



May 23, 2022

Honorable Michelle L. Phillips
Secretary to the Commission
New York State Public Service Commission
Agency Building 3
Albany, NY 12223-1350

Via email: secretary@dps.ny.gov

Subject: Case No. 22-E-0236, Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging

Dear Secretary Phillips:

Enclosed for filing please find Comments of the Alliance for Transportation Electrification in response to the Notice Soliciting Comment in the above-captioned proceeding, dated April 21, 2022.

Respectfully submitted,

Michael I. Krauthamer

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Senior Advisor
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Enclosure

**NEW YORK STATE
PUBLIC SERVICE COMMISSION**

**Proceeding to Establish Alternatives to
Traditional Demand-Based Rate Structures for
Commercial Electric Vehicle Charging**

Case 22-E-0236

**COMMENTS OF
THE ALLIANCE FOR TRANSPORTATION ELECTRIFICATION**

The Alliance for Transportation Electrification (ATE) hereby submits these comments in response to the Commission's Notice Seeking Comment dated April 21, 2022, in the above-captioned proceeding.

Background

ATE is a 501(c)(6) non-profit corporation; we engage with policymakers at the State and local government level across America 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 consist of about 50 members that include many electric utilities, auto and bus manufacturers, EV charging infrastructure providers, and related trade associations, and we have been actively engaged in each of the Commission's various EV charging proceedings since their inception.

Overview

Recognizing that the subject of this proceeding is quite complex, we urge the Commission to be cognizant of maintaining a balance in setting rates that both reflect cost causation while at the same time assisting the market transformation for EVs. Specifically, and as described below, if rates are not designed properly during this transition the not unexpected low utilization of EV chargers will cause customers to pay more per kWh than they will pay when utilization increases later. The result will be customers paying more for electricity as a fuel

than they would pay for the equivalent energy content of gasoline for an internal combustion-powered vehicle. The problem is caused by the potential for low utilization of charging stations today. Because DC fast charging stations today tend to be very peaky with a low load factor, the result is a high cost per kWh that ultimately is passed on to drivers. This will serve as a major deterrent to development of the EV market, as potential EV owners and fleet operators would not see the savings they expected - at least when using public or commercial fleet charging stations.

We encourage the Commission to consider a range of alternatives, recognizing that in most cases the utilization problem will be temporary. As utilization increases, the effects of demand charges will be lessened and in fact rates with demand charges at some point of usage become more economical than alternatives based on the volumetric energy component of the rate. The point at which this crossover occurs is very specific to utility tariffs and utilization, or load factor. At the same time, it is important to consider that public-facing DC fast chargers are dependent upon consumers who are not expected to queue up for charging; this means that there must always be more supply than demand, which creates a gap between theoretical and practical utilization. For this reason, utilities and commercial EVSPs need to carefully weigh these trade-offs as they address these issues before Commissions.

The Alliance's recommendation is to recognize the public policy benefits of widespread deployment of charging stations and provide demand charge relief – either eliminating or reducing demand charges when needed. However, the relief should in most cases be temporary as waiving or reducing demand charges without recovery of the fixed costs they were meant to recover results in a subsidy from other customers who will be required to bear a greater share of the utility's fixed costs for the period demand charge relief is in effect.

Accordingly we support periodic review by the Commission, in consultation with

utilities, electric vehicle service providers (EVSPs), and other stakeholders to monitor station utilization and make determinations as to when it is appropriate to transition back to rates that fully incorporate demand charges. That does not mean that specific time periods for use of rates with demand charge relief should not be established at the outset – only that it may be prudent to re-evaluate those time periods as we gain more experience.

And utilities will continue to consider and develop alternative rate designs that may obviate the need for demand charge relief, perhaps using specialized tariffs (such as low load factor or subscription rates), or that tie demand charges to station utilization within the tariff (as National Grid has proposed to the Commission in Massachusetts). Using stationary battery storage systems on site is another way demand charges can be mitigated, but the economics will vary by use case. Technology and innovation are advancing rapidly, and new solutions may be available in the near future to use techniques of flexible load management to offset current demand charges and rate designs, including the use of automated load management (ALM).

