May 15, 2023

**VIA ELECTRONIC MAIL**

Hon. Michelle L. Phillips, Secretary
New York State Public Service Commission
3 Empire State Plaza
Albany, New York 12223-1350
secretary@dps.ny.gov

**Re: Case 18-E-0138 – Proceeding on Motion of The Commission Regarding Electric Vehicle Supply Equipment and Infrastructure.**

Dear Secretary Phillips:

Advanced Energy United (United) and the Alliance for Clean Energy New York (ACE NY) submit for filing the attached comments in response to the Electric Vehicle Make-Ready Program Midpoint Review and Recommendations Whitepaper filed with the New York State Public Service Commission (Commission) on March 1, 2023, by the Department of Public Service (DPS), in the above referenced proceeding.

Respectfully submitted,

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**STATE OF NEW YORK**
**PUBLIC SERVICE COMMISSION**

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| **Proceeding On Motion of The Commission Regarding Electric Vehicle Supply Equipment and Infrastructure.** | **)** **)** **)** | **Case No. 18-E-0138** |

**May 15, 2023**

**Comments of Advanced Energy United and the Alliance for Clean Energy New York on the Electric Vehicle Make-Ready Program Midpoint Review and Recommendations Whitepaper**

# Introduction

Advanced Energy United (United) is a national association of businesses that works to accelerate the move to 100% clean energy and electrified transportation in the U.S. Advanced energy encompasses a broad range of products and services that constitute the best available technologies for meeting our energy needs today and tomorrow. These include electric vehicles, energy efficiency, demand response, energy storage, solar, wind, hydro, nuclear, and smart grid technologies. United represents more than 100 companies in the $238 billion U.S. advanced energy industry, which employs 3.2 million U.S. workers, including 157,000 individuals in the Empire State.

The Alliance for Clean Energy New York (ACE NY) is a member-based organization with a mission of promoting the use of clean, renewable electricity technologies and energy efficiency in New York State to increase energy diversity and security, boost economic development, improve public health, and reduce air pollution. ACE NY's diverse membership includes companies engaged in the full range of clean energy technologies as well as consultants, academic and financial institutions, and not-for-profit organizations interested in their mission.

United and ACE NY thank Staff for the significant work done on the Make-Ready Program (Program) to date, including the thoroughness of this mid-point review (the Whitepaper). Although New York State still has a long way to go to meeting its overall EV charging needs, we

are confident that the Program has already made major contributions to EV preparedness in the state. Since the establishment of the Make-Ready Program in 2020, New York's transportation landscape has changed significantly. Federal funding available through the Infrastructure Investment and Jobs Act (IIJA), in addition to the Inflation Reduction Act (IRA), have guaranteed incentives for customers and businesses, and the adoption of Advanced Clean Cars II and Advanced Clean Trucks standards will serve to further accelerate the transition to electrified transportation. Automakers globally have made additional commitments to full fleet electrification, and the investments associated with this shift signals the readiness of the private sector to expand its electric vehicle offerings. The actions that Staff has taken on the Make-Ready Program to better align its structure and incentives with the goals of the Climate Leadership and Community Protection (CLCPA) Act are appreciated, and we applaud Staff's recognition of the changing landscape in its increased Program budget of $1.1 billion, and other proposed changes.

Our detailed comments follow. Given the wide range of issues addressed in the Whitepaper, we have not commented on all of them. The lack of comments on specific topics does not imply agreement or disagreement with Staff's recommendations regarding those topics.

# Comments

## Program Outline

We appreciate Staff's thorough review of per-plug costs as well as the updated projection of total plug requirements. We support the overall expansion of the Program budget, particularly given the accelerated timeline of vehicle electrification programs across all vehicle types and categories by the state and federal governments since the start of the Make Ready Program.

