April 27, 2020

Honorable Michele L. Philips
Secretary to the Commission
New York State Public Service Commission

Via email: secretary@dps.ny.gov

Subject: Case No. 18-E-0138, Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure

Dear Secretary Philips:

Enclosed for filing in the above-referenced matter please find Initial Comments of the Alliance for Transportation Electrification in response to the Staff White Paper Regarding Electric Vehicle Supply Equipment and Infrastructure Development dated January 13, 2020.

Respectfully submitted,

Michael I. Krauthamer

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Senior Advisor
Alliance for Transportation Electrification

Enclosure

NEW YORK STATE
PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment	**Case 18-E-0138**

INITIAL COMMENTS OF THE ALLIANCE FOR TRANSPORTATION ELECTRIFICATION ON STAFF WHITE PAPER REGARDING ELECTRIC VEHICLE SUPPLY EQUIPMENT AND INFRASTRUCURE DEVELOPMENT

Introduction

Electric vehicle (EV) charging infrastructure is in short supply in New York state, creating a large infrastructure gap between inadequate infrastructure and a large expected growth in EVs to 2025 and beyond. Without an acceleration of such investments led by utilities and others, New York can neither meet its overall climate goals or its ambitious transportation electrification (TE) goals. The Alliance believes that utility investments in such infrastructure (defined as make-ready investments on both sides of the meter) should be considered as part of distribution grid assets and should be regarded as a core utility function as this grid transformation occurs. The level of investments contemplated in the Staff White Paper are substantial and, if approved, will provide a solid foundation upon which utilities, non-utility service providers, and others in New York can build in the future.

Range anxiety of potential EV drivers is still one of the major obstacles to further adoption. Accordingly, the Alliance believes that the debate over which comes first – the chicken or the egg – is a stale and misguided exercise. The White Paper provides a good

framework in which to assess such investments so that the utilities can make them in a cost-effective and impactful way involving many companies in the EV ecosystem. At the same time, we believe that the role of the utilities (including NYPA) should be enhanced in the final Make-Ready Program, and that the process should be substantially streamlined with less specific guidance and more of a focus on higher level metrics and outcomes. Therefore, the Alliance makes a number of comments and proposed modifications to the Make-Ready framework, and looks forward to staying engaged actively in the process and in the proposed working groups in the future.

Background

The Alliance for Transportation Electrification (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 a collaborative and open approach to accelerate the deployment of EV charging infrastructure, support an appropriate utility role by complementing the private/competitive market, and promote interoperability and open standards in all parts of the EV charging ecosystem. Our members include about 50 organizations including many utilities, automobile and bus manufacturers, EV charging infrastructure providers and network operators, and related trade associations.

Our goals are to engage with state commissions and other agencies to remove barriers to EV adoption by encouraging a collaborative and open approach to accelerate the deployment of EV charging infrastructure, support an appropriate utility role by complementing the private/competitive market, and promote interoperability and open standards in all parts of the EV charging ecosystem.

Discussion

1. *Utilities should be permitted to own infrastructure, including the EVSE, on the customer side of the meter; also, any EVSE and charging network platform connected to utility-supported make-ready must be interoperable and OCPP 1.6 compliant. (Eligible Project Costs and Technologies (at 28-29), Metering & Technology Standards (at 53), and Joint Utility & NYPA EVSE Ownership (at 12 and 54-55)).*

In the White Paper's discussion of "Eligible Project Costs and Technologies" (at 28-29), and of "Utility EVSE Ownership" (at 54-55) Staff recommends against utility ownership of infrastructure on the customer-side of the meter. We believe that with this recommendation to exclude utilities (both the Joint Utilities and possibly the New York Power Authority (NYPA)) from owning and operating EVSE, Staff misses a prime opportunity to facilitate robust and reliable infrastructure for the benefit both of the distribution grid and customers. We urge the Commission to consider the broader issues of consumer preferences and that some consumers and host sites may want the utility to assist with the installation and operation of such equipment including repairs and ensuring adequate uptime. Also, consumers may wish to switch from one network operator to another during the life of such EVSE, and if properly designed with a pre-qualified list of hardware providers by the utility, a robust utility role will provide consumers with more choice from a trusted source of information on electricity and the distribution grid.

Since the costs and benefits vary widely by use cases, with some more challenging than others, the utilities should have the option to propose ownership for certain use cases, and make-ready investments with a rebate for other use cases, along

with sharing of the installation costs. The analogy in the White Paper to other forms of DER development (pp. 54-55) is misplaced and outdated, and restricting the role to "very limited circumstances" is unwise. Simply put, a more robust role such as utility ownership as an option (with the burden of proof to demonstrate cost-effective investments with prudency) will provide the following advantages: avoiding vendor lock-in, allowing the utility to demonstrate new approaches perhaps with a vendor on a turnkey basis, and achieving scale more quickly in meeting the estimated demand.

Utilities Can Ably and Effectively Complement the Private Market, and Ensure Successful EVSE Deployment

As stated in our introduction, we believe that the make-ready investment approach outlined in the White Paper provides a good foundation for further development, but this model will not be a panacea for the long-term needs of New Yorkers. New York will continue to experience a deficit of charging due to longstanding reluctance by the private market to step in and deploy infrastructure, as evidenced by the very small number of developers (particularly for DCFC) and the overall inadequate number of plugs (both DCFC and Level 2). Instead, the Commission should consider a more robust utility role, perhaps an ownership model with a turnkey approach with qualified vendors, as being an important accelerator of EV charging infrastructure in the state. Moreover, if ratepayer funds are invested, logic dictates that the utility retain the opportunity to be involved with the resulting infrastructure to ensure continuous and reliable utilization.

Other jurisdictions have discovered that EV charging stations that were built in the last decade, often with government grants and incentives, are not well maintained and experience poor uptime and availability. Obviously, there can be reliability issues with all

the various business models and charging infrastructure. But especially with ratepayer funding for these investments, the utility would retain the primary responsibility for maintaining this distribution infrastructure, subject to the oversight and accountability of the Commission.

