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

| Order Instituting Rulemaking to Consider Alternative-Fueled Vehicle Programs, Tariffs, and Policies. | Rulemaking 13-11-007 (Filed November 14, 2013) |
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# REPLY COMMENTS OF NRG ENERGY, INC. ON ORDER INSTITUTING RULEMAKING

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## I. INTRODUCTION.

NRG Energy, Inc. (NRG) is pleased to submit the following reply comments in response to the opening comments of the parties to the Order Instituting Rulemaking filed on December 13, 2013. We appreciate the thoughtful responses of the parties and look forward to engaging in a productive discussion of how to best accelerate EV adoption in California, and how to turn the rapid growth of PEVs into a benefit for the grid, rather than a cost.

The following reply comments address these topics: i) submetering, ii) utility ownership of electric vehicle service equipment, and iii) an open framework for behind-the-meter resources.

## II. SUBMETERING

Opening comments shared many important perspectives on submetering. In this section, NRG identifies several trends.

NRG concurs with the observations articulated by ChargePoint, MEA, Green Power Institute/Community Environmental Council, and GM that charging in multi-family residential buildings requires special attention under this proceeding. An important factor inhibiting multi-unit charging is the risk of incremental demand charges on the host. As stated in NRG's opening comments, the same rules for submetered electric vehicle (EV) fueling could be applied equally to both single-family residential accounts and accounts for multi-family housing, thereby allowing EV drivers in both multi-family and single-family housing to enjoy access to equal service options. Access to expanded service offerings would eliminate a potential barrier to widespread adoption of multi-family charging.

TURN, GPI/CEC, and ORA expressed concern about addressing the cost of a submeter. NRG reiterates that customer or third-party owned submetering has potential simplifying cost savings, for instance in combining the submeter and the EV service equipment ("EVSE") in the same device.

## III. UTILITY OWNERSHIP OF EVSE

The process for considering utility ownership of EVSE was well framed in prior proceedings, which upheld the traditional utility ownership boundary at the meter. In D.11-07-029, the CPUC states, "The benefits of utility ownership of electric vehicle service equipment do not outweigh the competitive limitation that may result from utility ownership, with the exception of electric vehicle service equipment used to charge their own electric vehicle fleets or provide workplace charging for utility employees." Nonetheless, SDG&E suggests that "Regulatory prohibition against utility owned PEV submetering will need to be revisited, especially if grid-integrated charging is at stake..."

NRG disagrees. To best foster innovation, cost reduction, and customer responsiveness, the most viable programs for vehicle-grid integration (VGI) (and demand response generally) will require an open, competitive market for customer-facing technology, including the submetering and telemetry that might be required for VGI; therefore the development of VGI opportunities does not provide a compelling reason to revisit the regulatory prohibition against utility-owned PEV submetering. That said, it is clear that utilities must play a role in VGI to facilitate provision of value to the distribution system (though not necessarily to the transmission system), and NRG welcomes opportunities to work with stakeholders to determine what type of utility role in VGI might best serve the customer.

## IV. AN OPEN FRAMEWORK FOR BEHIND-THE-METER RESOURCES

NRG believes that V2G is central to California's triple goals of deploying 1.5 million zero-emission vehicles, 33% renewables, and 1.3GW of energy storage. If a substantial number of those vehicles are PEVs, the batteries and associated electronics will represent much more than the amount of energy storage mandated as part of the Storage Proceeding. Because NRG sees potential in this storage resource that has already been paid for, and because NRG sees an

opportunity to grow the EV market by substantially changing costs for owners, NRG has taken an active role in unlocking this value. For example, NRG has adapted a fleet of BEVs for V2G and brought an aggregate of those BEVs online in demand response markets. The total incremental equipment cost for enabling V2G is substantially less than the value of revenue that is produced, about $150 per month per car. Given the vast potential of V2G to further California's goals, NRG disagrees with comments by GM, SCE, the CAISO, and other parties that consideration of V2G should be deferred. As developers of an operating V2G aggregation, NRG disagrees with SCE that, "V2G is an untested technological concept." NRG also disagrees with the unsubstantiated claim by NRDC that the costs of a V2G approach outweigh the benefits, which is contrary to NRG's direct experience. Finally, in response to comments by GPI/CEC, CAISO, and others, who correctly point out that V1G can realize all the same types of benefits as V2G, NRG notes that, in general, the quantity of benefit is more relevant than the category of benefit.