In short, the Alliance believes that public policy considerations are a key part of cost of service principles traditionally applied to utility rates. Demand charge relief for EVSPs is essential in many cases for a period of time during which charging station utilization is low. It is a utilization problem – not a problem with the efficacy of demand charges themselves. Demand charges have been proven over the years to be a means to reliably, efficiently and fairly allocate costs to commercial customers. But we believe that some well-designed and time-limited relief from traditional rate design constructs, with periodic review, is necessary to enable the market transformation of this nascent industry.

Responses to specific questions

- 1. Provide examples of commercial electric vehicle charging tariffs or operating cost relief programs (solutions) from jurisdictions outside of New York that should be**

considered or avoided, based on the experience in those jurisdictions, and explain why they are effective or ineffective.

Tariffs that are effective in addressing EV charging typically incorporate the following characteristics:

Rates are transitional

- The concept is to offer a path to profitability by altering the demand charge component of rate structures on a temporary basis to help meet public policy objectives and better fit today's public charging business models.
- The goal is to get us past this period of low utilization.
- Different companies adopt different terms – “discount,” “credit,” “subsidy,” “economic development,” or “cost shift” to name a few. We adopt the term transitional relief.
- We believe this framework can satisfy the just and reasonable standard by increasing volumetric commodity charges while lowering demand charges.

Vary with utilization

- Recognition of the utilization issue is built into the rate, so that as utilization increases, demand charges are either phased in or imposed in full once a certain level of utilization of the charging station is reached.
- Usually starts out assuming a very low level of utilization and thus fully using volumetric charges.
- Again, the goal is to get us past this period of low utilization.
- We believe this framework can satisfy the just and reasonable standard by substituting volumetric charges for demand charges in manner that varies with utilization.

Recover cost of service

Two general types (in both cases, rates should attempt to recover fully the cost of service, especially fixed costs).

1. Rates that apply to low load factor C&I customers or irrigation loads, and;
2. Subscription-type rates that are based on cost-of-service and load profiles with a fixed monthly fee, and usually a requirement to enroll in TOU rates. Examples of EV rates that we recommend the Commission review include the following:

Southern California Edison (CA) TOU-EV-7/8/9

- This rate combines a “Demand Charge Holiday” with a mandatory TOU rate.¹ Specifically, for a defined five-year implementation period the rates do not include a demand charge, and the utility recovers costs primarily through energy charges. The demand charge is introduced in year 6, annually increasing to full cost by year 11.

Xcel Energy (Public Service of Colorado, or PSCO)

- Critical Peak Pricing. The EV tariff of PSCO is targeted at fleets, including transit. Savings are recognized for avoiding critical peaks, which may be called by the utility one day in advance; each peak period can be for up to four hours 15 times per year between noon and 8:00 PM. While this has been in place for nearly two years, several EVSPs responded that they are unable to respond reliably to critical peak pricing (CPP) events and would prefer another option. PSCO has therefore developed a new, non-CPP option (with a demand charge that is 84 percent lower than the S-EV rate), but substantially

¹ Application of San Diego Gas & Electric Company (U 902E) for Approval of SB 350 Transportation Electrification Proposals, Application 17-01-020, Docket No. 17-01-020, Decision On The Transportation Electrification Standard Review Projects at 111 (June 6, 2018) (available at <https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/d/6442457637-d1805040.pdf>).

increases the volumetric energy charges on a time-varying rate to recover costs.² The company reached a settlement agreement with public staff which was filed recently with the Commission³ and awaits a decision from an ALJ and the Commission.

Florida Power & Light (FPL)

- Demand Limiter. This feature applies to general service and general service large customers.
- Demand billed to the customer would be the lesser of the measured demand or the limited demand, which results in reducing charges to customers with less than 10% load factor.
- Thus, EVSPs with higher utilization continue to pay demand charges.

