March 17, 2023

Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Docket No. P-2022-3030743, Electric Vehicle Charging Rate Design Working Group

Dear Mr. Sherrick, Mr. Cardinale and Ms. Tran,

Advanced Energy United ("United") appreciates the opportunity to participate in the Pennsylvania Public Utility Commission's ("PUC" or "the Commission") electric vehicle ("EV") rate design working group and contribute to the Commission's development of a policy statement on utility rate design for EVs. United is a national association of businesses that are making the energy we use secure, clean, and affordable. We work to accelerate the move to 100% clean energy and electrified transportation in the U.S. We represent more than 100 companies in the $238 billion U.S. advanced energy industry, which employs 3.3 million Americans. This is a critical point in time for this conversation. The transition to an electrified transportation ("ET") sector is accelerating and the Commission must proactively plan for the widescale deployment of passenger and commercial EVs to ensure Pennsylvania's utilities and electric grid are ready for this new demand and can integrate EVs in the most cost-effective manner possible. Deploying EV-specific rate designs and load management options are important tools for facilitating charging infrastructure deployment, overcoming barriers to EV adoption and increasing the benefits of EVs for EV owners and all utility customers.

United looks forward to continuing to collaborate with the Commission and other members of the working group. The following comments outline our recommendations for topics to consider in the Commission's upcoming policy statement on EV rate design as well as related issues that the Commission will need to consider as part of a comprehensive transportation electrification strategy.

Respectfully Submitted,

Ryan Katofsky, Managing Director
Advanced Energy United

Introduction

EVs are already revolutionizing the automotive industry with most major automakers moving ahead with plans to electrify large (if not entire) portions of their vehicle offerings over the next decade. This has significant implications for the electric power sector, both in terms of what it needs to do to facilitate this transition but also the profound impacts that vehicle electrification will have on electricity use. If left unmanaged, the load growth that will result from this rapid market transformation has the potential to be disruptive to the grid and impose costs that could otherwise be avoided with smart, proactive planning and actions across a range of interrelated issues.

One of the key issues, which is the subject of this working group, is rate designs for EV charging. Fortunately, with smart rate design policies already being deployed around the country, EVs are creating downward pressure on rates for all ratepayers – as the costs of the grid are spread over a greater number of kWh, average costs will fall, provided that the additional investments required to integrate these new loads can be managed with proactive planning that, among other things, encouraged beneficial charging behavior that improves overall utilization of grid infrastructure.[1]

Although transportation electrification has some unique issues to address, it is not fundamentally different from other sources of new load. Therefore, **it is the firm belief of United and its members that swiftly enacting policies to address the EV opportunity is well within the Commission's purview and existing ratemaking authority, and in fact is vital to the agency's mission: to direct Pennsylvania's electric utilities to plan for the additional load from EVs, and to do so in a way that maximizes ratepayer benefit.**

Along with other strategies, electric utility rate design is an important tool for supporting beneficial EV charging and addressing near-term barriers to EV adoption. EV charging load presents distinctive opportunities because of its flexibility. With the number of EVs plugging into the grid on the rise, utilities have the opportunity to offer rate designs that will benefit all ratepayers and ensure that when possible EVs are charging at times that will minimize grid impacts, such as at night and other off-peak times. EV rate design will play a critical role in transportation electrification through a variety of means including voluntary and direct demand response, time of use rates, and compensation for the provision of other grid services.

[1] https://www.synapse-energy.com/sites/default/files/PA-EV-Rates-Report-18-021.pdf

Historically, electricity consumers (residential, commercial and industrial) respond well to price signals, and alter behavior in ways beneficial to them as well as the overall grid.

Policy Recommendations

Advanced Energy United is broadly supportive of the draft policy statement submitted by ChargEVC to this working group.[2] We believe that it properly addresses the range of issues that the Commission needs to consider and provides a suitable framework for developing various rate designs to address the different challenges and opportunities within different rate classes and EV charging use cases. In particular, we note the following:

- EVs have the potential to reduce electric rates for all ratepayers, as costs of the grid are recovered across increased electricity sales and across a broader group of end-users. Encouraging beneficial charging behavior should be a central goal of EV rate design for use cases where the EV owner has flexibility as to when they can charge their vehicle. This will achieve the goal of avoiding unnecessary grid upgrades and reducing average rates for all customers.
- For public DCFC and fleet charging, rate designs should address the current barrier that traditional demand charges present when charger utilization rates are low. A variety of strategies can be considered, and we recommend that the Commission review the recent order in New York that address this issues with a variety of strategies that are designed to provide a flexible, multi-pronged approach to rate design and managed charging.[3] In particular, strategies that work well when charger utilization is low may not remain appropriate as utilization increases over time.