Despite the thoroughness of Staff's analysis, we found some key assumptions to be missing from the Whitepaper, making it difficult to fully assess Staff's proposed budget. For example, if we are correctly interpreting the final results of Staff's updated analysis, Figures 6 and 7 in Appendix C can be used to estimate the average per plug incentive that would be paid out

going forward. For DCFC, this amounts to an incremental budget of approximately $468 million for 5,672 additional plugs beyond those already committed or completed, or about $82,500 per plug. For L2 plugs, the corresponding values are an incremental budget of just over $125 million for 30,647 additional plugs, or about $4,100 per plug. Given the revised higher baseline per plug costs and the increased share of the budget allocated to disadvantaged communities (DACs), which are eligible for up to 100% coverage, this suggests that many projects will receive far less than the maximum available incentive. This seems particularly true for L2 plugs, most of which will be downstate where costs are higher.

We note that on page 24 of the Whitepaper, Staff states that the utilities should "be directed to adjust project level payments to achieve the updated plug goals within the constraints of the new budget and the eligible cost thresholds." Without seeing those details, it remains difficult to fully assess the reasonableness of the proposed budget and overall allocations, and whether the project-level payments will be sufficient to support Program goals. That said, based on these simple estimates made here of average per plug incentive payments, it seems that even the revised budget of $1.1 billion may be conservative.

We are sensitive to the fact that this is a large program, and that Staff is proposing a significant overall budget increase. But we also recognize the need for the Program, and the long-term benefits it will provide. We would argue that the overall goal of the next phase of this Program should be to more closely align per-plug incentives with real world conditions. This may require further expansion of the budget beyond Staff's proposal, or the Commission may decide that it is preferable to set more modest near-term plug count goals or extend the target date. Put another way, we believe that front-loading the Program, when public dollars are of greatest need, is a high priority.

Regarding some of the specifics of Staff's proposal and recommendations for the budget we offer the following observations and recommendations:

## Baseline Costs

As we noted in previous comments,[1] and as Staff's analysis clearly demonstrates, the per-plug costs used in the original Make Ready order were too low, and we support Staff's recommendation to increase the baseline per-plug costs using historical data from the Program to date. This will allow the budget for per plug incentives to match real-world deployment more closely. We believe a close alignment of per plug incentives with historical data on project costs should be a guiding principle in the midpoint review overall.

## Plug Goals

We appreciate that Staff used the updated NREL EVI-Pro model to develop updated plug requirements. It seems evident from the Staff Proposal that careful consideration was given in determining the updated goals, and that for public and workplace L2 chargers, a decrease was warranted, while for DCFC, an increase was warranted. Overall, the analysis seems reasonable.

We support the addition of multi-unit dwellings (MUDs) to the plug projections, especially since the inclusion of MUDs improves the alignment of the Make Ready Program with the State's broader focus on equity in the energy transition. We recognize that, all else equal, this results in a net increase in the total amount of L2 plugs that need to be supported by the Program, but believe it is an important addition.

To mitigate total Program costs related to the increase in baseline per-plug costs, the increase in DCFC plugs, and the addition of MUD L2 plugs, Staff recommended that the proposed MUD budget be capped at 75% of the assumed MUD L2 plug levels for upstate utilities and at 50% for downstate utilities.[2] This results in a net overall decrease in L2 plugs in the Program relative to the current Program targets. This seems like a reasonable compromise, recognizing that the Program goals need not match exactly with the revised EVI-Pro analysis.

[1] Comments of Alliance for Clean Energy New York and Advanced Energy Economy, in Case 18-E-0138, October 3, 2022.
[2] See Appendix C of the Staff Whitepaper at page 89.

## Program Timeline

We support the flexibility to extend the Program beyond December 31, 2025, if Program targets have not yet been met and utilities have budget remaining. This flexibility acknowledges the reality that project development times and supply chain issues continue to impact the pace of EVSE buildout.

## Changes to Incentive Tiers

As we understand it, the only change to incentive tiers proposed by Staff is to reduce the Public Tier incentive level for downstate utilities from 90% to 75%. This is being proposed to help manage costs but is also predicated on Staff's assertion that the demand for this tier is very high downstate. If this change is made, we recommend that Staff carefully monitor the impact on deployment and interest in the Program and be prepared to restore the tier to the 90% level.

We also ask for clarification if this change to the downstate Public Tier applies to L2 and DCFC. In the main text of the Whitepaper (at p.24) Staff writes that this change applies to DCFC, whereas in Appendix C (at p.88-89) Staff's recommendation appears to apply to both L2 and DCFC.