Notwithstanding the differences identified in the preceding paragraph, it is not necessary for the Commission to take a particular stance favoring one form of behind-the-meter resource over another. Instead, the Commission should foster an open market for behind-the-meter resources providing many forms of value, including frequency regulation, flex capacity, and distribution system support. In this respect, NRG shares the perspective of the Clean Coalition that VGI is, in principle, simply a form of demand response. As the Commission considers the facts, uncertainties, and opinions related to facilitating the various VGI use cases, the Commission should rely on existing broad frameworks for behind-the-meter services—such as supply-side demand response—that can accommodate many technologies, but do not favor any in particular. From this perspective, it is not necessary for the Commission or the parties to judge the complexity, cost, feasibility, or commercialization timeline of V2G.

NRG shares the urgency that NRDC, GM and others express to ensure that the EV industry is not burdened with complex new requirements or regulations. Facilitating a broad, open market for behind-the-meter services in no way increases regulations on PEVs, and in fact it provides the option to create value with those PEVs that can substantially mitigate the cost barrier to ownership. We believe that a demand response approach can also provide more flexibility to consumers than does a VGI-specific rate structure, because the consumer can

choose from moment to moment whether to provide the service and be reimbursed accordingly. From this perspective, NRG endorses ChargePoint's statement in support of "development of tariffs that enable smart charging, facilitate the provision of DR services, [etc]…" with the added clarification that Commission-approved tariffs merely need to remove barriers to demand response participation, e.g. by fully implementing Rule 24 to allow bundled customers to participate in CAISO markets through third parties.

With respect to GM's comment that VGI should be defined as addressing the long-term concerns of grid reliability, but not defined as addressing provision of grid value, NRG references the Commission's original broader definition of VGI to encompass both grid reliability and grid value: after all, there is value in addressing grid reliability concerns, and an open market for behind-the-meter services can unlock that value. Moreover, while grid reliability is not yet an issue, there is an immediate need to accelerate PEV adoption by lowering cost barriers; sharing the benefits of VGI with EV owners is a viable solution to that need.

The CAISO comments that "…the settlement of electric vehicle load participating across both retail and wholesale markets will be an issue. The CPUC may need to explore how to define and treat load that is used for restoring an electric vehicle's charge for transportation purposes as opposed to how to treat electric vehicle load utilized for retail or wholesale grid services." NRG underscores the commendable work that the CAISO has already done in addressing this issue with the Proxy Demand Response product, which allows retail sites to provide wholesale services. In our experience, the only additional regulatory complexity added by V2G versus V1G is the need for an interconnection and net metering, measures that apparently already apply to energy storage devices (such as V2G). While the interconnection process can be complex, it is independent of settlements of particular market transactions. The CAISO goes on to express pessimism about the ability of PEVs to participate as wholesale grid resources ("This fact is forcing electric vehicle owners to examine participation in the ISO market as a wholesale grid resource, which arguably creates more complex regulatory and technical challenges"). NRG notes that expanding behind-the-meter participation as wholesale grid resources is precisely the proposal Commission staff made in the demand response proceeding for supply-side demand response. There are clearly different approaches to implementing V2G, some using demand

response frameworks and others not, so NRG cautions the Commission against painting all V2G implementation approaches with the same brush.

NRG agrees with SCE's comments that, "Only the utility has the (proprietary) information necessary to implement grid-integrated charging optimization with its distribution system conditions." It is important in the context of VGI generally to acknowledge the distinction between transmission services (like frequency regulation and spinning reserves) and distribution services (like feeder voltage support). Transmission services have been automated and dispatched by way of an open market for many years, while (to our knowledge) there is no precedent for an open market for distribution service like voltage support and load management on feeders and substations (though both are being discussed in other proceedings). Therefore, NRG expects that the timeline of deployment for behind-the-meter provision of transmission services and distribution services will be different; indeed, there is already a mechanism for behind-the-meter provision of transmission services (namely, Proxy Demand Response).

SCE comments that, "Adoption of optional rates designed to encourage VGI activities including lower charging levels and super off-peak charging are within the definition of storage (under PEVs or permanent load shift) in AB 2514, D.12-08-016, and D.13-10-040." NRG does not concur that the cited texts reference the applicability of changes to rates to the energy storage mandate, which primarily deals with procurement of services from energy storage devices.

## V. CONCLUSION

The Commission should use the opportunity presented by this rulemaking to expand the potential represented by submetering and behind the meter resources. However, the Commission should not accept the invitation by some parties to re-open the recently settled determination of the utilities' role in the provision of EVSE.

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Respectfully submitted,

*/s/ Sean P. Beatty*

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