At the very least, the Commission possesses the ability to require participants in the Make-Ready Program to adhere to pro-competitive policies such as avoiding vendors who seek to lock in customers to hardware with no real-world ability to change service providers.

OCPP (Open Charge Point Protocol) Should Be Required for All EVSE Connected to Utility-Funded Infrastructure

We are aware of the Commission's position from many years ago that charging infrastructure is not "electric plant."[1] The result of this finding is that utilities do not offer charging equipment to customers. But even if the Commission does not reconsider its decision on electric plant, the Commission should ask the utilities to require certain conditions for open design and architecture in RFPs with potential vendors who will bid on the hardware to be connected to the make-ready investments. The Alliance believes that this is a basic consumer protection issue by insisting on basic and unobjectionable principles such as open standards and interoperability, including specifically the technical and contractual right of customers who benefit from a utility make-ready to be required to install hardware and software that is compliant with prevailing standards such as OCPP.

[1] Declaratory Ruling on Jurisdiction Over Publicly Available Electric Vehicle Charging Stations, Docket No. 13-E-0199 (Nov. 22, 2013) (available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={0A1AB82A-ABD4-43FA-B3E6-A4C54EC02220}).

As articulated by Siemens, a leading global smart grid and technology company, interoperability produces three beneficial results: (1) lower costs to customers; (2) lowered risk of stranded assets; and (3) customer choice and avoided vendor lock-in.[2]

The White Paper (at 53) proposes that a stakeholder group explore open technical standards such as Open ADR (which enables demand response), ISO-15118 ("plug and charge"), and OCPP. This is a good step forward, and we urge that this group consist of technical experts from all sectors and be given a defined scope and timeline. We would add OCPI (Open Charge Point Interface) to the list of relevant standards and protocols, but with the clear point that there is absolutely no reason to delay the requirement that all charging hardware and software deployed in connection with or in any way as a result of this program be independently certified as compliant with OCPP version 1.6. This technology has been vetted and accepted widely as an industry protocol in key markets in the EU and North America. It is relatively inexpensive and easy to obtain an independent certification through the OCA (Open Charge Alliance), and we urge the Commission to impose such an obligation on network systems and hardware for this back-end communication protocol.

By way of brief background, OCPP is a protocol, or a language, by which charging hardware communicates to the network operator. When both hardware and software are compliant with OCPP, they speak the same language; this means that any OCPP charger can talk with any OCPP network. In the absence of an open protocol for

[2] Electric Vehicle Supply Equipment and Infrastructure Technical Conference and EV Readiness Working Group (Docket No. 18-E-0138) April 7, 2020). Presentation of Chris King, SVP of Policy and Regulatory Affairs, Siemens eMobility, at 9 (slides available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={369DBCAC-E362-4061-A7DC-786DBFE3D9FE}).

communications, however the customer or host site may be locked in to a single vendor if OCPP is not required or if contractual restrictions are put in place.

Consistent with our pro-open standards position above, we point out that there are market participants who do not adhere to open standards. We also observe that there are relatively few market participants today, and the firm with the dominant market share is able to unreasonably restrict new competitors, mostly by locking its existing non-OCPP hardware (much of which was paid for with federal, state, local, or utility funds) to its own network. The Commission should be aware of these realities in the nascent and development charging market among network management systems, and insist on only OCPP certified hardware and software in connection with future deployments.

To be clear, it is ATE's firm position that hardware that is connected to make-ready infrastructure be officially certified by a recognized independent third party as compliant with OCPP 1.6 (testing procedures are described on the webpage of the Open Charge Alliance, www.openchargealliance.org). Moreover, customers must possess the contractual right to direct any participating network operator to turn over control of chargers to another service provider. Only these provisions will protect customers, by allowing them to choose from a range of competitive network providers.

There is a Need for Charging and Non-Utility Parties Are Clearly Inadequate; The Commission's Prior Finding to the Contrary is Outdated and Detrimental to Achieving Important and Urgently Needed State Goals

Returning to the topic of utility ownership, the basis articulated in the White Paper for the Commission's exclusion of utility ownership is a combination of a 5-page declaratory order on EVSE dating from 2013, a time when the question of utility

ownership was very much in flux and interest in the topic was low, and an order on DER in the REV docket.[3] We urge the Commission to recognize that much has changed since that time regarding market development for EV infrastructure, as well as New York's ambitious clean energy, climate, and Transportation Electrification goals.

With regard to the EVSE order from 2013, we point out that a mere nine parties filed comments back then, and a summary of these comments with the benefit of seven years' hindsight is informative:

Party	**2013 Position**	**ATE Comments**
City of New York[4]	Avoid "hinder[ing] a burgeoning private ecosystem."	Based on the low EV and EVSE levels in New York, even seven years later the market is anemic despite utility ownership of EVSE being, at most, de minimis. If anything, the little market growth that does exist is arguably due largely to governmental subsidies. More subsidies are not the answer. A holistic approach to developing a charging ecosystem is required for the market to develop and utilities are the appropriate experts to undertake this important objective.
RESA[5]	Utilities will "hinder competition."	
NRG Retail Affiliates[6]	"The competitive market is best positioned."	
NRDC and Pace Energy & Climate Center[7]	"[T]he Commission should avoid sweeping restrictions at this early stage in the development of the market."	

[3] Order Adopting Regulatory Policy Framework and Implementation Plan, Case 14-M-0101 (issued Feb. 26, 2015) (available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={0B599D87-445B-4197-9815-24C27623A6A0}) (REV Order on DER).

[4] City of New York: "On balance, the City currently prefers that distribution utilities not own charging stations as part of their regulated operations. If the utility owns PEV charging stations as part of its regulated operation, market power issues could hinder a burgeoning private ecosystem."

[5] RESA: "The applicable standard is that the utility should be allowed to deploy its assets only in those areas where competitive markets are not available. . . . [and] allowing the utility to participate will impede market development or hinder competition."

[6] NRG Retail Affiliates: "The competitive market is best positioned to respond to customer demand and invest in the development and operation of charging stations."

