



March 27, 2018

David J. Collins
Executive Secretary
Public Service Commission of Maryland
6 St. Paul Street, 16th floor
Baltimore, MD 21202

Subject: Case No. 9478, In the Matter of the Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio

Mail Log No. _____

Dear Mr. Collins:

Enclosed for filing in the above-referenced matter please find an original and seventeen copies (with five copies three-hole punched) of the written comments of the Alliance for Transportation Electrification.

Respectfully submitted,

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Enclosure

In the Matter of the Petition of the *
Electric Vehicle Work Group for *
Implementation of a Statewide *
Electric Vehicle Portfolio *

Case No. 9478

**INITIAL COMMENTS OF
THE ALLIANCE FOR TRANSPORTATION ELECTRIFICATION**

The Alliance for Transportation Electrification (the Alliance) is pleased to submit the following comments to the Public Service Commission of Maryland in strong support of the petition filed by the members of PC44 for implementation of a statewide electric vehicle (EV) charging portfolio. The Alliance is a broad and diverse coalition of more than thirty national utilities, EV supply equipment (EVSE) firms and other organizations that support the acceleration of transportation electrification and is actively engaged in EV-related proceedings around the country.

Stakeholders are generally, if cautiously, supportive of the forward-thinking proposals outlined in the PC44 report. Certain differences of opinion exist, for example with regard to the role of regulated utilities in the EV charging space. These views are certainly valid, and the proper process for the Commission to weigh the options is not an evidentiary hearing, but a legislative style proceeding.

The Alliance has seen a wide range of efforts in support of EV charging infrastructure, and the process and product of PC44 is noteworthy for gathering such a wide range of stakeholders, incorporating numerous (and at times competing) points of view, and concluding in recommendations that are just and reasonable. For these reasons, the Alliance supports the Commission adopting the recommendations expeditiously.

Discussion

Each of the utilities has proposed a different style of program tailored to their own needs; this diversity mitigates the Commission's risk by not having all of its eggs in one basket. Given the exhaustive effort and wide range of contributions and perspectives in PC44, a proceeding which was initiated by the Commission itself and ably led by a senior Commission advisor, there is no justifiable need for the Commission to now essentially start over by wading into the specifics of the programs. Each utility has explained their strategies for implementation and provided compelling third-party cost-benefit analyses, measurement and verification approaches, customer outreach and education plans, budgets, and plans for an EV Portfolio Advisory Council.

The Public Conference format the Commission adopted in PC44 and other proceedings has proven to be efficient and fair, if for no other reason than the participants know that they will be subjected to the Commission's scrutiny. With this in mind, the Alliance recognizes that the Commission must review the PC44 report, consider all comments, deliberate, and provide the opportunity for modifications to the proposals. That said, given the dedicated work that so many stakeholders invested into the PC44 process, with the high caliber report being a model example of thoroughness and efficiency, the Alliance urges the Commission to consider the message that will be sent to further PC-style workgroups if a judicial-style proceeding is initiated, which would cause the entire process to be done over.

Admittedly there is some degree of uncertainty when it comes to new markets such as electric vehicle charging, but costly and time-consuming discovery

will not help us prognosticate. Instead, the one sure outcome of a long process will be fewer EVs, less infrastructure, and dirtier air. And the question before the Commission in this case is not nearly as novel as some suggest; among the Commission's statutory responsibilities are "promot[ing] adequate, economical, and efficient delivery of utility services" and "the preservation of environmental quality."¹

Accordingly, the timely deployment of infrastructure to facilitate the distribution and consumption of electricity in situations where there is a private sector failure has been the fundamental role of electric utilities regulated by Commissions since the days of Thomas Edison and Samuel Insull over a century ago. So while the logical outcome of this case may not seem obvious at first glance, it hinges on merely continuing the historical (if slow) arc of electrical technology to achieve broad policy goals that are already in place but require the Commission's approval. As evidenced in the extensive process in PC44, the Commission is well suited to shape the scope and substance of quasi-legislative hearings by presenting focused questions for the participants. In so doing, the Commission will continue to be fully informed and demonstrate its national leadership in EV infrastructure by defining the appropriate regulatory tools that work to the benefit of all consumers in this emerging market that combines elements of the automotive, mobility, and electric utility sectors.

¹ Md. Code Ann., Pub. Util. § 2-113 (West).

