, education, and outreach ("ME&O"), technical assistance, and rebate program implementation. Below is a summary of five key recommendations that are discussed in more detail in Section II of these comments:

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[2] The Draft TEF released February 3, 2020 would have placed significant and inflexible limitations on near-term TE actions that would have unnecessarily delayed progress toward California's decarbonization goals. *See* R.18-12-006. *Administrative Law Judge's Ruling Adding Staff Proposal for a Draft Transportation Electrification Framework to the Record and Inviting Party Comments.* February 3, 2020.
https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=326172086

A. Applicable EV-specific and VGI rates should be shared with all customers seeking to receive a BTM rebate and/or technical assistance.
B. Promoting demand response ("DR") participation options, including the Emergency Load Reduction Program ("ELRP"), should be an integral component of the proposed TE funding cycles.
C. Bidirectional charging ("V2X") equipment should be incentivized through the BTM rebate program.
D. Customers should be incentivized, including fair compensation, when electing ALM solutions that reduce TE infrastructure costs that would otherwise be borne by ratepayers.
E. BTM rebates should not be limited to separately-metered EV chargers. Instead, customers using both EVSE submetering and EV-based telematics should be eligible to receive BTM make-ready and charger rebates.

In addition, VGIC questions whether the Commission should end support for workplace charging due to its potentially significant role in supporting renewable energy integration and grid reliability (see Section III).

II. THE PROGRAM ADMINISTRATORS AND INVESTOR-OWNED UTILITIES SHOULD BE REQUIRED TO PROMOTE VGI OPTIONS THROUGH ME&O, IOU TECHNICAL ASSISTANCE, AND THE REBATE PROGRAM ITSELF.

VGIC believes it is critical to implement VGI strategies, including those identified in Decision ("D.") 20-12-029 ("VGI Strategies Decision"), alongside broader TE infrastructure investments, rather than considering VGI only *after* these investments have been made. This proactive approach can increase customer awareness of VGI opportunities, facilitate deployment of VGI-enabling technologies, and right-size TE infrastructure, which each have the potential to provide significant customer benefits and, in turn, accelerate TE. Moreover, incorporating VGI strategies into TE investment frameworks from the outset can reduce ratepayer costs compared to introducing VGI concepts after TE investments have already been made. However, the Staff Proposal contains nearly no discussion about the benefits of VGI and its ability to significantly

accelerate TE, and does not propose to incorporate VGI in a meaningful way into the proposed BTM rebate program.

With the unanimous adoption of the VGI Strategies Decision in December 2020, VGIC commended the Commission's leadership in promoting and facilitating a more proactive approach to VGI policy. Ordering Paragraph ("OP") 8 of D.20-12-029 directed each IOU to take specific actions related to VGI, "in all of its future applications for TE programs." [3] Additionally, OP 5 of D.20-12-029 directed each IOU to take specific actions related to automated load management ("ALM"), a specific VGI strategy, "in all of its future applications for TE programs, or rule or tariff to support TE infrastructure installation." [4] The directives in these OPs are critical to enabling VGI *alongside* – rather than *after* – TE infrastructure investments. With these clear Commission directives in mind, VGIC strongly recommends that VGI play a more integral role in the proposed TE funding cycles and statewide BTM program. Specifically, the proposed ME&O and rebate administration functions, as well as the technical assistance to be offered by the IOUs should promote VGI options, as detailed below.

A. Applicable EV-specific and VGI rate options should be promoted to all customers seeking to receive a BTM rebate and/or technical assistance.

Currently, customers in the medium- and heavy-duty ("MDHD") segment, multi-unit dwellings ("MUDs"), and public MUD-serving charging sites are eligible for certain EV-specific

[3] R.18-12-006. *Decision Concerning Implementation of Senate Bill 676 and Vehicle-Grid Integration Strategies.* D.20-12-029. (December 17, 2021). OP 8.
https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M355/K794/355794454.PDF
[4] *Id* at OP 5.