[7] NRDC and Pace Energy & Climate Center: "Utility operation of charging stations as part of a regulated service could discourage other competitive market entrants. . . . [T]he Commission may wish to allow regulated utilities to offer charging services in underserved markets . . . [and] [i]n sum, the Commission should avoid sweeping restrictions at this early stage in the development of the market.

Joint Utilities[8]	"The Commission should allow utilities the flexibility to own and operate charging stations in situations where appropriate."	We agree.
NYPA[9]	If utility ownership is allowed, "PSC oversight should be required."	
ChargePoint[10]	"[T]he Commission should entertain utility or utility affiliate proposals for EVSE ownership, subject to provisions that encourage competition. . . . Any utility application [should] [d]emonstrate that its market advantages will not harm or otherwise interfere with the competitive market."	ChargePoint does not rule out utility ownership. We note that ChargePoint in 2013 highlighted New York's leadership as third in the nation in numbers of PEVs and fourth in the growth of PEVs; the depth to which the state has fallen in terms of EVs is a testament to the failure of the past seven years and is incontrovertible evidence that the market has failed. It defies logic to continue to believe that utility ownership somehow damages the market by pushing out private capital when the market is so nascent and projected to grow rapidly in the future.
NYSERDA[11]	"[D]oes not currently take a position."	NYSERDA identified California as a state that prohibited utility investment. That decision was short-lived and the California Public Utilities Commission shortly thereafter reversed itself and ordered utilities to produce transportation electrification plans. That process continues, and California is the national leader in both EVs and EVSE.

[8] Joint Utilities: "The Commission should allow utilities the flexibility to own and operate charging stations in situations where appropriate, either as part of their regulated operations or as non-utility operations."

[9] NYPA: "Regarding the possible ownership of charging stations by regulated electric utilities, it is our opinion that PSC oversight should be required."

[10] ChargePoint: "New York currently has the third largest number of PEVs in the US, and is ranked fourth in the pace of growth in the purchase of PEVs. . . . It is ChargePoint's position that the Commission should entertain utility or utility affiliate proposals for EVSE ownership, subject to provisions that encourage competition and ensure that advanced technology is brought to consumers. . . . [B]efore approving any utility application to own EVSE, the Commission should require the utility to:

1. Demonstrate that its market advantages will not harm or otherwise interfere with the competitive market for providing services in residential, commercial and public locations;
2. Demonstrate that utility ownership will not preclude or interfere with consumer choice in EV services in residential, commercial and public locations; and
3. Demonstrate that third party service providers are able to offer services on utility owned EVSE (separating ownership of EVSE from provisioning of services to customers, which should be competitive)."

[11] NYSERDA: "NYSERDA does not currently take a position on whether the Commission should allow electric distribution utilities operating in New York State to own or operate EV charging stations . . . . To date, few states have taken positions on this issue, but two that have, California and Oregon, chose different paths on utility ownership of charging stations. The California PUC restricted utilities from

NY State Dep't of Envtl Conservation[12]	Defers to Public Service Commission on topic of utility ownership.	

While Staff points in the White Paper to the record from 2013 for why utilities today should not be permitted to own and operate infrastructure on the customer side of the meter, including EVSE, with the passage of time we believe the record clearly leads to the opposite conclusion. Specifically, some parties in 2013 expressed reservations to utility ownership based on the possibility that utility ownership would inhibit the market for EVSE. Seven years later, the state is home to a mere 122 DCFC CCS plugs at 67 locations.[13] For a frame of reference, California has twice as many people as New York but more than ten times the number of CCS charging locations as well as ten times the number of CCS plugs.[14] As we discuss below, and as supported by the strategy pursued by both Electrify America and Tesla, charging infrastructure is a precursor to electric vehicles so the fact that California has more EVs than New York does not explain the infrastructure disparity.

With regard to the specific justification the Commission cited in 2013, the Commission's conclusion that EVSE does not fall within the definition of "electric plant," was based on the reasoning (at 4) that "Charging Stations are not used for or in connection with or to facilitate the generation, transmission, distribution, sale or

owning EVSE while the PUC of Oregon concluded that utilities should be able to invest in EVSE and operate PEV charging stations."

12 New York State Department of Environmental Conservation: "[W]e defer to the Public Service Commission's expertise on how best to amend PSC policy regarding regulated or non-regulated facilities."

13 U.S. Department of Energy, Alternative Fuels Data Center (AFDC), filtering by State = New York, Fuel Type = Electric, Charger Type = DC Fast, Connectors = CCS (https://www.energy.gov/maps/alternative-fueling-station-locator).

14 There are approximately 20 million people in New York and approximately 40 million in California. According to the U.S. DOEs Alternative Fuels Data Center, in California there are 1,631 CCS plugs at 706 separate locations.

furnishing of electricity for light heat or power." We believe this was a subjective question that is based on policy and not engineering and could just as easily be answered in the affirmative.

The Commission in 2013 also cited California's prohibition on utility ownership in adopting its position, though that turns out not to have been a reliable indicator because not much later the California Commission reversed course. California Senate Bill 350 (SB 350) was subsequently signed into law and stipulated a strong utility role in catalyzing a transition to widespread transportation electrification. Many of the same "competitive" arguments were raised in California, and to alleviate such concerns the California Commission adopted the following four-step review.

1. The nature of the proposed utility program and its elements; for example, whether the utility proposes to own or provide charging infrastructure, billing services, metering, or customer information and education.
2. Examination of the degree to which the market into which the utility program would enter is competitive, and in what level of concentration.
3. Identification of potential unfair utility advantages, if any.
4. If the potential for the utility to unfairly compete is identified, the commission will determine if rules, conditions or regulatory protections are needed to effectively mitigate the anticompetitive impacts or unfair advantages held by the utility.

New York could adopt the same or a similar test and reasonably find that EVSE falls within the definition of Electric Plant, as has been found in Maryland, for example. This would not mean that all EVSE must be owned by utilities, or that ownership of

EVSE turns the owner into a utility. It would mean only that utilities could, at their option, include EVSE as Electric Plant.