More generally, we recommend that Staff carefully monitor EVSE deployment and the project development pipelines to see if there are communities where deployment is lagging and that are at risk of not meeting goals. We note that the recent order in Case 22-E-0236 on alternatives to traditional demand-based rates[3] may further improve station economics and accelerate the deployment of DCFC plugs, but it may take time for the various aspects of the Commission's order in that case to have the intended effect. Depending on how deployment proceeds, the Commission should be ready to consider increasing incentive levels beyond the current proposal.

[3] Order Establishing Framework for Alternatives to Traditional Demand-Based Rate Structures, Issued and Effective January 19, 2023, Case 22-E-0236 – Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging.

For both of these issues – the change to the downstate public tier incentive level and the assessment of whether any communities are lagging – we recommend that Staff, within 12 months of the Commission issuing an order updating the MRP, issue a report with any recommended changes to incentive tiers.

## Disadvantaged Communities (DACs)

We support the increased DAC budget to 35% of the total, which is consistent with our prior comments, although we did not advocate previously for a specific level of funding. We also support the addition of micro-mobility to the Program, as another avenue to support DACs, and more generally to make the benefits of electrified transportation more widely available to all utility customers who are funding the Program.

We also support the three modifications to the DAC tier eligibility proposed by Staff. With the addition of MUDs to the Program, we agree that it is important to ensure that MUD applicants seeking to take advantage of the DAC tier are indeed the intended targets of that tier. Using the existing Affordable Multifamily Energy Efficiency Program criteria seems reasonable and would be administratively efficient.

We also support expanding DAC tier eligibility to on-street L2 charging, consistent with our earlier comments.[4] Limiting on-street L2 charging to dedicated EV parking spaces will ensure that these chargers remain available to EV owners, but this also requires that municipalities create sufficient EV-only spaces to support the level of deployment anticipated. We recommend that Staff have a process for monitoring this use case and supporting the coordination of municipalities and utilities to ensure sufficient EV-only parking is being developed.

Lastly, applying the "DAC+0" eligibility radius to L2 chargers for all utilities would seem to make sense, in order to focus funds towards the most beneficial locations.

[4] Comments of Alliance for Clean Energy New York and Advanced Energy Economy, in Case 18-E-0138, October 3, 2022, at page 7.

## Medium & Heavy Duty (MHD) Pilot

Our prior comments focused on how the reform of the MHD pilot should be a key objective of this mid-point review. While we agree with Staff's emphasis that the new MHD proceeding (23-E-0070) will be the primary venue for solving issues surrounding fleet electrification, we continue to believe the MRP is the most appropriate near-term path toward accelerating adoption in this sector. We thus appreciate and support the overall budget expansion of the MHD pilot and the inclusion of certain DAC customer-side costs. That said, the issues with the pilot – cited by many stakeholders – was not lack of funds but lack of enrollment due to issues that are not addressed in Staff recommendations. We thus remain concerned that restrictions may continue to hinder the workability of the pilot.

While we appreciate Staff's inclination not to deplete pilot funding too quickly and recognize the urgency of addressing overburdened communities, we believe the end goal of any pilot is supporting projects that lead to learnings rather than strictly defined geographic boundaries. Such learnings could include validation that such make-ready programs are beneficial to ratepayers[5] and therefore that the pilot could be scaled accordingly.

As a way to narrow project scope, we suggest a focus on "public benefit vehicles" defined as owned or contracted by the government, such as transit agencies, school buses and municipal fleets. Pilot participants may choose from among different business models, including owner-operated and third-party owned-operated infrastructure, allowing users to select their best fit solution. Incentives should be available for all utility-side infrastructure costs, and rebates for all customer-side infrastructure costs, up to 90% cost reimbursement, and 100% if in a DAC. This would be equivalent to the public non-proprietary categories in the light-duty program.