dynamic time-of-use rates.[5] These rates are important tools to save on EV charging costs and reduce peak demand by shifting EV charging load toward off-peak hours. In addition, San Diego Gas & Electric ("SDG&E") offers a VGI Pilot rate to Power Your Drive VGI Pilot customers that uses a more time-granular commodity component based on CAISO day-ahead hourly prices and a distribution adder reflecting the top 200 annual hours of peak demand.[6] The Commission also recently approved Pacific Gas & Electric's ("PG&E") Day-Ahead Hourly Real-Time Pricing ("DAHRTP") rate as an optional tariff for all customers eligible for PG&E's BEV rates.[7] PG&E's DAHRTP rate may be offered to customers as early as 2023.[8] Meanwhile, SDG&E is poised to offer a similar dynamic rate to a broad range of customers as a result of the recent Assigned Commissioner Ruling, which consolidates SDG&E's proposed V2G Export Rate (A.21-12-008) with its General Rate Case Phase 2 real-time pricing rate application (A.21-12-006) to design a dynamic rate that applies to both commercial and residential EV customers (as well as non-EV customers).[9]

Considering this array of available, approved, and pending EV-specific and VGI rates, VGIC recommends, at a minimum, the TE funding cycles and BTM rebate program do not in any way restrict the rate options that customers may enroll in. Moreover, the ME&O administrator should be required to provide customers with a clear explanation of the rate options available to

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[5] Customers must meet minimum demand threshold, be metered separately from site load, and meet any other requirements detailed in the tariff. *See:*
PG&E Electric Schedule BEV https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_SCHEDS_BEV.pdf
SCE TOU EV-7, TOU EV-8, TOU EV-9 https://www.sce.com/sites/default/files/inline-files/TOU-EV-7_8_9%20Rate%20Fact%20Sheet_WCAG%20(2).pdf
SDG&E Schedule EV-HP https://tariff.sdge.com/tm2/pdf/ELEC_ELEC-SCHEDS_EV-HP.pdf

[6] *SDG&E*. Schedule VGI. https://tariff.sdge.com/tm2/pdf/ELEC_ELEC-SCHEDS_VGI.pdf

[7] A.20-10-011. *Decision Authorizing Pacific Gas and Electric Company to Implement an Optional Day-Ahead Real Time Rate for Commercial Electric Vehicle Customers.* (November 18, 2021). https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M424/K557/424557371.PDF

[8] *Id* at 32.

[9] A.21-12-006 & A.21-12-008. *Assigned Commissioner's Scoping Memo and Ruling*. (April 18, 2022). https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M469/K615/469615155.PDF

them, any approved rates that have not yet opened for enrollment but that customers may soon be eligible to take service under, opportunities to stack rate options and programs,[10] and a list of EV service and technology providers that can help maximize the benefits from enrolling in dynamic rates. Moreover, the IOU technical assistance function should provide this education as part of its efforts to promote load management and VGI, and do so in coordination with the ME&O administrator.

B. ***Promoting demand response ("DR") participation options, including the Emergency Load Reduction Program ("ELRP"), should be an integral component of the proposed TE funding cycles.***

Demand response ("DR") programs have immense potential to support the grid during times of stress by reducing peak demand. The out-of-market Emergency Load Reduction Program ("ELRP") pilot (if extended)[11], existing utility DR programs, utility DR programs that may be approved in the future (e.g., resulting from the DR application cycle beginning May 2022), and non-utility DR programs (e.g., CAISO DR resource aggregation models) should all be presented to customers by the ME&O administrator and IOU technical assistance function. In addition, VGIC recommends that customers be considered eligible to receive an upfront incentive, in addition to the proposed BTM make-ready and charger rebate, for enrolling in a DR program. The exact amount of this additional upfront incentive should be informed and updated by studies, program design pilots, and programs. For example, Peninsula Clean Energy's managed charging

[10] For example, Real-Time Pricing equivalent tariffs and the Emergency Load Reduction Program, per D.21-12-015, page 133 and Attachment 2, page 6.
[11] Currently, the ELRP is set to end in 2025. If ELRP is extended/renewed or if elements of ELRP customer group A.5 are rolled into a new DR program, these should also be clearly presented to customers.

pilot and PG&E's VGI Pilots (pending approval)[12], which aim to experiment with upfront incentive design. Lastly, VGIC notes that DR program enrollment is a condition of receiving make-ready rebates in Southern California Edison's ("SCE") Charge Ready 2 ("CR 2").[13] VGIC posits that most SCE CR 2 and other Funding Cycle 0 ("FC0") TE program participants are "early adopters" and may be more amenable to enrolling in DR programs than "mass-market" customers that would be reached through the relatively expanded proposed Funding Cycle 1 ("FC1"). As such, VGIC believes it is reasonable to more actively promote – rather than simply require – DR program participation in FC1 by providing an upfront enrollment incentive to encourage customer enrollment, in addition to the performance-based incentives that encourages ongoing customer participation. Upfront incentives may be particularly supportive of customers in AB 841 Prioritized Communities and other low and middle-income customers.