Such a finding would also be consistent with the REV Order for conditions in which utility ownership would be allowed: [W]here there does not appear to be a developing market . . . and the public interest warrants utility investment that will support such development.[15] This is the precise situation that exists today with EVSE.

New York Power Authority (NYPA) Should Be Eligible for Make-Ready Funding

In addition to our support of the Joint Utilities having the option, at their election, to own and operate EVSE subject to Commission oversight that ensures a level playing field as is done in other states such as Maryland, Washington, Oregon, and Minnesota, we also support the proposal of the New York Power Authority (NYPA) to be eligible for funding under the Make-Ready Program. The White Paper (at 12) states the desire that EV charging "be built by private developers engaged in a competitive market." We believe this could exclude NYPA, and we recommend that the Commission remove this exclusion from the final program because excluding NYPA will be detrimental to successful market development.

One reason to allow NYPA to participate as a recipient of Make-Ready funding is that NYPA, which has already announced plans to construct and operate a network of DCFC, typically does not self-perform. This is important because NYPA invests in the community, and in doing so utilizes in-state construction companies, materials suppliers, various support vendors, and in-state labor in furtherance of its mission. By relying on local contractors to construct and maintain infrastructure, NYPA provides an important

[15] REV Order on DER, *supra*, at 69.

economic and job-training stimulus to New York.

A collaboration between the Joint Utilities and NYPA would advance many important state goals and increase the probability of capital expenditures benefiting New York companies and workers. Once the stations are operational, we have every reason to believe that NYPA will establish prices for charging that reflect current market conditions in New York and ensure price competitiveness with other charging service providers as well as relative to traditional petroleum fuels. For all of these reasons, we consider NYPA to be a valid recipient of funding under the Make-Ready Program.

We firmly believe that the time is ripe for the Commission to overturn the previous findings and conclusion that led, at times, to the exclusion of NYPA. With regard to utilities broadly (the JU as well as NYPA) we urge the Commission to recognize the changed circumstances and the lack of overall progress in developing adequate EV infrastructure from this time and recognize their unique approach and structure in this market. Along with other forward-leaning utilities in other jurisdictions, such as Oregon, California, Washington, Minnesota, and Arizona where utility ownership is recognize and allowed, such participation will help kick start or catalyze this developing market for the benefit of other market participants, and ultimately for all utility customers and EV owners in New York.

The EV and EVSE Markets Are Not Succeeding and Utility Engagement is Required

ATE does not agree with the statement in the White Paper (at 29) that the Commission's 2013 decision "laid the foundation for a competitive EV charging provider market." If the "foundation" established in 2013 to encourage a "competitive" market for EV charging were successful, New York would be in position more similar to California

today for both publicly available Level 2 and DCFC plugs; instead, as stated above, New York has a small fraction of charging per capita.

The Commission should be focused on real outcomes, including clear metrics and benchmarks for publicly available infrastructure in the State. Seven years after the 2013 decision, still with a completely inadequate number of non-Tesla DC Fast Chargers to be found and also a dearth of Level 2 charging, Commission Staff again optimistically writes (at 55) that "the nascent market continues to develop," that it "does not see evidence of market failure," and that "utility ownership of EV charging stations should continue to be restricted." *See also* White Paper at 21. Evidence of this failure is shown in the charts below. The chart on the left shows the gap between the number of EVs in New York today and numbers required to meet state goals. The chart on the right shows the number of DCFCs required to serve the EV market.

* "Low DCFC Need" assumes two DCFC per thousand fully electric vehicles.
** "Medium DCFC Need" assumes five DCFC per thousand fully electric vehicles.
Source: Electric Vehicle Supply Equipment and Infrastructure Technical Conference and EV Readiness Working Group (Docket No. 18-E-0138) April 7, 2020). Presentation John Markowitz, New York Power Authority, at 10 (slides available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={42265401-0391-42A0-B5BA-8F5D517BA52B}).

There are two takeaways from these tables. First, from the chart on the left, that New York is far behind in the sales of EVs. Second, from the chart on the right, that New

York needs to greatly increase the number of DCFC to have any chance of serving the need for charging. And this is important because many fully electric vehicles with large batteries are getting ready to come to market and purchases could happen much faster than it takes to deploy thousands of DCFCs. But there is another point, which is that the presence of EV charging, both Level 2 and DC Fast, causes people to think about sustainability and the benefits and enjoyment of driving EVs. So as we have written elsewhere, this is not a chicken and egg question. More charging will motivate more EVs. The flipside is also true; the absence of charging conveys the impression (accurately) that there will be no place to charge, and this "range anxiety" prevents drivers from purchasing EVs. The bottom line is that New York needs more chargers needs them quickly.

In our view, these gaps are pretty clear evidence of a large market failure; and if not, a significant market gap that needs to be addressed quickly and effectively. This is true at both an aggregate assessment of the charging market (above in graphs and other data in this Docket), or macroeconomic level, as well as a specific EV charging use case level, or microeconomic. We do not intend to engage in an academic discussion of the factors that led to such market gaps, such as negative externalities, information failures, or other failures. Suffice it to say that we believe there were many factors the led to this current situation, and the Commission should stay focused not on detailed discussions of market failures or gaps, but instead of the stark facts set forth in the data.

We suggest that policy and regulatory actions play a significant role in the development of nascent markets such as public EV infrastructure, and that the Commission stay focused on changing the facts on the ground in the near future. We

applaud the decision by NYPA management and its Board of Governors to move ahead with its plans to deploy an ambitious network of DCFC stations in New York, and NYPA should be permitted to participate in the Make Ready Program. But even NYPA's planned DCFC network will not serve the entire market demand over the medium and long term. Along with NYPA, the Joint Utilities and other non-utility providers all have an important role to play in planning, siting, building, and operating public infrastructure over the next 5 to 20 years.