Justification for Legislative-Style Process

Public Utilities Article § 3-104 provides that the Commission “shall institute and conduct proceedings reasonably necessary and proper to the exercise of its powers or the performance of its duties.” This authority has been held to be very broad as courts recognize that “[a] great deal of discretion is necessarily vested in the Commission in order that it may properly discharge its important and complex duties,”² and that, when challenged, Commission decisions “are to be affirmed unless found to be illegal or unsupported by substantial evidence.”³ The legislature and courts have granted the Commission such latitude with the understanding that the Commission is “well informed by its own expertise and specialized staff,” and that the Commission's decisions are valid “as long as the matter is at least fairly debatable, meaning that ‘a reasoning mind could have reached the same conclusion as the agency[.]’”⁴ Indeed, the Commission in PUA § 3-101 is explicitly “not bound by the rules of evidence or procedure of any court,” and a legislative hearing is well suited to providing the clear and satisfactory evidence necessary to approve the utilities’ proposals.

On the question of how fully the utilities’ cases have already been discussed and vetted, the Alliance points to the exhaustive process outlined in the PC44 report at 10-12 (Overview of EV Work Group Activities). Certainly the Commission must review the record, with the absolute right to order modifications; notwithstanding

² People's Counsel v. Pub. Serv. Comm'n, 52 Md. App. 715, 722, 451 A.2d 945, 949 (1982).

³ Id.

⁴ Communications Workers of America v. Pub. Serv. Comm'n of Maryland, 424 Md. 418, 434, 36 A.3d 449 (2012).

the point that the Commission could adopt a judicial-style process, the Commission can certainly fulfill its responsibility via a legislative-style proceeding. No less an authority than Justice Oliver Wendell Holmes, in Prentis v. Atl. Coast Line, 211 U.S. 210, 226 (1908), concluded that “Proceedings legislative in nature are not proceedings in a court . . . no matter what may be the general or dominant character of the body in which they may take place. . . . That question depends, not upon the character of the body, but upon the character of the proceedings.” In short, the Alliance agrees with the perceptive analysis of Justice Holmes that Commissions, while having important judicial characteristics for litigation purposes, also have broad powers that are quasi-legislative in nature that fit remarkably well in this ongoing process to determine the proper regulatory tools for this unique and emerging market of electric vehicles and the necessary charging infrastructure.

Policy Considerations

The instant proceeding is a textbook example of why the Commission possesses great flexibility. In response to requests for an evidentiary hearing, the Alliance notes that from a legal perspective the Commission is on sound footing in pursuing a legislative-style en banc review of the participating companies’ filed proposals, attended by interested parties and executive representatives of all participating companies. As part of Maryland’s well-documented commitment to clean air and clean transportation, Governor Hogan signed into law the reauthorization of the Greenhouse Gas Reduction Act; in addition, Maryland is a signatory to a regional eight-state Memorandum of Understanding under which our state is aiming for 60,000 zero-emission vehicles by 2020 and 300,000 zero-

emission vehicles by 2025.⁵ According to the Auto Alliance, an organization which tracks vehicle sales, as of December, 2017, with fewer than 7,000 plug-in electric hybrids and not even 5,000 fully electric vehicles on the road today, Maryland is shockingly behind its goal.

The reasons for this disappointing deficiency are many, but it is nearly indisputable that driver confidence in electric vehicles is enhanced by a robust ecosystem of charging infrastructure. Notwithstanding a concerted and capital-intensive effort by the private sector to develop just such an ecosystem in Maryland, the results remain far short of what is needed. A report just issued by the National Renewable Energy Laboratory concludes that to serve the targeted number of vehicles Maryland will require 17,400 workplace Level 2 plugs, nearly 10,000 public Level 2 plugs, and 1,000 DC Fast Charge plugs. According to the U.S. Department of Energy's Alternative Fuels Data Center, today the number of DC Fast Charging locations is only 66, with a combined 174 plugs (subtracting the proprietary Tesla plugs brings the total down to only 144 plugs across 63 locations). Statistically, Level 2 progress is even worse with a mere 988 plugs across 429 locations. Meanwhile carmaker after carmaker announces new plug-in vehicles, with plans in some cases to electrify entire lineups.⁶

⁵ Memorandum of Understanding available at <http://www.nescaum.org/documents/zev-mou-8-governors-signed-20131024.pdf> (<https://goo.gl/eaZJyM>) (last visited March 21, 2018).