C. ***Bidirectional charging or "V2X" equipment should be incentivized through the BTM rebate program.***

Bidirectional charging ("V2X") use cases can leverage the latent battery capacity in EVs to provide backup power to customers, manage customer bills, and support the grid through vehicle-to-grid ("V2G") exports. Currently, V2X systems have a standard interconnection

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[12] CPUC Energy Division. *Draft Resolution E-5192 Pacific Gas and Electric Company Advice Letter 6259-E request approval of four vehicle-grid integration pilots pursuant to Decision 20-12-029.* Currently held to May 5, 2022 CPUC Voting Meeting. https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M355/K794/355794454.PDF

[13] A.18-06-015. *Decision Authorizing Southern California Edison Company's Charge Ready 2 Infrastructure and Market Education Programs.* D.20-08-045. August 27, 2020. https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M346/K230/346230115.PDF

pathway through Rule 21,[14] can receive export compensation through the ELRP,[15] may soon be eligible for retail bill based compensation (pending approval of SDG&E and PG&E rate applications, as described above in Section II.A), and are commercially-available across a number of customer segments.[16] One critical barrier to widespread adoption of V2X technology is that existing TE programs require EVSE be placed on a separate meter, a challenge discussed in further detail in Section II.E *infra*. In addition, while V2X solutions have demonstrated clear benefits to both customers and the grid, the technology is new and unfamiliar to most customers. To overcome this gap, VGIC recommends that the ME&O administrator and IOU technical assistance teams work to educate customers on the benefits of V2X use cases, capable chargers, vehicles and associated equipment (collectively, "V2X equipment"), appropriate interconnection pathways, applicable rates and programs, and any technical considerations, including opportunities to co-locate and integrate other types of distributed energy resources ("DER").[17] Additionally, the

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[14] Specifically, V2G DC EVSE, where the inverter is located inside the charger, are eligible to interconnect under Rule 21.

[15] R.20-11-003. *Phase 2 Decision Directing PG&E, SCE, and SDG&E to Take Actions to Prepare for Potential Extreme Weather in the Summers of 2022 and 2023.* D.21-12-015. https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M428/K821/428821475.PDF

[16] *See*, for example: Steve Hanley. Clean Technica. Nissan Using Vehicle to Grid Technology to Power US Operations. November 29, 2018. https://cleantechnica.com/2018/11/29/nissan-using-vehicle-to-grid-technology-to-power-us-operations/; Roberto Baldwin. 2021 Mitsubishi Outlander PHEV Gets Bigger Motor and Battery at Same Price. Car and Driver. February 25, 2021. https://www.caranddriver.com/news/a35605985/2021-mitsubishi-outlander-plug-in-hybrid-upgrade/; Nuvve Corporation. Blue Bird Delivers North America's First-Ever Commercial Application of Vehicle-to-Grid Technology in Electric School Bus Partnership with Nuvve and Illinois School Districts. March 23, 2021. https://nuvve.com/blue-bird-v2g-electric-bus-with-nuvve-and-illinois-school-districts/; Thomas Built Buses / Daimler Trucks North America LLC (2021). The Safe-T-Liner C2 Jouley Electric School Bus. https://thomasbuiltbuses.com/school-buses/saf-t-liner-c2-jouley; Lion Electric. Lion Electric Announces Successful Electric School Bus Vehicle-to-Grid Deployment with Con Edison in New York. December 14, 2020. https://thelionelectric.com/img/medias/LION_Press_Release_White%20Plains%20EN%20FINAL.pdf; Nuvve Corporation (2020). Nuvve DC Heavy Duty Charging Station Specifications Sheet. https://nuvve.com/wp-content/uploads/2020/04/nuvve-dc-heavy-duty-spec-sheet-1.0.pdf; Fermata Energy. Proven Results and Cost Savings with V2G Technology. October 14, 2020. https://www.fermataenergy.com/news-press/proven-results-and-cost-savings-with-v2g-technology; Rhombus Energy Solutions. V2G Charging, Control, and Management 50-500kW: Bidirectional. https://rhombusenergysolutions.com/products; Ford Motor Company. Ford Intelligent Backup Power. https://www.ford.com/trucks/f150/f150-lightning/features/intelligent-backup-power/

[17] Especially for fleet customers that would benefit from BTM DERs that can also manage site load and overall operating expenses.

