

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC INVESTIGATION OF)	
AMENDMENTS TO THE PUBLIC UTILITY)	CASE NO.
POLICIES ACT OF 1978 AND)	2022-00369
ELECTRIFICATION OF TRANSPORTATION)	

COMMENTS OF THE ALLIANCE FOR TRANSPORTATION ELECTRIFICATION

Introduction

While not a formal party to this proceeding, the Alliance of Transportation Electrification files these comments based on the Commission’s encouragement in its Order of November 17, 2022 opening this Proceeding for “interested stakeholders to participate either by intervening or filing suggested guidelines or comments.” We first commend the Commission for opening this Proceeding to examine the issues raised by Amendments to PURPA Section 111(d) of the Public Utility Regulatory Policies Act of 1978 (PURPA) that were included in the Infrastructure Investment and Jobs Act (IIJA) of 2021. The issues raised are critical to ensuring the electric vehicle markets in Kentucky and the necessary infrastructure are developed in an expeditious and cost-effective manner. As this Case develops, we will offer more specific ideas and suggestions in response to further questions by the Commission, based on our experiences with best practices and EV infrastructure development in other states.

The Alliance for Transportation Electrification (“ATE” or the “Alliance”) is a 501(c)(6) non-profit corporation established in early 2018 and is active in many state proceedings across the country. We engage with policymakers at the State and local government level to remove barriers to EV adoption and to encourage the acceleration of EV infrastructure deployment with a particular emphasis on open standards and interoperability. We currently have about 60 members that include many electric utilities, auto and bus manufacturers, EV charging and service providers (EVSPs), and related trade associations and non-profit organizations.

In its November 17 Order, the Commission asks a series of questions both on existing measures used to promote electrification of the transportation sector by electric utilities in the Commonwealth (Question 1), and existing rate mechanisms (and customer experience programs and incentives) that may already help to meet the new PURPA standards (Question 2). We believe the utilities in Kentucky are best positioned to answer these questions and we will not attempt to duplicate those answers. Rather, ATE will focus its comments on the third question: “Appropriate measures to promote greater electrification of the transportation sector.” We will respond with a focus on the measures specified in the PURPA Amendments to promote greater electrification of the transportation sector, including the establishment of rates that –

- (A) promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure;
- (B) improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles;
- (C) accelerate third-party investment in electric vehicle charging for light-, medium-, and heavy-duty vehicles; and
- (D) appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

Each of these PURPA Standards which the Commission is asked to evaluate are discussed in the Section below.

Appropriate Measures to Promote Greater Transportation Electrification

(A) promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure;

The best way for the Commission to ensure that rates for electric vehicle charging are affordable and equitable is to continue to rely on cost of service ratemaking based on just and reasonable standards. Regulated utilities, per direction from the Commission, perform extensive CoS (cost of service) studies every few years, and these studies should provide the foundational data and analysis to set rates for EV charging. Moreover, rates can reflect the public policy priorities of the state by reflecting the need for

encouraging charging during off-peak hours to the extent practicable, and for commercial station charging customers, consider the need for relief from demand charges during the early years of EV market development when utilization of these stations may be very low (generally, an average monthly utilization rate of about 5 percent or less).

Rather than providing a detailed answer here, we refer the Commission to two white papers developed and published by ATE which discuss in detail the ratemaking issues with respect to EV charging and makes recommendations on ensuring the efficient development of charging infrastructure. In these papers, we argue that regulated utilities, with Commission approval, can provide affordable and equitable programs and rates for the transition to EVs, while at the same time being consistent with the traditional Bonbright CoS principles. The first of these papers consists of an overview of both residential and commercial rates – “Electric Transportation Rate Design Principles for Regulated Utilities “ (July 2021) and is available at <https://evtransportationalliance.org/wp-content/uploads/2022/02/ATE-Rate-Design-Principles-Final-July-202194.pdf>. The second paper focuses in on commercial charging stations and the impact of demand charges – “Rate Design for EV Fast Charging: Demand Charges” (May 2022) available at <https://evtransportationalliance.org/wp-content/uploads/2022/06/Rate.Design.TF..Demand-Charge-Paper-Final-5.25.22.pdf>.