Arizona Public Service

- Rate Rider for DCFC that acts as a limiter on distribution demand charge.
- Sets up three periods from 2021 to 2031 (temporal period for transition).
- Sets up limiters based on average monthly load factors: starting at 25% (equivalent to a 182.5 hour demand limiter), to 20%, and ending period (2028 to 2031) at 15%.

National Grid (MA)

- Generally, a limited term demand charge alternative for the General Service class, based on size of load and sets a sliding scale based on utilization.
- 100% Demand Charge discount in Year 1

² The company refers to these as “S-EV rates” but consistent of two optional rates: the revised S-EV (secondary voltage, TOU EV Service, and the previous S-EV-CPP, with a CPP component. See Joint Post-Hearing Statement of Position of Public Service Company of Colorado and Trial Staff of the Colorado Public Utilities Commission, https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=971988&p_session_id= (May 9, 2022).

³ Notice Of Non-Unanimous Comprehensive Settlement In Principle, Docket No. 21AL-0494E, https://www.dora.state.co.us/pls/efi/EFI.Show_Filing?p_session_id=&p_fil=G_789820 (March 31, 2022).

- During years 2-10 a discount is applied to demand charge based on previous year utilization.
- Discount is from 100% to 0% (at 15% load factor). At this load factor, the normal distribution demand charges for General Service customers return.
- National Grid, Eversource, and Unitil have each submitted petitions to the Mass. DPU in Track 2 of Docket Nos. 21-90, 91, and 92, and a decision is expected this fall.

Dominion Energy in VA (GS-2) and Portland General and PacifiCorp (OR)

- Non-demand rates for customers below a certain threshold

Pacific Gas and Electric,⁴ San Diego Gas & Electric, Duke Energy (proposed)

- Subscription rates with built-in demand charges
- Based on historical data, and real load profiles
- Time horizons vary, but generally in the 10-year timeframe

Sacramento Municipal Electric Utility District (SMUD)

- EVSP Storage Rates

2. **When evaluating the impact of potential solutions, what assumptions should be applied to appropriately represent the investment decision that charging station developers and/or site hosts must make? Key assumptions of interest include, but are not limited to, utilization of the charging stations over the investment horizon, capital costs, capital structure, and operation and maintenance costs (*i.e.*, leasing costs of land, the fees or pricing consumers will pay for public charging, and the minimum financial threshold: Internal Rate of Return or Return on Investment to determine if the tariff or cost relief program is sufficient to spur investment).**

When evaluating the impact of potential solutions, the key drivers to profitability are revenue (primarily driven by charger utilization as measured by kWh) and cost of revenue. Cost

⁴ Decision Approving Application for Pacific Gas and Electric Company's Commercial Electric Vehicle Rates, Docket No. A1811003, <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=318552527> (Oct. 28, 2019).

of revenue includes energy (the commodity as well as demand charges), station operating and maintenance expenses, warranty and repair services, and station site lease expenses. Of these expenses, energy is typically the most variable from one utility service territory to another and is also the expense over which station operators have the least control.

3. How should the rate design principles articulated by the Commission in the REV Track Two Order (Case 14-M-0101, Reforming the Energy Vision, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015)) be applied when evaluating the potential solutions in this proceeding? Are there additional rate design principles you believe should be applied and why?

Electric rates that are based on traditional cost-of-service principles (as opposed to value of services or market-based pricing) support both efficiency and equity in the provision of electric service at just and reasonable rates which are approved by state regulatory commissions. In this context, demand charges in commercial and industrial rates accurately reflect cost causation, which is a key objective of rate design. Based on foundational ratemaking principles, demand charges are a fair and efficient means of recovering the costs utilities incur in providing sufficient capacity to manage peak needs reliably and to meet customer demands, but can raise issues when included in rates paid by charging station operators.