[5] See for example, the analysis referenced in this recent article: https://www.canarymedia.com/articles/clean-fleets/ev-trucks-and-buses-need-costly-grid-updates-should-utilities-pay

Regardless, the goal should be to quickly establish pilots and enroll some fleets to acquire information relevant to the questions posed in the MHD barriers proceeding regarding infrastructure cost, project timelines, procurement lead times, and charging data.[6]

We echo our previous suggestion that Staff create a dedicated subprogram and funding source for electric school buses under this public benefit vehicle pilot program. We appreciate the direction of utilities to focus on assisting school districts with load serving capacity assessments, but we are becoming increasingly concerned that the infrastructure timelines do not align with the required pace of adoption in this vehicle category. Such a subprogram could expand support to grantees funded under the US EPA's Clean School Bus program, for example, and would yield important insights for other school districts in the state.

## Other Issues

### Application Process

Based on the Whitepaper, we see similarities between the current issues regarding queue management for the Make Ready Program and those that were the impetus for creating the Interconnection Technical Working Group (ITWG) and the Interconnection Policy Working Group (IPWG). Given the anticipated overall number of charging station locations and total plugs that need to be deployed in a relatively short period of time, we see value in establishing a similar group and stakeholder process to address current and future new connection requests for EVSE. That said, we note that issues to be addressed for connecting the new loads of EVSE should generally be more straight-forward than for the interconnection of distributed generation and storage because most EVSE connected under the Make Ready Program are not likely to involve electricity export. Thus, the scope of any new working group can focus on queue management and providing the right level of transparency. For vehicle-to-grid applications, the new working group can draw upon the experience of the ITWG and IPWG to work expeditiously to provide any additional recommendations for EVSE with these

[6] Case 23-E-0070, Proceeding on the Motion of the Commission to address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure.

capabilities. Given the urgency of scaling EVSE deployment, this more limited scope should enable the working group to develop recommendations for changes that can be implemented quickly to support the goals of the Make Ready Program. We recommend that this working group be convened within 30 days of a Commission order on the mid-point review and that it be directed to submit recommendations for the Commission's consideration within 90 days thereafter.

Once Program goals are met, the Commission can consider whether such a working should continue to meet, although we anticipate that there will continue to be value in having such a working group beyond the current timeframe of the Make Ready Program.

## Communication Standards

We recognize that the industry movement toward ISO 15118 and OCPP compliance has potential benefits for customers and can future-proof customer-funded assets. While we support ongoing alignment, we recommend the MRP focus on consistency among such programs across the country to ensure hardware is efficiently deployed. It is also important to recognize ongoing evolution in EV charging technology and software and management systems as well as the current state of market availability for certified products. A phased approach that requires hardware initially and then firmware might be most prudent. Moreover, communications standards are highly technical and should be established in more technical forums than via comments. Any future changes to standards should come only after being thoroughly vetted by industry, utilities, and other stakeholders.

While we support future third-party testing for OCPP 1.6, proprietary extensions should be allowed. Some EV charger units may require proprietary extensions to communicate between cloud servers and chargers; these extensions should be made publicly available so that any vehicle or customer can still use the charger. Proprietary extensions should be allowed within the context of OCPP 1.6 so that providers have the flexibility they need to successfully implement OCPP in practice.

Very few EVSE are currently formally certified and no Buy America compliant EVSE are currently listed as certified by the only organization that certifies OCPP compliance – the Open Charging Alliance.[7] Should the Commission proceed with requiring third-party certification for OCPP compliance for future EVSE we request at least one year from the order date to enable the numerous companies providing EVSE and related services time to apply and receive certification. Without an appropriate timeframe for all parties to meet this new proposed requirement, it will likely unintentionally delay critical infrastructure deployments needed to serve New Yorkers and meet the state's climate and EV deployment commitments.

We generally support adopting ISO 15118 within the program but recommend at this time that the ISO 15118 requirement remain a hardware ready-only requirement. We propose a phased approach as has been adopted in California. Currently, any chargers funded through certain California programs must be ISO 15118 "Ready" by July 1, 2023. This means that chargers must have the hardware to allow them to use 15118. However, they are not yet required to be 15118 "Enabled," which means they do not yet need to be using the 15118-communication standard. The requirement to be 15118 Enabled will come in time as the technologies, hardware, software, and firmware become more widely available. This will give time for the market to develop and adopt the necessary technologies to use this communication standard. Once the technologies are ready for widescale use, chargers that are 15118 Ready will be able to receive over-the-air updates to turn on this ability. We propose following a similar approach in New York to give the market the necessary time to adopt this protocol.