To sum up our position on the utility role, we believe that a strong utility role will help to accelerate the development of public EV infrastructure in programs and tariffs approved by the Commission, and subject to the outcomes and guidance set by the Commission. Such a utility role can help kick start this nascent market for the benefit of many other vendors, service providers, and other organizers, and it will greatly assist in reducing the largest and growing component of GHGs in New York, the transportation sector (about 36 percent).

Regardless of what the Commission determines on the ownership question, however, we urge the Commission to require that all recipients of Make-Ready Program funding commit to using only EVSE and networking that are each individually certified as compliant with OCPP 1.6 (and eventually subsequent iterations) by an independent and recognized third party testing facility.

2. *The program should be less prescriptive in many areas and flexibility should be permitted when comparable goals can otherwise be achieved. (Eligibility Criteria at 30-33):*

Given the uncertainty in how the EVSE market in New York will develop, we

encourage the Commission to make the program less prescriptive in many aspects and instead focus on outcomes, metrics, and performance at a higher level. In the make-ready approach set forth in the White Paper, the utilities will partner with a large number of developers with widely varying experience, resources, and motivations, which are not directly under the utilities' control, and therefore not directly under the authority of the Commission either. We would prefer a more robust role for the utilities (as outlined above), in terms of working with vendors of both hardware and network management systems in a turnkey approach. While the White Paper does not envision this approach, we urge the Commission to allow the Joint Utilities to work with the EV ecosystem (including NYPA) to meet the dynamic changes in the market in the future as new opportunities and challenges arise. In the following, we list several areas where we believe the utilities should be given more flexibility.

The penalty for paid parking (at 31-33) fails to recognize that paid parking in many places is ubiquitous and will not be a barrier to customer utilization; this will also serve as a major barrier to the all-important multiunit residential sector.

To receive the full 90 percent payment, the White Paper dictates that "[t]he station is accessible to the public without an access fee or restricted access." The result of this provision is detrimental in several aspects.

During the April 7 working group meeting, numerous stakeholders who are experts in parking explained the commercial reality that parking operators who charge for parking are not going to waive parking fees for EV drivers. Competition dictates whether the market will bear paid parking, and when it does the logical conclusion is that all parking operators will charge. And while nobody likes paying for parking, in some cases

there is simply no choice.

We are confident that reducing funding for EV charging at paid parking (whether in lots, garages, or curbside) will not cause those chargers to locate at nearby parking where there is no fee. Instead, we believe developers will respond to the 90/50 signal and build where they can get the 90 percent funding level, which will by definition primarily be in remote (i.e., free) locations, with the result being that charging will gravitate to areas where there are fewer cars. This would be a counterintuitive and undesirable outcome.

Payment for parking is also an important source of revenue for municipalities, and local governments (as well as private operators, for that matter) should not be forced into choosing between earning their parking revenue and providing the valuable service of EV charging. For these reasons, the penalty imposed on pay parking lots should be avoided since it introduces a new obstacle to deploying EV infrastructure.

The penalty on paid parking also serves as a significant deterrent on charging in multi-unit dwellings (MUDs) and effectively freezes these essential locations out of the program. These communities, which include apartment buildings, condominiums / cooperatives, are essential elements of an effective charging ecosystem and should be eligible for the higher funding level in this phase of infrastructure deployment. That New York is home to perhaps the largest concentration of citizens who do not own their parking spaces makes the exclusion of multi-unit dwellings and workplaces all the more puzzling.

We draw the Commission's attention to the REV Order that specifically identifies multiunit dwellings as cases in which utility ownership is appropriate ("[Not being able

to participate in program benefits] is particularly acute in the case of rental customers that cannot control improvements to premises.")[16] This is consistent not only with ATE's position that charging at multiunit dwellings receive the full 90 percent funding, but also our position stated above that utilities be permitted to own and operate the EVSE.

Utilities should have the flexibility to fund the appropriate number of Level 2 and DC chargers per site.

The White Paper (at 33, in the Program Eligibility section) recommends that eligible DCFC installations be defined as containing no fewer than four and no more than ten plugs, with an aggregated power rating of 2 MW. Although this may be in the interest of balancing economies of scale (by setting the minimum at 4) with not overbuilding (by setting the maximum at 10), these conditions are not necessarily correct and so the Alliance urges a less prescriptive approach in the siting and design of DCFC installations. A preferable approach would be to set forth broad criteria that need to be considered, such as availability, geographic diversity, and equity, and allow the developers to do the often-challenging work in finding suitable sites and configuring installations and numbers of ports.

In other words, program goals should be set in a manner that evolves with the market. Such flexibility will enable developers meet consumer demand for types of charging infrastructure that lead to higher EV adoption, rather than attempting to predict the future nature and mix of chargers. While the more prominent EVSE developers tend to deploy DCFCs in groups of four to ten, there are use cases where fewer than four or more than ten are desirable. For example, there are countless examples of retail locations

[16] REV Order, *supra,* at 69.

such as stand-alone drug stores or smaller neighborhood shopping centers that are appealing to EV drivers seeking a fast charger but there may simply not be enough parking spaces to dedicate to four DCFC plugs. Also, installing two DCFC at 150 kW each may very well cost less on a per-plug basis than four DCFC at 150 kW each. At the other end of the spectrum, there are locations such as highway rest stops and regional malls where a site host may wish to deploy a large number of DCFCs and where such an installation would be useful to travelers. For these reasons, we urge the Commission to not constrain the size of fully funded projects at four to ten DCFCs or at 2 MW.

With regard to the distribution of DCFC with Level 2, we commend the Commission for the using the EVI-Pro Lite tool of NREL to develop its estimates of the necessary public infrastructure in the State to meet the 850,000 vehicle goal by 2025. This resulted in the following numbers: 79,798 workplace Level 2, 49,730 public Level 2, and 3,287 public DCFC plugs. The Alliance believes that this tool is one of the best methods in the public sphere that can perform these estimates, but we offer two points of caution. First, the methodology is dependent on the assumptions on EV growth and number of vehicles in the fleet at a certain time and can provide only a macro and approximate estimate. Second, NYPA and the JU understand the geography and topology of the distribution grid in great detail, and should be able to run (if not already be in possession of) similar estimates using their own utility-specific data which may be unique to their service territories. Accordingly, we urge the Commission to use both approaches when trying to estimate the overall need and program cost, both the higher macro level look provided by NREL and the more granular assessment by each utility.