ATE has reviewed the principles from the REV proceeding. We generally agree with most of them, and our comments on select principles follow.

With regard to the principle to “encourage outcomes,” we agree that outcomes are important from a policy perspective and that policy is a part of ratemaking, but the primary considerations should be program design and a cost benefit analysis.

On the subject of access, transportation electrification represents a once-in-a-generation opportunity to transition to electricity as a transportation fuel. This is beneficial particularly to customers with low and moderate incomes and to equal justice communities because of the health benefits as well as the lower total cost of ownership of driving electric vehicles. Access to

charging that is safe, reliable, and affordable is important, and we need a stronger spotlight on LMI and EJ communities related to EVs.

The third principle we comment on is economic sustainability. As discussed herein, ATE supports a transitional period, one which is time-limited while still based on cost of service.

Our overarching position is that demand charges still represent the best means of ensuring reliable, efficient use of the grid and fairness to all commercial customers once utilization increases to a sufficient level after a certain transition. We believe the Commission should also recognize the salient health and climate change benefits created by accelerated transportation, electrification in New York's public policy (such as the CLCPA signed into law in July, 2019), and set forth a framework of options for providing demand charge mitigation for a transitional period. The relief should in most cases be temporary as waiving or reducing demand charges without recovery of the fixed costs they were meant to recover results in a cost shift from other customers who will be required to bear a greater share of the utility's fixed costs for the period demand charge relief is in effect.

- 4. What solution design elements should be considered to best maintain an incentive to manage electric demand? For example, should the structure of the potential solutions incentivize charging station owners to use time-varying pricing for drivers, to co-locate storage with electric vehicle charging stations, or to co-locate charging stations with complementary load profiles or anchor customers such as commercial fleets or ridesharing businesses?**

Rate design is just one of multiple factors that an EVSP considers when developing a commercial charging station. While we cannot answer all of the elements of this question, the business case typically involves many utility-related and other criteria such as traffic and location, a variety of soft costs (permitting, easements, ROW, etc.), and availability of adequate capacity and power on the local distribution system.

One of the scenarios posed above is the inclusion of other potential customers with complementary load profiles; we believe this is interesting conceptually, but in our view not practical at this nascent stage of development.

We also believe that rate design should take into consideration behavior that is beneficial to the grid, while at the same time balancing drivers' needs to charge including when those times may coincide with times of high demand. For this reason we do not necessarily oppose time-varying (TVR) rates, but we believe that if the on-peak price is too high, it will defeat the purpose of providing chargers and impose a disincentive to driving an electric vehicle. We do not advocate for a specific ratio between on and off peak periods, since each utility should make its own proposal based on its cost-of-service and peak capacities in the summer and winter periods. It is important to provide flexible rate options to all commercial customers, including the EVSPs.

In response to the question about on-site energy storage, this may be a viable option in certain circumstances, but as discussed above there are many factors and opportunities that various developers consider and the traditional demand charge framework may work for certain business models. Commercial EVSPs should therefore always have the option to rely on existing C&I rates if technological solutions provide a viable economic alternative for the EVSP.

Solution design elements ATE recommends to best maintain an incentive to manage electric demand include:

- For transitional relief approaches, once you depart from cost of service, there is no best alternative. Utilities should adopt rates that best fit their needs and the needs of their EVSE customers.
- Rates that depart from full cost of service over the long-term require continuing cost shifts from other customers and should be avoided.

- Permanent rates can be developed that recover cost of service but avoid issues with demand charges.
- Utilities should be given flexibility to develop approaches best fitting their current cost-of-service and commercial tariffs.
- A one size fits all approach (namely, similar rules and policies across all regulated utilities) should be avoided by the Commission. Instead, a broad framework should be provided that allows each utility to customize its demand charge alternative solution based on its cost-of-service, existing tariff structure, and other factors.