⁶ "Volvo Cars To Go All Electric, July 5, 2017, available at <https://www.media.volvocars.com/global/en-gb/media/pressreleases/210058/volvo-cars-to-go-all-electric> (<https://goo.gl/7BTn5D>) (last visited March 21, 2018).

The bottom line is that infrastructure is being installed far too slowly in relation to the projected introduction of multiple types of electric vehicles in the marketplace, thereby aggravating the urgent need to address today this looming infrastructure gap. Based on the lack of private sector investment in what by all accounts should be a robust market, the only conclusion is that utilities are best suited to holistically address the multiple examples of market failure.

The Alliance believes, along with many other EV market analysts, that there are significant market failures in several types of EVSE. There are many causes for this, and certainly the private sector's short-term time horizon for the return on its capital investment is a key factor. The lack of a longer-term time horizon is especially fatal to the stand-alone business case for DC fast charging, but applies to other types of charging as well. Also, several areas of the hard-to-reach EVSE market such as multi-unit dwellings, and transportation electrification in general for the low to moderate income class, cannot be justified on a stand-alone commercial basis.

Utilities, on the other hand, can take the long-term time horizon and use their strong balance sheets, access to capital markets for both debt and equity, and technical expertise to make strategic investments that will, undoubtedly, benefit all ratepayers over time with properly designed programs and tariffs, and oversight by the Commission. There is no one-size-fits-all approach, but appropriate utility roles can include ownership of the make-ready portion of EVSE installations, ownership of EVSE itself, cost-effective rebates for EVSE infrastructure, collection and use of the vital data for reliability purposes, as well as potential applications to new grid-

edge technologies such as demand response and distributed storage. Moreover, utilities have been serving their customers for decades with electric service, and are uniquely positioned to engage in outreach and education activities with potential EV owners as well as automobile dealers.

Vehicle charging is not a competitive market across all sectors

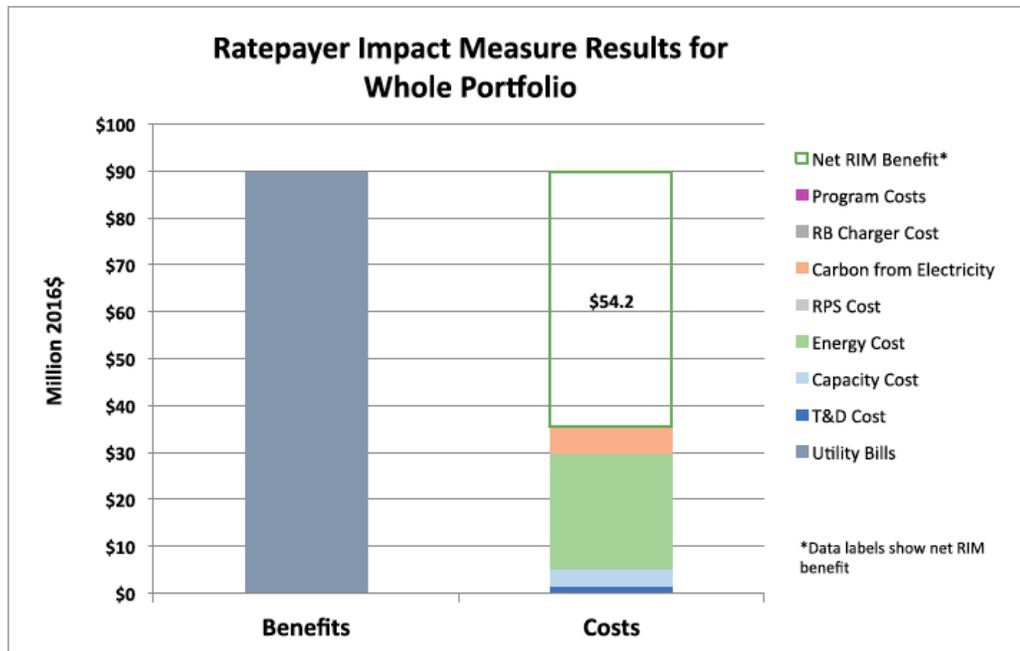
Generally speaking, nearly every sector is underserved in one way or another for the simple reason that the cost of installing infrastructure is high and the profit margins are minimal. Utilities can help by providing installation rebates for specific use-cases that will result in increased electricity consumption, preferably during off-peak hours. Alternatively, utilities may choose to provide the “make-ready” for EVSE, or in some cases even own and operate the EVSE where Commission rules allow it and it makes sense from a portfolio approach. There are scenarios ranging from disadvantaged communities to high-end multifamily dwellings to commercial truck fleets where the utility’s involvement can make or break a deal.

