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)

OFFICE OF RATEPAYER ADVOCATES COMMENTS ON THE FEBRUARY 5, 2014 ADMINISTRATIVE LAW JUDGE RULING

I. INTRODUCTION

Pursuant to the Administrative Law Judge (ALJ) Moosen's February 5, 2014 Ruling, the Office of Ratepayer Advocates (ORA) submits this filing on the Order Instituting Rulemaking on Alternative-Fueled Vehicle Programs, Tariffs, and Policies ("OIR" or "Rulemaking"). ORA comments on the workshop summary report and responds to the questions posed in the Ruling.

II. SUMMARY OF ORA RECOMMENDATIONS

- Before adopting large-scale programs, the Commission should order the utilities to gather data on customer behavior from the pilot programs and surveys of plug-in electric vehicle (PEV) owners/drivers to help design a PEV program with the greatest market penetration.
- The Commission should adopt Time of Use (TOU) rates conducive to off-peak charging, and customers must be made aware of the potential savings based on the PEV TOU rates.
- The Commission should utilize Use Cases starting from the simplest ones to implement, with the more complicated Use Cases implemented at a later date.

III. DISCUSSION

The ALJ Ruling[1] requested parties further comment on Energy Division's whitepaper, "Vehicle-Grid Integration," and the Workshop Summary Report. The Ruling also included three questions for parties' additional input.

A. Energy Division's Whitepaper

ORA filed comments on the Whitepaper on December 13, 2013. ORA provides no additional comments at this time.

B. Workshop Summary Report

ORA agrees with many of the parties' recommendations at the December 4, 2013 workshop. For example, California Independent System Operator (CAISO) and Natural Resources Defense Council (NRDC), among others, propose prioritizing the Use Cases based on ease and practicality of implementation,[2] setting parameters, and then letting the market determine the direction and level of penetration. As stated in ORA's comments,[3] customer surveys and pilots should be conducted from the pilot programs, and the results studied and analyzed to determine the best approach before any of the Vehicle-Grid Integration (VGI) programs are implemented.

ORA also agrees with CAISO that the decision to participate in VGI should ultimately be made by the end-use customer/PEV driver.[4] Though VGI may provide additional incentives for potential PEV customers, the decision to participate is secondary—the PEV owner/driver purchases the vehicle first and foremost for transportation purposes.

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[1] ALJ Ruling, p. 2.

[2] ALJ Ruling, Attachment A, p. 11.

[3] Filed on December 13, 2013.

[4] ALJ Ruling, Attachment A, p. 14.

Finally, while ORA supports reducing barriers to PEV ownership, ORA opposes utility financing of PEV-related facilities. Such financing is not needed to grow the PEV market, and will increase costs and risks borne by nonparticipating ratepayers.

C. Questions in the ALJ Ruling

1. *What programmatic changes can be made to support VGI as a resource within existing or proposed state energy programs and policies, such as demand response, resource adequacy requirements, energy storage, interconnection, and net energy metering?*

ORA's response to this question focuses on resource adequacy and energy storage.

Resource Adequacy

The Resource Adequacy (RA) program provides capacity payments to resources, which can provide set amounts of capacity during required time frames. To qualify for RA capacity, a resource must meet net qualifying capacity (NQC) criteria. Decision (D.) 10-06-036 adopted a Qualifying Capacity Manual that describes the methodologies used to calculate NQC values for all resources. Another form of capacity, referred to as flexible capacity, is currently being developed and will qualify resources for flexible capacity payments if the resource can ramp up its power during specific time frames.

VGI can be more valuable, and thus more competitive, if it is set up in a manner that meets Resource Adequacy criteria and qualifies for capacity payments for system, local and flexible capacity. Consistent with the priorities in the VGI Use Cases included in the whitepaper, Qualifying Capacity for controlled charging (V1G)5—which is a form of Demand Response (DR)—should be developed first. This should be followed secondly with Qualifying Capacity for V2G,6 or for PEV batteries used as energy storage.

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[5] V1G represents one-way flow of electricity from the grid to the vehicle where charging level can be controlled by the utility, or a third party.