These papers offer several alternatives to traditional rate design and demand charges, for commercial customers like EVSPs but argue that such rates should be sustainable and fair over time as well. The rate-setting process will depend heavily on the specific circumstances of the utility, its cost of service, its distribution grid, and the use case proposed either by the private developer or the utility. In summary, these papers conclude that EV charging can best contribute to the development of EV markets if first, residential rates are either based on time of use or utilize managed charging to ensure that most charging occurs in off-peak hours. Second, with respect to rates charged by utilities to commercial public charging stations, demand charges might be temporarily mitigated with reductions to demand charges or more permanent rates without demand charges focused on low load factor customers. ATE stands ready to respond to any questions the Commission may have on these papers and their conclusions.

(B) improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles

The Commission can best meet this objective by creating an environment in which both non-utility and utility-owned DC fast charging (“DCFC”) sites (which are faster than public AC (Level 2) stations) can be developed and charge rates that reflect savings over the equivalent cost of gasoline. In these comments, we will refer to the actual charging station or port as “EVSE”, or electrical vehicle supply equipment, and the private company providing charging services both the hardware and the network/software as an “EVSP”, or EV service provider.

As discussed above, ensuring that EVSPs can provide economical charging stations may require adjusting demand charges for low-load factor DCFC charging stations or providing them commercial rates that don’t include demand charges -on a temporary basis until utilization of these stations improves. Kentucky will get DCFC charging stations under funding from the IJA through the National Electric Vehicle Infrastructure (NEVI) program, for which its plan has been approved, but the Commission will be responsible for overseeing the electrical infrastructure (called make-ready investments) to the EVSE at certain sites as well as determining the proper rate design for utility sales to the host sites or EVSPs.

Kentucky is in the very early stages of EV market development – unlike some other states that have had much greater consumer adoption (according to the latest study from the dashboard of the Auto Innovators, the market share of EVs in Kentucky, both plug-in hybrids and full battery electric, is only about 2.2%, placing the Commonwealth at 43rd place among states). But the number of EV’s both registered in Kentucky and travelling along its highways is expected to increase rapidly in the near future. In addition, the pace of electrification for MHD (medium heavy duty) vehicles is quickening in a way that will directly impact fueling in the state with incremental electrical loads much greater than those for light-duty vehicles.

It is also important that rates for regulated utility sales to EV charging stations need to reflect the use case involved. One clear lesson we are learning is that consumers want to be able to charge their vehicles quickly while on the road. They do not want to wait for a lower cost time period, so managed charging, for example, may not make sense for highway charging. But fleets have more flexibility for charging during off-peak times than do highway-located chargers, as they usually return to a fixed base

between trips. Moreover, one should not forget the importance of the most cost-effective public AC Level 2 chargers that many host sites, utilities, and EVSPs are offering to the public in many states. These stations offer longer dwell time charging at either heavily discounted or cheaper rates (although often regulated utilities must fully reflect the CoS studies in such rates) which may apply to some important charging use cases, such as workplace charging, park-and-ride sites by public transit authorities, and other public authorities such as cities and of course regulated utilities as well.

(C) accelerate third-party investment in electric vehicle charging for light-, medium-, and heavy-duty vehicles

The utility can help enable the transformation of electric transportation, as it has done with other technologies such as energy efficiency measures, in multiple ways working with private technologists and EVSPs. The Commission can best encourage the development of charging infrastructure investment through its ratemaking authority as discussed above, but also by encouraging and allowing utility investment where it's needed, particularly to fill in gaps not being met by private investment. Also, it is important to recognize that third-party EVSPs have multiple business models that have implications for rate design, uptime and maintenance, and data reporting. Many EVSPs locate on property leased from site hosts. Some EVSPs own and operate the chargers with full responsibility for operations and maintenance (O&M) to ensure adequate uptime. Others provide equipment and networking but let the site host own and operate the EVSE. With respect to maintenance, some companies provide the service but some delegate this maintenance responsibility to other parties through service level agreements (SLAs), of which there is a mixed record. And finally, some of the EVSPs have developed capabilities to partner with regulated utilities (usually co-branded) on a turnkey basis, where the utility owns and operates the station but most of the development work and operations of the charging station is done by the EVSP.