In terms of overall technical requirements, we further encourage the Commission to maintain harmony with the Federal Highway Administration's (FWHA) National Electric Vehicle Infrastructure (NEVI) standards to ensure consistency and maximum access to federal funding for transportation electrification solutions by New Yorkers. After extensive stakeholder engagement and comprehensive assessment, the FHWA intentionally decided to not require third-party certification for communication standards compliance, recognizing the current

[7] https://www.openchargealliance.org/certification/certifiedcompanies/

state of the industry and new evolving technology and standards. As they noted, "The FHWA sees value in third-party certification of OCPP but acknowledges there is currently limited capacity to accomplish it or to regulate compliance with third party certification."[8]

## Battery Energy Storage / Advanced Technologies

We support Staff's recommendation that "cost-reducing advanced technology be eligible for make-ready incentives." We agree that the primary purpose of deploying storage or other advanced technologies would be to reduce costs and improve the economics of EV charging. Staff conditioned its recommendation on the need for the technologies to provide grid and ratepayer benefits but provided only a qualitative description of what some of those benefits would be. In order for Program participants to have confidence that investments in these types of solutions would be eligible under the Program, more clarity is needed. It seems overly burdensome to require a site-specific benefit-cost analysis to assess whether or not the use of any cost-reducing advanced technologies produce "grid and ratepayer benefits." We therefore recommend that a simpler approach be developed that can be made part of the application process – one that provides confidence to the Commission that Make Ready funds will produce the desired benefits but that manages the effort required to include them in the application.

We also note here that the issue of battery storage and advanced technology eligibility under the Program is closely related to Staff's brief coverage in the Whitepaper of "power sharing", i.e., the ability to manage loads among several chargers when their aggregate nameplate charging capacity exceeds the site's utility-side supply capacity. We encourage the Commission to view "power sharing", which we discuss in more detail below, as a specific use case for onsite hardware and software solutions that would fall into this category of battery energy storage/advanced technology.

Regarding utility ownership of storage, Staff notes that the Commission is considering allowing for utility ownership in Case 18-E-0130. Consistent with our comments in that proceeding we

[8] Federal Register /Vol. 88, No. 39 /Tuesday, February 28, 2023 /Rules and Regulations 12745

do not support utility storage ownership beyond the well-reasoned criteria already established by the Commission as given on page 37 of the Whitepaper.

### Vehicle-Grid Integration (VGI)

Staff recommends the TSWG propose solutions to VGI barriers, potentially through a new pilot. While the TSWG is the place to address interconnection, other barriers (consumer education, permitting, etc.) may be better addressed elsewhere (e.g., NYSERDA). We emphasize that VGI technology is proven and commercially available today. Rather than another pilot, a specific program should be developed to support investments in bidirectional charging for school districts, fleets, or the contractors that provide fleet services. Any pilots should have a clear timeline for commercial scaling if certain metrics are met.

Staff also directs the utilities to update their VDER tariffs to define VGI as eligible for compensation under VDER. We support that but would want the opportunity to comment on those proposed updates in the Value of DER proceeding (15-E-0751).

### Performance Incentives (EAMs)

United and ACE NY have long supported New York's EAM framework as a means of better aligning utility financial incentives with desired outcomes. Generally speaking, the shared savings approach used for the Make-Ready EAM supports this by providing utilities with incentives to control programs costs, while simultaneously ensuring that customers still receive the majority of the benefits from achievement of the EAM.

Staff noted in the Whitepaper that with the exception of National Grid's DCFC plug achievement, none of the utilities met the minimum thresholds for plug deployments to have the opportunity to earn under the metric. Staff asserts that this is not necessarily an indication that the EAM is not working, and we agree that shareholder incentives should only be paid out when utility performance exceeds the agreed upon baseline levels of performance. So, while Staff's assertion may indeed be correct, the Whitepaper lacks sufficient information for stakeholders to assess this assertion. Moreover, given the significant changes being proposed

to the Program at this time, it remains unclear to us if the EAM is serving as a suitable incentive or if the targets are simply too far out of reach to effectively drive utility behavior. While we do not have a specific alternative proposal at this time, it may be valuable for Staff to share additional details related to utility performance and examine some alternatives to the current EAM design.