3. *Cost Allocation*

Staff proposes (at 39) that the costs of the Make-Ready Program be allocated to all customer classes based on transmission and distribution revenues. ATE supports this methodology. In particular, we agree with Staff's reasoning that the environmental benefits, especially GHG reductions, accrue to all customer classes and should be allocated accordingly. We would note that the recent study done by EPRI developing what is termed the "total value test" (a hybrid between the Total Resource Cost, or TRC, and the Societal Cost Test, or SCT) provides a framework for a similar conclusion,[17] and we urge the Commission to refer to this as these EV infrastructure programs are implemented.

4. *Performance Tracking and Data Requirements: Reporting is essential to ensure compliance and so that the public is aware of how funds are invested, but quarterly reporting strikes us as imposing an undue administrative burden; annual reports with an abridged semi-annual report would strike a better balance.*

The White Paper proposes (at 40-43) quarterly performance tracking and general reporting "to allow DPS Staff and the Joint Utilities to recalibrate the incentive level based on actual market realities" (at 41) and "to ensure maximum benefits to ratepayers and program participants, and to benefit from lessons learned" (at 42). Information to be reported includes a long list of granular data.

ATE believes that quarterly reporting as described in the White Paper is too frequent; we believe that semi-annual reporting makes more sense for the first year or two. Since this market is still in an early development phase, EV management teams at

[17] Available at https://www.epri.com/#/pages/product/3002017017/?lang=en-US.

utilities are quite small and generally stretched thinly to meet their normal operations and management duties. Although the regulatory divisions are involved in putting together the data on performance, the key information comes from the EV and EV infrastructure experts at each utility. Accordingly, we urge the Commission to strike a proper balance between keeping the Commission informed through reporting requirements and working group obligations, and the important task of doing the real work on the ground to work with developers, cities and counties, and get infrastructure deployed cost-effectively.

To the extent DPS seeks frequent updates, we propose that a short list of key criteria be identified for semi-annual reporting; these might include major milestones of new projects and limited metrics such as number of sessions, total & average number of kWh per session, and number of unique customers. More detailed reporting would be appropriate on an annual basis. We fully support transparency and a robust stakeholder process. But we also ask that the Commission recognize that infrastructure projects such as these do move relatively slowly and face many new challenges. Therefore, we believe that a more comprehensive annual report along with simple and templatized semi-annual updates are an appropriate compromise.

We observe in the White Paper that there is no mention of program management costs for the JU. Administering the Make Ready program is a substantial undertaking and will require significant resources. In our experience with programs such as this, a program management budget of ten to fifteen percent is appropriately sized to accomplishing the State's goals. This amount would ideally be in addition to the funds already earmarked.

5. *Suitability Criteria (at 45-46), Charging Business Case (at 47), and Strategic Locations (at 47-48) are reasonable recommendations but should not be required because the market is nascent and we cannot afford to be overly selective*.

Establishing a process to identify suitable locations for charging as set forth in Table 5 (at 45) appears on its surface reasonable and can serve as useful guidance. The process should not, however, be rigidly imposed because the market is so nascent and interest by landlords and site hosts remains inconsistent. The various criteria (whether capacity is "available," whether there is a "charging business case," and whether the location is "strategic") are vague and could be the subject of reasonable debate. For example, whether a location is strategic is quite subjective, and whether a charging business case exists varies by the business model as well as customer preferences and tolerances. The Commission should provide sufficient flexibility given that maintaining an EV charging station after construction entails responsibilities and consequences that will be the responsibility of the charging service provider. We therefore urge the Commission to let the market and Joint Utilities use their discretion to make informed decisions rather than adhere to a rigid matrix set forth with three factors in Table 5.

6. *Education and Outreach Activities (E&O) (at 48-49) are essential for widespread TE, and utilities have a vital role to play along with other stakeholders*.

Commission Staff advocates for utility investment in the form of education and outreach to EVSE and charging infrastructure developers (who presumably have extensive knowledge about EVs and EV charging stations) while recommending against outreach and education to influence customers (who generally know little to nothing about EVs). Most national surveys, however, indicate that the fundamental lack of

consumer awareness (even in advanced states like California and New York) about basic "EV 101" information on vehicle types, plug standards, and location of charging stations is one of the largest barriers to greater adoption.

We do note that the White Paper allows for education about rates and "how EV charging impacts the grid," but we do not believe that most customers base their decision to purchase an EV on these subjects, nor do most customers really care. What customers do need help with, and what can actually impact the grid, is whether to buy an EV. That is, they want to understand the benefits *to them* of owning an EV.

The Alliance believes that the utilities are well positioned to carry out a robust E&O function by their extensive relationships with their customers and serving as an "energy advisor" on other advanced energy services and programs. To prohibit utilities from helping with this vital task in the very same paragraph as acknowledging that "[t]he Joint Utilities are best positioned to educate their customers on the many electric rates available and how EV charging impacts the grid" strikes us as more than a little incongruous. Accordingly, we urge the Commission to allow the Joint Utilities to propose reasonable budgets to be funded out of rates in order to allow them to engage in this outreach activities, such as organizing ride-and-drive events, enhancing web portals that provide timely information on EVs and charging, and other activities. We trust that customers are smart and well informed and will use these web portals and utility-provided information, along with other sources of information from auto dealers, EV web sites, and auto OEMs in order to make informed decisions.