ME&O administrator and IOU technical assistance teams should share with customers a list of approved V2X equipment – and create a centralized list if one does not already exist at that time – similar to how eligible unidirectional charging ("V1G") approved product lists are marketed in existing IOU TE programs. These could be two separate lists, or one list that indicates to customers which EVSE are V2X equipment. Given the potential complexity of interconnecting large V2X sites, the IOU technical assistance teams should – in a technology-neutral manner – actively support customers through the design and interconnection process and ensure a streamlined customer experience.

At a minimum, V2X equipment should be eligible to receive the same BTM make-ready and charger rebates as V1G equipment. However, given the immense potential of V2X to support customer needs, bolster grid reliability, and lower system costs, VGIC believes it is reasonable to offer an incremental rebate to V2X customers to partially offset the costs of purchasing and installing V2X equipment. VGIC believes an incremental V2X rebate is in fact critical to spurring the nascent V2X market in California. Despite commercially-available V2X equipment, available interconnection pathways, and eligible compensation mechanisms (currently limited to ELRP), uptake of V2X equipment is still in its early stages. In contrast, stationary energy storage systems, incentivized under the Self Generation Incentive Program ("SGIP"), have been deployed at an incredibly rapid pace in California. However, V2X equipment is not eligible for SGIP incentives – or Net Energy Metering ("NEM") compensation – and does not have an analogous technology incentive program that aims to deploy V2X equipment. VGIC believes the proposed TE funding cycles and BTM program is an appropriate venue to offer an incremental incentive to V2X equipment since it is administratively simple, offers consistency to providers and customers (compared to the previous patchwork of *ad hoc* IOU TE programs), and incorporates consistent

treatment across all IOUs in California. VGIC offers itself as a resource and hopes to collaborate closely with stakeholders to determine what incentive level would be appropriate for V2X equipment. At this time, VGIC suggests that a $10 million annual incentive budget carveout in both FC0 and FC1 could meaningfully promote BTM V2X equipment in the near-term. For FC0, VGIC recommends these funds be supported from any unused TE program funds. For example, there are several previously authorized programs, such as the IOU MDHD programs, SDG&E's Power Your Drive Extension, SCE's CR 2, PG&E's EV Charge 2, authorized VGI pilots budget, and any other ongoing or proposed TE programs that may not exhaust the remainder of authorized funds.

D. ***Customers should be incentivized, including fair compensation, when electing ALM solutions that reduce TE infrastructure costs that would otherwise be borne by ratepayers.***

Encouraging customers to voluntarily choose ALM solutions can be a powerful tool for both streamlining and minimizing the costs of EVSE deployment. Notably, D.20-12-029 deemed ALM a near-term policy action in recognition that ALM is an important tool for helping to meet California's TE goals.[18] OP 5 of D.20-12-029 directs the three major IOUs to take specific actions related to ALM, "in all of its future applications for TE programs, or rule or tariff to support TE infrastructure installation." [19] PG&E's recent EV Charge 2 application intends to meet the

[18] R.18-12-006. *Decision Concerning Implementation of Senate Bill 676 and Vehicle-Grid Integration Strategies.* D.20-12-029. (December 17, 2021). Page 25.
https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M355/K794/355794454.PDF
[19] R.18-12-006. *Decision Concerning Implementation of Senate Bill 676 and Vehicle-Grid Integration Strategies.* D.20-12-029. (December 17, 2021). OP 5.
https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M355/K794/355794454.PDF

requirements of D.20-12-029, stating they will "build off the successful use of ALM in EV Charge Network ["EVCN"], whereby costs were reduced and physical constraints were overcome at customer sites that were deemed a good fit to use this technology."[20] However, the Staff Proposal offers no consideration for how ALM solutions can accelerate energization timelines, overcome physical constraints, and reduce TE infrastructure costs borne by ratepayers (in other words, stretch the proposed FC1 budget to deploy more chargers). Given that ALM is slated to become an integral part of TE programs pursuant to D.20-12-029 OP 5, has been proven in EVCN, and is proposed to take a larger, structured role in EV Charge 2, VGIC strongly recommends the Commission incorporate ALM into the proposed TE funding cycles and statewide BTM program. Specifically, the statewide BTM program should ensure customers are permitted to elect third-party ALM options including both:

1. ALM solutions that share available electrical capacity among charging stations to avoid the installation cost of additional electrical capacity, for example "software-based solutions" as described in D.20-12-029; and,
2. ALM solutions that share available electrical capacity among charging stations and/or utilize on-site DER, such as stationary energy storage systems, to avoid the installation cost of additional electrical capacity