The economic case for the utility, Commission, and ratepayers is straightforward: New load on the system, during hours of low utilization, will result in the collection of incremental revenue that can be spread across the fixed costs of operating the distribution system, which puts downward pressure on rates and can be allocated to all customer classes based on a full revenue requirements analysis. Commissions have faced similar challenges in the past regarding rate design among several types of customer classes when introducing new technologies or potential new loads in the system. This Commission clearly possesses the regulatory experience to meet the EVSE challenge.

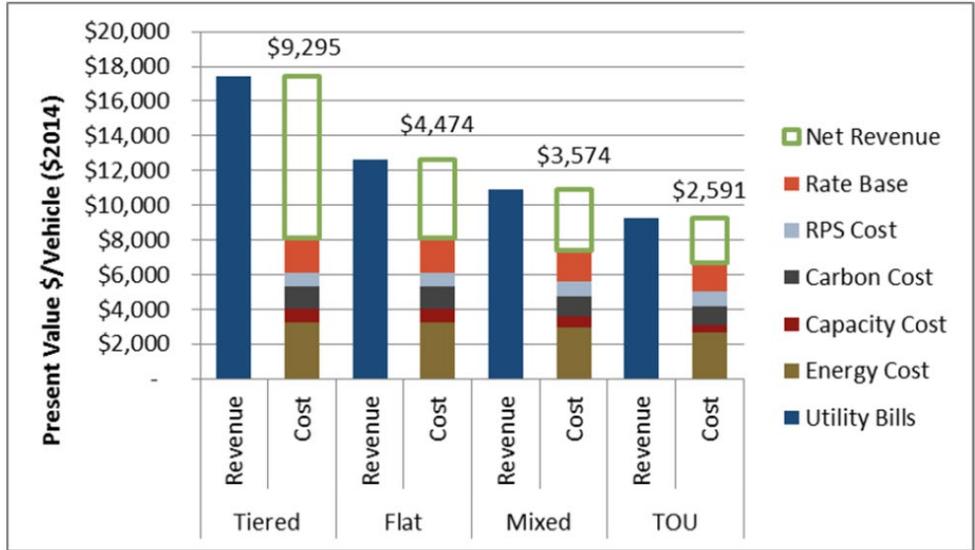
In California, ICF, in conjunction with Energy & Environmental Economics, conducted in-depth research and analysis and concluded that:

The Ratepayer Impact Measure (RIM) shows that the utility bills PEV owners pay more than offset the costs incurred by the utility to deliver the electricity to charge the vehicles. From the utility customer perspective, revenues from PEV charging are a benefit and the resources expended to deliver electricity for charging are costs. Under each of four rates and charging load shape scenarios studied, additional revenue from PEV charging exceeds the marginal costs to deliver electricity to the customer, providing positive net revenues that put downward pressure on rates.⁷

The following two charts from the ICF report show net benefits both at scale and on a per-vehicle basis (benefits from the latter accrue to all ratepayers based on kWh consumption and therefore do not require large scale deployment to be realized).



⁷ California Transportation Electrification Assessment, Phase 2: Grid Impacts, Oct. 23, 2014 (available at <https://goo.gl/7hR8aS>).



In short, more charging in more places will encourage people to drive more electric vehicles more miles, and this will create a virtuous cycle to accelerate EV adoptions and catalyze the overall EV market.

Utilities must be granted latitude to deploy infrastructure and not be limited by constraints that may appear logical but which actually do not apply. We know there is a need for flexibility because experience shows that the distinction between competitive and non-competitive markets cannot necessarily be determined through a generic characterization such as the use case or type of charger. Instead, the question can involve factors such as projected usage, lack of single-user or unified site control (i.e., multifamily communities), and the magnitude of a utility upgrade necessitated by the installation. For example, in cases where a utility upgrade such as a new transformer or expensive work in a highly-developed or congested area makes a project non-economic, allowing the utility to place the capital costs in rate base with an authorized return could both make a project competitive and provide benefits to other end users on that circuit.

As stated earlier, the Alliance posits that the utilities, Commission, and stakeholders need to adopt a long-term view when assessing the necessary utility involvement in EV charging infrastructure. Such a long-term view is not unusual for the Commission, in general, as it has always had the duty of examining large investments that last for decades in the distribution grid in setting just and reasonable rates.