That said, we support Staff's recommendation to update the EAM with the revised baseline cost assumptions, and also support in principle Staff's recommendation that minimum achievement on the Transit Authority Make Ready Program also be a precondition to earn on the EAM. However, we would like to opportunity to weigh in on any specific updated EAM proposal before it is finalized.

### Power Sharing and Load-Serving Capacity Maps

We support Staff's recommendation to provide quarterly updates to load-serving capacity maps.

Power sharing technologies like Automated Load Management allow dynamic, optimized charging while maximizing use of existing grid infrastructure, which will greatly alleviate the short-term need for distribution system upgrades. Thus, consistent with our comments above on Battery Energy Storage/Advanced Technologies, we support inclusion of costs associated with the installation of hardware and software that facilitates load management solutions. Beyond additional incentives, we encourage Staff to be responsive to program designs that limit such critical technologies in unintended ways. We also encourage Staff to revise make-ready programs to fund asymmetric capacities on the customer and utility sides of the meter to ensure that customers choosing to minimize new infrastructure can still be assured they will receive the assistance commensurate with that of an unmanaged installation.

The phrase "Power Sharing", and the associated assumption by Staff that available capacity would be shared "proportionally across all EV chargers",[9] is limiting and does not reflect the

[9] Staff Whitepaper at page 53.

capabilities of load management technologies to minimize aggregate charging load while dynamically allowing EVSE to access their full nameplate capacity. We recommend that Staff adopt the terminology definition of Automated Load Management (ALM) used in the Staff Whitepaper Regarding Alternatives to the Traditional Demand Charge for Commercial Customer Electric Vehicle Charging: "actively managing load from EV charging plugs and/or other on-site electricity uses to reduce total combined demand," when considering these concepts.[10]

Using ALM across chargers at a site could have significant cost savings by avoiding utility-side infrastructure buildout. The Program should not establish a required utility-to-customer side ratio as each site will have different load management and power sharing needs. California has adopted a rule through building codes that sites using ALM should have enough panel space for a minimum of 3.3 kW for each charger. However, this rule has become a hinderance for some companies as there are sites that, through using ALM, could size panel space even lower for each EVSE and manage charging from each EVSE according to customer and site needs. Therefore, the Program should not set a cap or limit on power sharing capability and should leave this to each site to decide how to best manage power sharing. Additionally, as discussed in our response to the "Battery Energy Storage/Advanced Technologies" section, ALM technologies used to reduce, defer, or avoid infrastructure buildout should be included as eligible costs through the Program.

We further encourage Staff to revise recommendations to the Commission regarding proactive assessment of existing load capacity at school bus depots to include "identification of operators who may be able to use load management solutions to electrify using their current

[10] Department of Public Service Whitepaper Regarding Alternatives to the Traditional Demand Charge for Commercial Customer Electric Vehicle Charging, September 26, 2022, page 18, Case 22-E-0236 – Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging.

grid capacity", and to more broadly quantify how load management solutions can expand the cohort of schools who are likely to electrify without upgrades.[11]

### Data Reporting

Staff noted that the utilities had difficulty with some reporting requirements, including 15-minute interval data, and also the inability of most plugs to report if they were out of service (which Staff found particularly concerning). In general, industry standards alignment around the Federal Highway Administration's minimum standards and guidance for EV charging equipment should be mirrored in any data or collection reporting requirements for operators.

We support Staff's recommendation to convene a technical conference on this topic to further understand the challenges being faced and to explore potential solutions, including changes to reporting requirements.

## Conclusion

We appreciate the opportunity to provide input on the Make-Ready Program Midpoint Review and Recommendations Whitepaper and look forward to the Commission's order on this matter. Please do not hesitate to reach out with any questions.

[11] As Staff noted, "This collaborative work should include identification of existing grid constraints, identification of school transportation operators that can electrify fleets with current power capacity, and greater coordination to allocate Bond Act funding efficiently." See Whitepaper at page 51.