7. *Commercial Fleets (at 60-61): Rapid growth is expected in the medium and heavy-duty vehicle sectors; because electrifying these fleets will play an outsized role in decreasing pollution, immediate engagement is essential because the market responds to incentives. Medium and heavy-duty vehicles should not detract from the current Make-Ready Program; additional funding should be made available so as to not compete with the light duty market.*

The transportation sector is the largest source of greenhouse gas (GHG) emissions in the United States, emitting more pollutants than even the power sector (the transportation sector is accounting for a growing percentage of all GHG emissions primarily because the power sector is reducing GHG through actions such as retiring coal plants and running cleaner gas plants). In recognition of this new reality, local communities and governments are increasingly focused on reducing GHG emissions from trucking because of the attendant benefits for local air quality. In fact, in New York, DEC reported that the transportation sector accounted for 36 percent of the state's total GHG emissions.[18]

According an analysis conducted by Atlas Public Policy,[19] though, the cost competitiveness of procuring electric vehicles was determined primarily by the presence of two key elements: low cost charging and vehicle incentives. EV procurements which did not include these elements were almost categorically non-competitive in the scenarios analyzed.

[18] New York Greenhouse Gas Inventory, NYSERDA Fact Sheet (available at https://www.nyserda.ny.gov/-/media/Files/EDPPP/Energy-Prices/Energy-Statistics/greenhouse-gas-inventory.pdf).
[19] Assessing Financial Barriers to Adoption of Electric Trucks (Feb. 2020) (available at https://atlaspolicy.com/wp-content/uploads/2020/02/Assessing-Financial-Barriers-to-Adoption-of-Electric-Trucks.pdf)

We agree with Staff's skepticism (at 60) of fleet operators generating streams of revenue from charging. This and other evidence such as the high upfront cost of charging infrastructure is highly persuasive toward the Commission addressing medium and heavy-duty electric vehicles now, and not missing this opportunity.

* * * * *

Supplemental Questions

After the White Paper was issued, the Commission issued supplemental questions on February 5, 2020; we provide answers below.

1. Incentive Step-Downs. Now is too early to consider reducing incentive levels. ATE does not oppose the concept of reviewing incentives later, once the market is up and running and utilization is at a commercially acceptable level, but that time is too far in the future to be debating the process and nature of a step-down process. As we argue in our comments, the Alliance believes that market development can take place in a "hybrid" fashion with a strong utility role along with that of non-utility service providers and others. In fact, such a debate today could have a chilling impact on investments in EV infrastructure in the state, whatever the source of funding. When that time does come, there should be ample notice about the Commission initiating such a process with perhaps several methods or "strawman proposals" put forth supported by data and experience in other forward-leaning jurisdictions.

2. Performance Incentives. Notwithstanding that most consumers are resistant to purchasing EVs without a robust charging ecosystem, many of these same consumers do

not heavily utilize public charging. For this reason, utilization is not necessarily a key metric for success. Instead, because the ultimate goal is to encourage and facilitate New Yorkers to buy and drive EVs, the appropriate metric is electric vehicles in the market.

3. Regional Economic Development Councils. ATE does not take a position on this issue.

4. Ratemaking. ATE believes this issue is best addressed on a case by case basis by the utilities. We are involved in monitoring alternative rate-making methods being discussed in other jurisdictions, such as multi-year rate plans, PBR (mentioned in this white paper), and other possibilities. Again, now is not the time to be addressing these issues for EVs at such a small scale of market development. However, as Staff proposes, it might be a sensible idea to discuss the ratemaking issues at the mid-point review of the DCFC per-plug incentive program.

5. Disadvantaged Communities (DACs). Disadvantaged communities, low-moderate income neighborhoods, and communities of color have borne the brunt of air pollution in general and tailpipe emissions in particular for both ozone forming pollution and particulates. The cumulative impacts of such pollution has had a serious and negative impact on the public health of these communities, especially for respiratory health. But in terms of how to serve these communities, there will not be a one-size-fits-all solution. ATE suggests that Staff and the Joint Utilities engage with individual disadvantaged communities directly to find out what they desire. Some may prefer DCFC hubs for rideshare vehicles, while others may prefer that tailpipe pollution be reduced by electrifying transit buses, school buses, or commercial fleets that are based in the community. There are many possibilities and they will change by location and over time.

Engagement with the community is the best way to identify best practices.

6. Existing Utility Programs. ATE does not take a position on this issue.

7. Future-Proofing. ATE recognizes the potential for abuse in future-proofing. For this reason, we recommend that the Joint Utilities work together, along with a variety of interested stakeholders such as site hosts (commercial and multifamily), contractors, and EV charging service providers to establish best practices.

8. Interoperability. We discussed this topic at length in our comments above. In short, we strongly support open protocols and standards because these best practices reduce costs, increase options, mitigate the risk of stranded assets, increase security, and provide a better overall customer experience. Any recipient of incentive funds under the Make-Ready Program (or any other PSC-authorized funds) should be required to install only EVSE and software that are certified by the officially recognized independent third-party testing facility as compliant with OCPP version 1.6 (or better, as the technology evolves).

9. Fleet Electrification. The best way to promote fleet electrification that minimizes adverse impact to the grid is to support managed charging and to inform customers about options. Utilities around the country are beginning to provide fleet advisory services to customers, and that would be a prudent course of action here too.

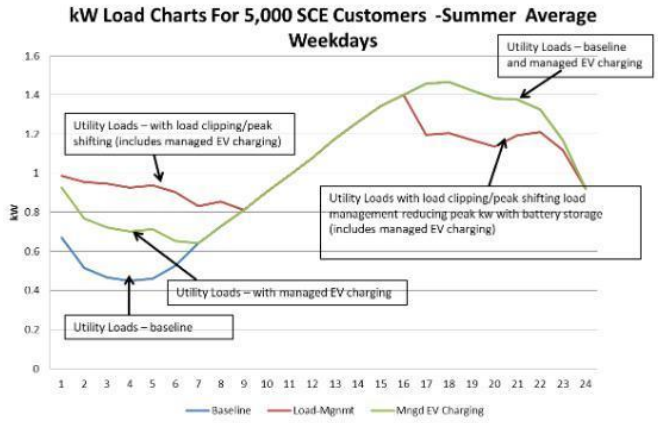
10. Reporting. We discussed this topic in our comments above. We believe reporting should be less frequent, with comprehensive reporting provided annually. Interim reporting should be summary data to alleviate the compliance burden.