Moreover, the recently updated EV Infrastructure Rules, which removed customer cost responsibility for utility-side distribution system upgrades, offer no incentive for customers to elect ALM solutions, even though doing so would result in material savings for ratepayers. VGIC is

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[20] A.21-11-010. *PG&E's Electric Vehicle Charge 2 Prepared Testimony.* (October 26, 2021). At 5-2. https://pgeregulation.blob.core.windows.net/electricvehiclecharge2//ElectricVehicleCharge2/Testimony/PGE/2021/ElectricVehicleCharge2_Test_PGE_20211026_675449.pdf?sv=2014-02-14&sr=b&sig=Plt5dQqlk4Z9PFIUmn3dbtPhPRI32FsWfYOuncQ7S7A%3D&se=2022-04-22T22%3A05%3A05Z&sp=rl

concerned that this lack of customer incentive is at odds with D.20-12-029's prioritization of ALM and requirements that utilities incorporate it into applications, rules, or tariffs, but also stands in the way of timely and cost-effective fulfilment of California's broader TE goals. To account for this gap and to capture the full value ALM can provide, the proposed statewide BTM program should encourage ALM that minimizes both customer- and utility-side costs. This can be accomplished either by:

1. Offering an incremental incentive to host sites voluntarily choosing to implement ALM that is linked to ***both*** the customer- and utility-side cost savings component, or
2. Offering an incremental incentive to host sites voluntarily choosing to implement ALM that is linked ***only*** to customer-side cost savings ***while*** simultaneously revising the EV Infrastructure Rules to promote optional ALM that reduces utility-side costs.

VGIC recognizes the scope of the Staff Proposal is limited to BTM infrastructure and investments. However, in the absence of any ongoing or upcoming policy forums to consider this issue, it seems appropriate to utilize the proposed BTM program to compensate customers that elect ALM for both the BTM cost savings as well as the utility-side cost savings. VGIC recommends that a shared cost savings model, like that proposed in PG&E's EVC 2, be applied to ensure customers have an incentive to promote ALM. Specifically, customers seeking rebates under the proposed BTM make-ready and charger program should be eligible to receive an incremental incentive commensurate with the estimated load reduction and/or infrastructure cost savings resulting from their ALM election.

E. ***BTM make-ready and charger rebates should not be limited to separately metered EVSE. Instead, customers using both EVSE submetering and EV-based telematics should be eligible to receive BTM make-ready and charger rebates.***

To enable VGI, as detailed in Sections II.C and II.D above, it is critical to ensure customers can take advantage of rebate programs even if the EV load is comingled with site load. For example, if EV load continues to be isolated onto a separate meter, as has been standard practice under existing TE programs and the most attractive EV-specific rates, customers will be unable to use their vehicles to provide backup power support when needed. It would also be infeasible to use V2X capabilities to mitigate demand charges, self-consume rooftop solar production ("renewable energy time shifting"), or otherwise support customer bill reduction through V2X. Additionally, separately metering EV load undermines a key value proposition of ALM solutions, which is to accelerate EVSE deployment and reduce costs by safely and reliably adding EV chargers to existing infrastructure (where appropriate and when desired).

VGIC believes that making TE funding support conditional on EVSE being separately-metered is an unfortunate policy that has brought unintended consequences, including missed opportunities to unlock VGI value for customers and the grid to date. The Staff Proposal's TE funding cycles and statewide BTM program offers an opportunity to reset California TE policy onto the right course by leveraging EVSE submetering and EV telematics approaches to unlock substantial value for customers and the grid. Notably, EVSE submetering and EV telematics approaches have been widely proven in the field and deployed at program-scale across the country.[21] VGIC reiterates its recommendation that customers using both EVSE submetering and

[21] See, for example: Xcel Minnesota EV Accelerate At Home Program, where EVSE submetering has saved customers an average of $2,196 (pg. 12) in upfront costs; Xcel Colorado Charging Perks Pilot (pg. 263-267), which

EV-based telematics should be eligible to receive BTM make-ready and charger rebates, such that not all EV load is separated from site load by default. Given the wide array of EV/EVSE use cases, customer types, site constraints, and duty cycles, VGIC strongly encourages enabling both EVSE submetering and EV-based telematics options for all customers.