Further, as noted in the draft policy statement from ChargEVC, in their rate design proposals, the EDCs should:

- Propose alternatives to traditional demand charges to address barriers that demand charges currently pose.
- Provide time-differentiated tariff options for EV charging-only load designed to reduce peak demand. Such EV-specific rate options should include transmission, distribution, and supply-related elements;
- Propose a plan for future reporting to the Commission on customer enrollment and utilization of the EV-specific rates. Such reporting should be based on streamlined and

[2] https://www.puc.pa.gov/media/2266/chargevc-pa-updated-policy-statement-feb2023.pdf

[3] ORDER ESTABLISHING FRAMEWORK FOR ALTERNATIVES TO TRADITIONAL DEMAND-BASED RATE STRUCTURES, New York Public Service Commission order in case 22-E-0236, dated January 19, 2023, available at: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={2043A628-EC7D-4064-9F32-662D82598760}

targeted data collection and analysis that provides consistent data for reporting while protecting customer's privacy and commercial issues;

- Demonstrate that their rate design proposals do not support unreasonable subsidies; and
- Include a plan for informing their customers about the availability of the new EV-specific rates and an explanation of the rates that they will be subject to with specific examples at multiple usage levels, and an accessible rate calculator that allows consumers to meaningfully assess and compare rates for EV charging under different conditions. Because even the best designed time of use rates are complicated, and the choices between rate options can be confusing even for sophisticated customers, robust customer engagement is vital. To drive adoption of an EV rate offering, EDCs should also coordinate their education and outreach with other EV programming offered through Pennsylvania's state agencies, such as programs offering incentives for charging installation and/or for the purchase of an EV. Such plans could also be encouraged or require to include behavioral load shaping (also sometimes called a "rate coach") that will help customers after they enroll with ongoing reminders about peak times, usage info and other helpful EV-related information.

The Commission should also ensure that time varying rates in any residential EV rate schedule are offered on a voluntary, opt-in basis, and must include explicit safeguards that ensure non-EV adopters are not inadvertently enrolled in an EV-specific rate.

As part of the EV rate design policy statement, the Commission should direct all EDCs to propose specific tariff language to provide rate design options for EV charging for its residential, commercial, and industrial customers, including the host sites who either operate or lease public charging stations. Given the expected rapid growth of EVs in the coming years, time is of the essence and the Commission should strive to have rate designs filed by the end of 2023. Given the dynamic nature of the market and the value of bringing in a wide range of experience and knowledge, we strongly recommend that the Commission use the current proceeding or open a new non-litigated proceeding in which Pennsylvania's EDCs would file proposed EV tariffs. Relegating this process to a contested rate case filing would limit the ability of stakeholders to participate and provide valuable insights from other jurisdictions. EDCs should be given latitude to tailor their EV rate design proposals to the needs of their customer base.

Utilities should also be required to gather and report data on EV loads. This will support learning across the utilities and ensure that the rate designs are having the desired impact.

We also recognize that rate design is but one aspect to a comprehensive transportation electrification strategy. Although the current efforts are focused on rate deign, the Commonwealth will not be as successful as it can be unless it also:

- Plans proactively for the grid investments that will be needed to accommodate, integrate and manage EV loads.
- Addresses timelines for connecting new loads (e.g., public DCFC charging stations). Experience from other jurisdictions shows that the normal timelines that may be suitable for other types of similarly-sized new loads (e.g., new commercial buildings) are out of sync with the pace at which new charging loads can be brought online
- Addresses issues related to cost recovery, to the extent these are not adequately covered by existing ratemaking processes.

Lastly, We recommend that the report from this working group should set guidelines and timetables for the information EDCs will be expected to include in their EV rate design proposals.

Conclusion

Advanced Energy United thanks the Commission for its examination of the important issue of EV rate design. We look forward to our continued engagement on this topic.