Unfortunately, the issue of the utility role in either owning or operating charging stations or providing make-ready investments with rate-based investments has become contentious and the Commission is likely to hear from some parties who believe utility participation should be prohibited. We believe their position is misguided and counter-productive.

ATE strongly believes that regulated utilities should be permitted and even encouraged to own and operate both the electrical infrastructure to the charging station (make-ready) as well as the actual EVSE as requested by the customer. And, as long as the Commission oversees the rates that utility-owned stations charge for service to EVs, which it will, we do not see the need for any restrictions or limitations. This does not mean that utilities can or should be the only or predominant owner of charging stations or EVSE. Rather, utilities, particularly in these nascent stages of market development when public-facing stations are needed to reduce range anxiety of potential EV owners, should focus on filling gaps when the private non-utility charging market is not sufficient. It may be that sometime in the future when EVs are ubiquitous on Kentucky roads, public charging by third-party EVSPs will develop sufficiently to meet all fueling needs of electric transportation. But that is certainly not the case today. Due to its universal service obligation, the utility should play a key role in enabling this market transformation, ensuring all communities are served, and that the equipment and networks are maintained.

Building charging infrastructure to meet both current and future demands is one of the greatest needs facing emerging EV markets and is vital to driving the benefits that transportation electrification can provide. The IJA of 2021 provided a major boost to getting infrastructure built by authorizing the National Electric Vehicle Infrastructure (NEVI) program which provides \$7.5 billion dollars in funding to states for locating charging stations along certain Alternative Fuel Corridors. Additional funding was provided for electric school buses through the EPA. In addition to stations that have already been installed around the country, this is a good start.

But it is only a start. The needs for public charging are immense. The International Council for Clean Transportation has estimated that to meet modest EV sales growth, we will need to increase the number of chargers in the U.S. from 216,000 chargers in 2020 to 2.4 million by 2030, including 1.3 million workplace, 900,000 public Level 2, and 180,000 direct current fast chargers. The costs would be about \$28 billion. Atlas Public Policy research shows that to achieve 100 percent passenger electric vehicle sales by 2035 and put the nation on the path to full electrification, over \$87 billion in investments in charging infrastructure will be needed over the next decade, including \$39 billion for public charging. While we don't know of any studies of charging infrastructure needs in Kentucky specifically, the needs will be significant.

So how do we get this infrastructure built? Federal funding through the Joint Office, FHWA, and EPA will certainly help but will prove to be insufficient to meet future demands. Given the magnitude of the need, we must rely on an all-hands-on-deck approach. We need to rely on government, private EVSPs in the business of building, owning and operating charging stations, private employers, transit and bus companies, landlords, real estate developers, fleet owners and operators, and yes – utilities - have a vital role to play.

There are three different types of potential utility infrastructure investment -- utility distribution system upgrades, make ready investments (equipment and wiring between the utility pole and the charger stub), and ownership and operation (O&O) of charging stations. Improvements to utility distribution to accommodate new charging stations is the least controversial of these. Most stakeholders agree that it is appropriate for utilities, in the normal course of meeting forecasted load, to make investments in distribution upgrades to accommodate increased charging loads. The Kentucky PSC has regularly recognized the appropriateness of distribution investment to maintain reliability in the face of increased loads, based on integrated resource planning, assessing peak loads, and other forms of planning and coordination. These efforts will need to be enhanced and done on a more granular level in the future as loads increase through electrification. We believe the traditional types of cost recovery, such as placing these assets in a regulatory asset or directly in rate base, should be allowed by the Commission on a timely basis.