5. What solution design elements should be considered to encourage increased utilization of charging stations over time?

Put simply, low numbers of EVs are the cause of low charging station utilization, not rate design. In other words, it is important for the state, and perhaps the Commission, to provide incentives for vehicle adoption and charging infrastructure along with other best practices of a utility program, such as a broad portfolio approach across use cases, an adequate budget for education and outreach and fleet advisory services, and adoption of an appropriate cost-benefit methodology that incorporates societal and other benefits of transportation electrification.

We believe that one of the keys to the higher utilization is incentivizing more “butts in seats” for light-duty electric vehicles. Without that scenario, we find it difficult to envisage how utilization rates for publicly-accessible TE infrastructure is attained through a healthier EV ecosystem where the third party EVSPs are able to reach profitability.

But rate design is important nonetheless, and is a contributor to poor economics for DC fast charging stations in these early days of the EV industry because there are few kWh across which to spread demand charges. Once the number of EVs on the road increases, so too will charging station utilization.

Elements that should be considered to increase utilization are those that will provide a good business case for charging station developers, but should be designed to revert to traditional rates based on actual utilization rather than one standard solution.

It is also important to recognize, especially in the early years as consumers get accustomed to EVs and electricity as a fuel, that pricing for EV charging should be relatively consistent and easy to understand. Ultimately, EVSPs will not simply absorb high demand charges or other costs; the costs of electricity supply from the utility to the EVSP will be passed on to the host sites and EV owners through market-based pricing. We therefore believe that a variety of pricing options should be allowed in this phase of market development, including dwell time, per kWh, idle fees and hybrid options. While complexity exists in the market today, the Alliance believes that the utilities do have a role to play, through outreach and education to their customers, along with commercial EVSPs, auto OEMs, and dealers in helping consumers navigate this fundamental transition. We also believe that there will be more consistency in pricing as the market approaches more maturity, which should increase the utilization of public charging stations.

6. What solution design elements should be considered to encourage good investment decisions for charging stations?

Predictability will encourage good investment decisions. In this context, regulatory certainty is critical for all key players in developing the EV ecosystem – the commercial EVSPs, the hardware and software vendors, the regulated utilities, and others. We recognize that the Commission’s role is to strike the appropriate balance in transportation electrification by balancing the interests of utility customers, commercial EVSPs, environmental justice communities, nongovernmental organizations, and many others.

Yet we would urge that once the Commission adopts certain frameworks or policies – whether it be a demand charge mitigation tariff, other rate designs, or further decisions on the make-ready and other programs in the midpoint review – that it be given a defined period of time to be implemented. Investment decisions are being made today in electric vehicle design and adoption for at least the next five to ten years. Hence investors, utilities, transit authorities, auto OEMs, and vendors are expecting a certain regulatory framework to guide these investment and deployment decisions for that period of time.

To the extent the Commission offers lower demand charges in the context of a transitional rate with a limited time duration, the time should be long enough to account for a worst-case adoption scenario. Providing station developers with a sufficient cushion that mitigates risk will increase private investment in charging infrastructure. Moreover, the Alliance believes that once the fundamental framework is established, the regular “check-in process” with the Commission on a variety of implementation issues is a positive step. The midpoint review of the Commission commencing this fall is such a mechanism (Case 18-E-0138). This regular review process has emerged as a best practice in several other states such as Colorado, Oregon, Washington, North Carolina, and Illinois. Also, many state Commissions have required their regulated utilities to file updated TE Plans every three years or so as a means to revising programs, budgets, rates, and other features of programs. We expect the review of rate designs, such as demand charge mitigation, to become part of the updated TE planning process and become more common in the future.

- 7. Should the solution design address sites that may be necessary to establish a minimum network of public charging but are located in areas that are likely to experience lower utilization in the long-run? If so, how?**

Yes, the design should address sites that need public charging and are likely to experience lower utilization in the long run. The solution is to design the rate such that transitional aspect of the tariff is based on utilization.