We also believe there is no justifiable reason to impose artificial time limits at this time, generally because electric vehicle charging is consistent with utilities' core function of providing reliable and affordable service to all customers over the long-term. Moreover, it is not necessary because the upfront cost of installing chargers will not change in the future and because, as stated above, the provision of EVSE by the utilities with smart charging will provide ample system benefits for ratepayers.

Finally, it is worth noting the several international competitors of important U.S. industries such as automotive, information technology, and mobility – such as China – are taking a very long-term view of both EV adoptions and building out the EV infrastructure. While these issues obviously are not directly in the orbit of the Commission, we believe that the international characteristics of this dynamic and emerging EV market and related infrastructure should be given some weight by the Commission.

General Principles

Transportation electrification is in the public interest

There is a clear policy case for transportation electrification, as it can offer operational savings to plug-in electric vehicle (PEV) drivers, support local industries in the state, reduce dependency on foreign oil, and provide significant environmental benefits to all Maryland residents through reduced tailpipe emissions.

There is also a clear regulatory case for transportation electrification because increased PEV adoption puts downward pressure on rates. Currently, the vast majority of vehicle charging takes place overnight at home, effectively utilizing excess distribution and generation capacity. Furthermore, given that PEVs can over time become intelligent storage assets, the electrification of transportation can build a resource for grid services such as capacity, demand response, and reserves, each of which contributes to reduced overall costs as well as reliability and resiliency.

Transportation electrification in Maryland is lagging and barriers need to be addressed

- As the advancement of battery technology is bringing PEVs closer to price parity with internal combustion engine vehicles, auto and truck manufacturers (“OEMs”) are bringing additional PEVs to market, increasing consumer interest. However, consumer awareness and knowledge of PEVs, range anxiety, and charging infrastructure investment remain primary barriers to PEV adoption.
- Maryland can address range anxiety by supporting the accelerated deployment of residential, workplace, commercial/fleet, and public charging infrastructure

that provides equitable, reliable, and consistent access to electric transportation for riders and drivers.

- It is in the public interest to ensure key consumer protection principles like transparent pricing for PEV charging services and the use of open standards for communications and payment to ensure universal access for PEV owners to publicly available charging stations.
- The private investment committed to deploying charging equipment and services in Maryland is not enough to close the infrastructure gap across the state (especially in underserved markets including multi-unit dwellings), so public and utility investments should be utilized to complement private funding sources to establish a foundational charging infrastructure in Maryland. In other words, utility investments in this EV infrastructure can play an important role in both transforming the overall EVSE market and catalyzing other investments in partnerships or targeted, strategic approaches.
- Maryland can improve customer understanding by empowering stakeholders (e.g., OEMs, utilities, and charging equipment manufacturers) to improve the customer journey - from initial consideration to ownership and operation – through education and outreach.

Utilities are uniquely suited to help

- As demonstrated across the country, utilities are uniquely suited to integrate PEV infrastructure in a manner that mediates system capabilities, costs, and future growth while maximizing system benefits for all customers.

- PEV load has unique characteristics, and utilities - particularly those with Advanced Metering Infrastructure (“AMI”) - are well positioned to manage this flexible load with time-based rates, smart charging / demand response programs, and other innovative applications.
- Since utilities have an obligation to serve all customers under Maryland state law and regulations of the Commission, they have the ability to fashion EVSE tariffs and programs under a portfolio approach that can allocate costs and benefits across various rate classes in a manner that serves the public interest.
- To accelerate the deployment of infrastructure to enable adoption of electric transportation, it is critical to appropriately leverage multiple funding sources – including utility investment seeking reasonable cost recovery - in a manner that complements a robust PEV charging market.
- Utilities can leverage established customer relationships to develop an informed market and engage in education and outreach programs, in partnership with others in the EV ecosystem, in order to enhance customer confidence in PEV technology.
- Utilities should be encouraged, if not required, to develop rate designs and education and outreach programs that benefit all customers. The Alliance believes that a collaborative approach involving multiple stakeholders and the relevant state agencies, just such as the instant proceeding, is the most sensible way to accelerate the deployment of EV charging infrastructure.

Conclusion

In conclusion, because the EV industry is in its early stages, policy decisions and regulatory developments should maintain flexibility to enable utilities and other stakeholders to quickly respond to market developments. To this end, the Alliance urges the Commission to adopt the proposals set forth in PC44.

Respectfully submitted,

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