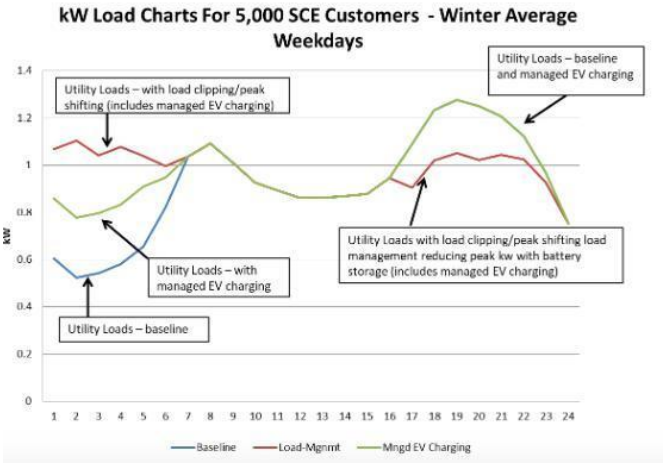
11. Value to the Grid. Managed charging is the best way for EVs to provide value to the grid. And the way to ensure managed charging provides the maximum value is

through hardware and software that complies with open standards and interoperability. Customers are always welcome to purchase and use proprietary systems with their own money, but if utility funds are involved then openness and interoperability must be required.

12. Smart Charging. This is closely correlated to Value to the Grid (#11). One study of Southern California Edison (SCE) customers found that EV batteries used as a "virtual power plant" can shift the entire residential peak load to nighttime hours by using energy stored in batteries during the day and managing charging at night with EV market penetration of only 10 percent. Moreover, annual net savings were $560/EV customer.

Smoothing the utility's load reduces all customers' costs because peaks require additional power plants to be dispatched; when plants are dispatched only during peaks, the annual cost must be covered during a relatively small number of hours, which results in higher electricity prices for everyone.





The finding that a small EV market share can completely clip the residential peak (see charts at right) and save participants $560/year even

after paying for overnight charging has long been suspected but the study provides highly credible evidence. This important discovery highlights savings that help offset today's higher EV sticker price. Meanwhile, for non-EV customers, lowering the system peak reduces the cost of electricity and supports the case for utilities investing in EV charging infrastructure.

13. Developer Feedback. We presume that utilities are always open to recommendations from customers for how to improve their processes, particularly with new frameworks such as EV charging. One common refrain we hear is that the lead time for service upgrades for commercial and transit fleets is considerably longer than the lead time for vehicles. This will be exacerbated as fleets grow and battery capacity and charging speeds increase. Requiring an upgrade of multiple megawatts is not at all out of the question, and the timing for such an upgrade could be months not years. ATE understands there are many constraints in the planning process, but the scenario described above has the potential to be a significant impediment to transportation electrification if not addressed.

14. Medium and Heavy-Duty Vehicles. We address this topic in various places in our comments. In terms of timing, we urge the Commission to act as quickly as possible because demand for electric trucks and buses exceeds supply, so they are going to the cities and states where the costs and challenges are lowest. New York has the potential to be a significant hub for electric trucks and buses due to the state's population, industrial and logistics base, and proximity to key markets. The competition for attracting these companies and jobs, however, will be strong, so we urge the Commission to act quickly along with other state agencies to create supportive regulatory and policy measures for

the entire state.

15. Resiliency. Resiliency is certainly an important issue, but in the context of EV charging placing too much emphasis on this topic will simply add another regulatory barrier and hinder the deployment of EVSE. "Resiliency" for electric power systems is an elastic word that does not have an easy definition and proper scope. Like the word "subsidy," it means widely different things to different interest groups and people. We are certainly sympathetic to states in the mid-Atlantic region that were badly damaged in their critical infrastructure by Hurricane Sandy several years ago. We are also sensitive to other related issues like making our electric systems resilient from cybersecurity and physical attacks on both the generation assets and distribution grid as the grid evolves in a more distributed way. The Commission can approach these important issues in several ways and in other Dockets as well, at both the high level policy arena as well as for detailed permitting and siting issues with counties and cities on the ground. For example, today we believe that various electrical and building codes already take into consideration many factors related to resiliency of infrastructure in the face of natural disasters such as flooding. Accordingly, at this time and in this Docket, we urge the Commission against imposing additional burdens or challenges on utilities or developers of EV infrastructure.

16. Online Application Portal and Load Service Capacity Map. ATE is not familiar with whether the benefits of such a portal would outweigh the costs. For example, in our experience, new service applications do vary by utility but not so much that the variations create a meaningful impediment to developers. With regard to load serving capacity maps, they may serve other functions but we do not believe them to be essential for EV charging because EVSE site developers should know how to identify basic infrastructure

such as transformers and switches and the distribution system in New York is generally strong enough to handle EV charging infrastructure without cost prohibitive upgrades.

17. DCFC Bundling. ATE does not take a position on this issue.

Conclusion

ATE appreciates the thought and effort that Commission Staff has put in to the White Paper, and we look forward to continued collaboration among all stakeholders to advance transportation electrification and help New York achieve its climate and TE goals. We believe that the Commission can adopt some of the following changes in the paper to ensure a more effective and streamlined process focused on key outcomes:

1. Utilities should be permitted to own infrastructure (including the EVSE) on the customer side of the meter, and any EVSE and charging network platform connected to utility-supported make-ready must be OCPP 1.6 compliant;
2. Be less prescriptive and increase flexibility, including by eliminating the penalty for paid parking;
3. Utilities should be permitted flexibility in carrying out cost containment measures;
4. Reduce the burden of excessive performance tracking & data reporting and allow a program administration budget;
5. Apply the suitability criteria in a flexible way;
6. Expand the breadth of utility outreach and education to include customer-oriented activities and messaging conveying the benefits of driving electric to consumers; and
7. Begin a process now to address the needs of electric medium & heavy-duty vehicles.

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Respectfully submitted,

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