8. Should a separate service class for commercial electric vehicle charging stations be established for tariff-based solutions? What are the benefits or drawbacks of this approach? Should separate service classes be established for different types of electric vehicle charging infrastructure and applications (e.g., L2 versus High Voltage Direct Current, fleet charging infrastructure)?

There is not an easy answer to this complex subject since it involves both rate design issues, and more importantly cost allocation issues. In most cases, ATE believes that the rate design issues for commercial EVSPs, as well as residential EV customers, can be resolved adequately with the current broad rate class (C&I) or sub-classes. Yet there are some cases where members of ATE have proposed a separate rate class for a particular end-use customers (e.g. battery electric bus operator) on a pilot basis. Whatever the construct in class or sub-class, the cost allocation issues are likely to be difficult and contentious at times in terms of assessing the contribution of the EVSP to fixed cost recovery (or lack therefore), the appropriate peak methodology to be used, and fair treatment in this allocation compared to other C&I customers. In summary, we believe that the utilities should have flexibility to put forward proposals on demand charge alternatives after consulting with their commercial customers, both EVSPs and others in the C&I class, which will deal with both rate design and the class issues.

The Commission should not rush to any particular judgment or one-size-fits-all solution on this topic until more use cases with actual data emerge with greater market maturity. A traditional cost reflective rate, which may include time of use, is beneficial because it will provide:

- Customer benefits for EV drivers such as fuel savings and incentives for off-peak use;

- System benefits for all ratepayers such as include reliability, integration, data, resiliency, lower rates; and
- Positive environmental (GHG reduction) and public health benefits.

Shifting and shaping EV load through rates and technology is key to achieving beneficial electrification.

9. What selection criteria should the Commission use to rank potential alternative tariffs?

Selection criteria that ATE recommends the Commission use to rank potential alternative tariffs include whether:

- cost of service is reflected over time in sustainable rates;
- the tariff provides regulatory certainty;
- the kWh charging rate is reasonable relative to the equivalent energy cost of gasoline;
- the tariff structure is simple to understand; and
- the tariff is appropriate for all use cases.

10. How should the Commission determine whether the alternative tariffs or cost relief programs are effective (e.g., possible metrics)?

We recommend that the Commission not commit to a specific timeframe for sunseting its EV demand charge policy. Instead the Commission should conduct periodic reviews to determine if its demand charge policy is still having its desired effects.

11. How should the Commission determine whether the alternative tariffs or cost relief programs are still necessary in the future?

As suggested above, we believe that some type of regular “check-in” or periodic review for the demand charge alternative is necessary and appropriate. This could be done either in the context of a midpoint review process for the overall TE program (the “make-ready programs” approved in July 2020), or could be done separately since rate design is sometimes a more

technical topic involved cost-of-service studies and cost allocation overseen by rate experts. Many Commissions and utilities in other jurisdictions are requiring such reviews to take place every three years or so. We think this would be an appropriate timeframe in which to gather evidence and detailed data on how commercial EVSPs and customers are responding to alternative rate designs, and other rate structures for EV charging.

Conclusion

We appreciate the thoughtful questions and the chance to engage with the Commission and stakeholders on these vital issues. ATE published a rate design study last summer (July 2020) covering fundamental principles of ratemaking (Bonbright principles), as well as the application to rates both for residential and commercial EV charging. That study is available on our website: <https://evtransportationalliance.org>. Moreover, the task force has nearly completed a “phase 2” study specifically on demand charges and alternatives; when complete, we would like to submit that white paper to the record in this Docket.

ATE appreciates the efforts by Staff to engage with stakeholders to develop solutions that respect traditional and equitable ratemaking principles and support public policy on transportation electrification. If the Commission reduces or eliminates demand charges for EV charging, ATE urges the Commission to do so only temporarily while the industry matures, and to provide regulatory certainty while respecting and adhering to cost-based principles. We look forward to continuing to be involved in this important proceeding.

Respectfully submitted,

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