Investing in (or offering incentives for the construction of) make-ready infrastructure has become a best practice for utilities in many jurisdictions and allowed by Commissions across the country. These costs are typically deferred in a regulatory asset, allowed under FASB and cost accounting rules, and then reviewed in a future general rate case. Such make-ready programs are offered in a variety of ways both in front of the meter and behind the meter, depending on the use case. However, there are certain parties or organizations who may oppose such programs. Opponents of such investments can generally be placed in two classes: first, are groups who generally object to potential rate increases, and second are petroleum marketers, convenience stores and gas station owners who object to “subsidized competition” from other charging station owners – and many simply oppose any actions that will lead to more EVs on the road and lower gasoline sales. Non-utility EVSPs and potential host sites, on the other hand, generally support make-ready investments as it reduces their upfront capital costs in land acquisition, development, and procurement and can help accelerate the pace of deployments. The

arguments for make-ready investments by utilities are really the same as those for O&O investments and are discussed below.

As mentioned above, utility O&O is the most contentious of the potential utility investment options. The primary opponents of utility ownership are third-party EVSE developers, and again convenience store and gas station operators, and gasoline wholesalers and marketers. Their primary argument is that utility O&O amounts to unfair competition – that being able to place costs in rate base gives utilities an economic advantage in building charging stations and the ability to undercut the prices that may be charged by non-utility EVSE owners. They suggest that they will not invest in chargers as long as even the threat of utility competition exists and thus, they seek regulatory or legislative prohibitions on utility ownership of charging stations (and sometimes prohibitions on make-ready investments). Their arguments are usually couched in free market principles– that competition among private “unsubsidized” entities will alone be sufficient to provide needed levels of charging stations at the lowest cost to consumers.

Unfortunately, the arguments made by these stakeholders sound like they are opposing or preventing potential bad actions by the local utilities. And their arguments might have some heft if these groups were meeting the needs of consumers by deploying EV infrastructure in a timely way. Utilities would be more than happy to let private entities develop the market if they were actually doing so. The real benefit to utilities (and their customers) is from development of the EV market, not ownership of charging stations. But as noted earlier, the needs for charging station development over the next decade are so significant relative to current levels that greater action is needed now. And there are potentially many use cases – such as rural areas, underserved communities, multi-unit dwellings, and others where private investment is difficult, and utilities can step in to fill the void. And perhaps most importantly, early utility investment can help kickstart the market leading to more EVs on the road and better economics for private investment. In other words, we believe that a rising tide lifts all boats. The arguments by opponents of utility O&O are also wrong and misleading on many levels and represent a basic misunderstanding of how utility investment works and the protections in place to ensure that utilities can’t take anti-competitive actions.

- First, while utilities do place the costs of make-ready or charger investments in rate base once approved by commissions, customers do receive substantial benefits in return. The Alliance believes that, while there may be a cost shift in the short run to enable the market, over time

these investments will be “normalized” as part of the electrical infrastructure or plant assets and should provide system benefits to all customers of the regulated utility. Moreover, utilities cannot give away charging service for free. When utilities charge EV drivers for charging at utility-owned stations, those revenues also go to offset the costs that utilities have invested. Thus, over the long term, customer costs are reduced by the amount of utility revenues at a level equal to or greater than the original investment. With greater overall revenue, there should also be downward pressure on rates over time that can be addressed in a general rate case;

- Second, utilities can and should make every effort to ensure that the bulk of EV charging takes place in off-peak hours when there is excess capacity in the distribution system. Increased revenues from such sales will be greater than any incremental costs, meaning average rates for all customers will see downward pressure. While most of this effect occurs from home charging, where over 80 percent of light duty EV charging occurs, again the presence of significant public charging is necessary for consumers to be willing to buy EVs in the first place. So, if utility investment in public charging leads to more EVs on the road and a subsequent increase in off-peak charging, rates to all customers can be reduced.
- Finally, there are other substantial benefits to the development of the EV market which can be driven in part by utility investment. These benefits include environmental, economic and national security benefits (less reliance on energy imports).