While VGI aggregators participating in the ELRP are permitted to use EVSE submetering to measure incremental load reduction,[22] to VGIC's knowledge this is the only existing EVSE submetering pathway available in California. While the Commission continues to defer action on adopting an EVSE submetering protocol and has not yet initiated the establishment of an EV telematics measurement pathway, other states are poised to "leapfrog" California by enabling these options at scale. With this in mind, VGIC strongly encourages the Commission to take swift and decisive action to advance the use of EVSE submetering and EV telematics and not require EVSE be separately metered in order to receive rebates under the proposed statewide BTM program. In addition to EVSE submetering and EV telematics, virtual aggregation of separately-metered EVSE load and customer site load should be permitted, as it has been under the ELRP.[23] Under this approach, separately-metered EVSE accounts can be "linked" to customer accounts for electrically contiguous non-EV site load (and generation), and grid imports and exports would be "netted" across both accounts.

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uses vehicle telematics to manage EV charging and collect EV charging data; National Grid Massachusetts Off-Peak Charging Rebate Program (pg. 3) which uses telematics and networked EVSE (pg. 38) to monitor charging data, providing participants with 3-5 cents/kWh for off-peak charging; National Grid Massachusetts Connected Solutions Program, which offers an enrollment incentive and annual credits for using vehicle telematics; Eversource and UI Connecticut Managed Charging Programs, which use telematics and networked EVSE to enable demand response participation for customers; Baltimore Gas & Electric Maryland evPulse, a program offering annual incentives for smart charging via vehicle telematics; Xcel Colorado, Minnesota, and New Mexico Optimize Your Charge Program, which offers customers an annual bill credit for participation; Smart Charge Rewards Program in New York, Portland, Florida, Georgia, and Nashville, which uses a FleetCarma C2 measurement device plug-in to enable VGI; (Pending) Duke Energy North Carolina Managed Charging Pilots which would utilize telematics to manage EV charging.

[22] PG&E, SCE, SDG&E. *Second Substitute Sheet for Joint Advice Letter 6485-E et al.* (April 11, 2022).

[23] See D.21-12-015 Attachment 2 page 15.

III. THE COMMISSION SHOULD NOT PREMATURELY DEPRIORITIZE WORKPLACE CHARGING USE CASES THAT CAN SUPPORT THE INTEGRATION OF RENEWABLE ENERGY.

As written, the Staff Proposal would "end incentives for workplace charging BTM."[24] VGIC agrees that workplace charging patterns have changed due to the COVID-19 pandemic and there has been much more headway on installations at workplaces as compared to MUDs. However, workplace charging remains a potentially vital part of the VGI equation. Because workplace chargers are used during normal business hours, they potentially have a critical role to play in supporting the grid by absorbing excess mid-day solar generation while also allowing some drivers to more easily shift their charging load away from the 4-9 pm peak window. Notably, the 4-9 pm peak coincides with when many commuters may be returning from home and may desire to begin charging if they did not have regular access to a workplace charger. In addition, workplace charging sites are likely to provide more opportunities to leverage V2X equipment to mitigate demand charges, which tend to be higher for commercial and industrial customers relative to MUD customers. Workplace charging sites may also lend themselves to scale, which enhances opportunities to implement ALM, on-site renewables and DER integration, aggregation of V2X equipment for backup power/resilience, and participation in DR programs with minimum size requirements.

VGIC respectfully recommends the Commission reconsider whether to explicitly end support for workplace charging via adoption of the Staff Proposal. Instead, VGIC recommends the Commission consider allocating a small portion of FC1 funds toward workplace charging, for

[24] Staff Proposal at 20.

example a percentage of overall funds to be decided on through stakeholder workshops. Given the fast-changing nature of the COVID-19 pandemic, the potential for workplace charging to absorb excess solar generation, benefits to summer peak reliability, and the explosion of "super commuters" that may require workplace charging before a long journey home (in many cases to AB 841 prioritized communities),[25] the matter of support for workplace charging should be revisited on a shorter timeline than other issues highlighted in the Staff Proposal.

IV. CONCLUSION.

VGIC appreciates the opportunity to submit these comments on the Staff Proposal. We look forward to further collaboration with the Commission and stakeholders on this initiative.

Respectfully submitted,

Edward Burgess

Senior Policy Director

VEHICLE-GRID INTEGRATION COUNCIL

April 25, 2022

[25] Chris Salviati and Rob Warnock. Apartment List. *Explosion of Super Commuters Offers Lessons for Sustainable Growth.* (August 16, 2021). https://www.apartmentlist.com/research/explosion-of-super-commuters-offers-lessons-for-sustainable-growth