[6] V2G represents a two-way flow of electricity where the PEV battery can be also used to supply power to the grid.

Energy Storage

The customer-sited energy storage could include PEV batteries if aggregated sufficiently to provide storage services in the longer run. The energy storage program should explicitly allow PEVs to contribute to energy storage requirements and targets adopted by the Commission. The PEV batteries are primarily used in vehicles for transportation needs and have different characteristics than stationary storage devices. These characteristics must be considered when available capacity is developed such as the calculation of the Qualifying Capacity for meeting Resource Adequacy requirements, as stated in the response to the RA program above.

2. *What immediate, near-term actions should the Commission undertake to support the development and implementation of VGI Use Cases and applications?*

As stated in ORA's comments on the OIR,[7] the Commission should immediately provide incentives for potential PEV customers. This can be accomplished by providing TOU rates favorable to PEV owners.

Current VGI efforts are intended to provide value for the PEV customers and benefit the society in general. The value of the VGI program that would create sufficient incentives for PEV customers should be mainly monetary, either in the form of cost savings via TOU rates or PEV rebates or some type of a cash flow income/credit by providing VGI services. However, there are potential risks and at least inconveniences involved in providing VGI services. For example, providing VGI services could result in having a partially charged battery when the vehicle is needed for transportation, or could impact warranty coverage or degrade battery life. Hence, ORA recommends that this process be conducted on a step-by-step basis to assure a successful program and avoid unnecessary work and costs. The following steps, in the order listed below should help minimize potentially costly errors:

[7] ORA Comments on the AFV OIR, filed December 13, 2013.

1. Implement TOU rates conducive to PEV ownership, with very low rates during longer off-peak periods, as recommended by ORA.[8]
2. Provide customer education and awareness of the available PEV TOU rates and the potential savings for PEV drivers.
3. Conduct customer surveys, and pilots as recommended by ORA.
4. Review and analyze results of the surveys and pilots to determine whether VGI program can be practically and cost-effectively implemented.
5. Assign higher priority to the V1G Use Cases that are simpler to implement and have a higher probability of real life adoption.
6. Next consider vehicle-to-home (V2H) capabilities. This capability, when available, will provide an additional incentive for the vehicle owner to purchase the vehicle and use it in case of major outages to power their homes, and is explained in more detail below.
7. Assign the lowest priority to the Use Case related to V2G. V2G is of low priority because it is not widely available yet, and is more complicated to implement and administer.

As stated in ORA's December 2013 comments, the vast majority of vehicle manufacturers, as well as many Electric Vehicle Supply Equipment (EVSEs) manufacturers, do not provide V2G capability with their current products. This is not to say that the V2G capability will not be provided in the future, but V1G is more readily available and can be implemented sooner. In addition, as stated above, that before exploring V2G Use Cases, the Commission should explore an area which would likely have more customer appeal—that is, V2H application. V2H allows for the vehicle battery to be used to power the home in case of extended power outages. This application is not only easier to implement, it would tend to provide more incentive for security minded customers to purchase a PEV.

ORA recommends that since VGI is a new program, the Commission should implement the changes step-by step, and avoid creating unneeded and costly stranded assets.

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[8] ORA comments filed on December 13, 2013.

3. *In consideration of the Use Case prioritization proposed in the whitepaper, are there near-term actions that the Commission should avoid in order to not preclude progress on Use Cases considered to be more complex?*

A near-term action that could potentially have a negative impact on progress is attempting to accomplish too much in a short time period—especially on the more complex Use Cases. ORA agrees with the process envisioned by the Energy Division to give higher priority to the Use Cases with lower complexity and ease of implementation. Specifically, the Use Cases dealing with multiple dwelling units (MDUs) and V2G should be given lower priority and addressed after the simpler V1G issues are addressed.

Before actual implementation of any rules based on the Use Cases, the results of various pilots must be evaluated and analyzed to determine the best course of action to implement going forward.

IV. CONCLUSION

ORA respectfully requests the Commission adopt ORA's proposals above and in its December 2013 comments in response to the questions posed in the Ruling. ORA looks forward to participating in the upcoming prehearing conference on February 26, 2014.

Respectfully submitted,

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