Utilities can also bring benefits simply owing to quite different time horizons for capital investments in EVSE as a grid-edge asset: namely, while third-parties often take a shorter term (less than five years) to achieve the return on investment demanded by their equity investors, the regulated utility takes a much longer view toward investments in utility assets in the distribution grid (often in the 10 to 40 year timeframe). And many investments in chargers by private EVSPs— particularly DC Fast Chargers -- will take longer than five years to recoup costs. In most of the cases where utility investment has been approved around the country, there is a strong component of investment in areas that otherwise would not see much charging capacity because of the long-time frame needed for cost recovery.

There are two primary arguments made by opponents of utility O&O relating to claims of unfair competition. First is the argument made by many opponents of utility O&O is that such investment will be overwhelming and “crowd out” the potential for investment by private interests. But proposed

utility investments are so small relative to the total need that any arguments that utility investment will overwhelm the market or push out competition reflects a disregard for market-based realities, or a tendency by vendors and certain advocates to want to “lock in” certain business models, including proprietary systems. There are numerous examples around the country where even a proposal to build 10, 20 or 30 new charging stations receives opposition from private companies when the identified needs are in the thousands or hundreds of thousands of chargers. In these cases, the argument made that utilities will crowd out private investment are misguided, not based on real data, and ignore the basic tenets of market transformation for new technologies such as EVSE.

The second competitive argument made by opponents is that utilities, because they are able to recover costs of investments from ratepayers, will be able to price charging service in a manner that will undercut the price of charging services by non-utilities. This represents a total misunderstanding of the utility ownership model – whether intentional or not. Utility retail service – including charging services provided at utility-owned charging stations – will be fully regulated by the Commission (unlike prices charged by non-regulated entities). It is simply not possible for a utility to try to undercut the price of non-utility charging stations, without intervention by the Commission. Those worried about unfair competition may intervene in utility rate proceedings where prices are set for charging services. Thus, the Commission can and should use its ratemaking authority to prevent unfair competition. And, while the Commission does not regulate the prices charged by private EVSPs, the Commission and other state agencies have general responsibilities to protect consumers from unfair pricing and potential discrimination.

The Alliance believes that multiple models should be allowed by the state and Commission to accelerate the development of charging infrastructure, and that in these early days of market development, each model should develop until greater maturity. As stated above, each project will depend on unique factors and be very use-case specific. But particularly in these early years of market development, the Commission should not preclude any source of investment where it makes sense. Utilities have an important role to play, particularly in areas where non-utility EVSE development is unlikely to occur.

(D) appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure

While it is essential that rates for delivering power to EV charging infrastructure at a minimum recover marginal costs to preclude other customers from being harmed by such service, we do not think marginal cost-based rates are sufficient. Marginal cost pricing is a complex topic that involves many choices of whether to use short-run costs or long-run costs, and many other factors in a capital-intensive industry such as electric utilities. While their use may assist certain new technologies and help new market entrants, the Alliance does not necessarily believe that this is the right metric to use compared to embedded cost ratemaking. Most Commissions use cost-of-service (COS) studies based on actual embedded costs, and use averages among the commercial and residential classes, to develop J&R (just and reasonable) rates in the public interest. As is the case with all rates charged by regulated public utilities, traditional cost of service regulation which is utilized by most every state regulatory commission requires that all customers pay their fair share of the costs that utilities have incurred in providing safe, reliable service to customers at the lowest reasonable cost.

EVs should not be exempt from paying their fair share of historically incurred costs without which they could not be served. This does not mean that some accommodations to traditional rate design are not appropriate to meet public policy objectives. For example, temporary mitigation of demand charges for the EVSPs may be appropriate to allow DC fast charging stations to be economically feasible during periods of low utilization or for a certain period of time. But, under such rates, the EVSPs are still required to make a contribution to embedded costs of the utility system using the rate spread and cost allocation rules developed by the Commission.

Respectfully submitted this sixteenth day of December, 2022,

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