



January 22, 2024

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

Submitted via Pennsylvania PUC eFiling (M-2023-3040755)

**Re: Electric Utility Rate Design for Electric Vehicle Charging; M-2023-3040755
Proposed Policy Statement**

Sierra Club submits, on behalf of its over 27,000 members in the state of Pennsylvania these comments supporting the Pennsylvania Public Utility Commission’s proposed Electric Vehicle Rate Design Policy Statement.

The Sierra Club Supports the Proposed Electric Vehicle Rate Design Policy Statement

Sales of electric vehicles are rapidly increasing, meaning a concomitant increase in the number of EVs on the road: in 2023, nearly 1-in-10 light duty vehicle sales was for a plug-in electric vehicle.¹ This ongoing—and accelerating—transition in how vehicles are powered, from fossil fuels to electricity, presents enormous opportunities to not only improve air quality and address climate change, but to also drive down electric rates for customers across Pennsylvania.

When done well, managed charging programs provide for and incentivize participating customers to charge vehicles during off-peak periods to maximize availability of infrastructure and put downward pressure on rates.² Conversely, if rate structures improperly incentivize EV owners to charge disproportionately during peak times, additional stress can be placed on the grid. As such, the Sierra Club supports the proposed Electric Vehicle Rate Design Policy Statement and its directive to “promote efficient use of electric vehicle charging infrastructure and to manage grid demand,” particularly through the use of “time-of-use rates that . . .

¹ See U.S. Dept. of Energy, Office of Energy Efficiency and Renewable Energy, “FOTW #1325” (“Plug-in electric vehicle sales were 9.1% of all light-duty vehicle sales in 2023, up from 6.8% in 2022”) at <https://www.energy.gov/eere/vehicles/articles/fotw-1325-january-15-2024-plug-ev-sales-december-2023-rose-98-all-light-duty>.

² See, e.g., Jason Frost, Melissa Whited, and Avi Allison, Synapse Energy Economics, “Electric Vehicles Are Driving Rates Down” (June, 2020 update), available at https://www.synapse-energy.com/sites/default/files/EV_Impacts_June_2020_18-122.pdf.

appropriately incentivize the movement of charging consumption to off-peak periods or periods of less system stress.” § 69.3553(a).

Electric Vehicle Charging Rates Should Be Periodically Revised

As discussed above, encouraging EV charging to occur at times that are beneficial to the electric grid as a whole is critical to ensuring that electrification of the vehicle fleet proceeds in an efficient and equitable way that delivers cost savings to all customers. However, neither the times of peak demand nor the times when the cheapest generation is available are set in stone: as more and more renewable resources are added to the grid, it may make increasing sense to shift EV charging from evenings, for example, to midday and afternoon times of peak solar or wind output. As such, Sierra Club also supports the Commission’s recommendation that “electric-vehicle charging distribution and default service generation rates should be flexible and adaptable to changing circumstances and technologies,” and its directive that EV rate structures “should be periodically reviewed and adjusted . . . to ensure that they remain fair, cost-effective and efficient.” § 69.3553(b).

Consideration of Bi-Directional Rates Should Be Included

Vehicle-to-grid (sometimes referred to as “V2G”) use of electric vehicle batteries can be an important way of not only encouraging shifts in demand to optimize the grid’s ability to charge EVs, but also to make use of EVs as a stock of storage. Using EV batteries as storage can help increase grid flexibility and help apply downward pressure on costs by balancing out supply and demand. Particularly for customers who operate fleets of EVs, where fleet operators may be more able to plan in advance when charging will occur and coordinate with EDCs on optimal charging and discharging times, V2G integration can be an important additional tool for electrification. Owner-operators of multiple EVs be well-suited for V2G, as they may have more predictable activity cycles, and thus could be able to schedule charging for nights when electricity prices are low or midday when solar output is high and could be available for discharging to the grid at peak demand periods.

Accordingly, the Commission should encourage electric distribution companies to develop rates and rate structures to best enable V2G to help make effective use of EVs as storage resources.

Conclusion

The Sierra Club supports the Commission’s proposed Electric Vehicle Rate Design Policy Statement, and appreciates the opportunity to submit these comments.

/s/
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