



June 17, 2020

Aida Camacho-Welch  
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Board of Public Utilities  
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## VIA ELECTRONIC MAIL

### **Clean Transportation Technologies and Solutions**

[www.calstart.org](http://www.calstart.org)

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RE: Docket No. QO20050357 - In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out

Ms. Camacho-Welch:

CALSTART is pleased to offer its comments in response to New Jersey's Electric Vehicle Infrastructure Ecosystem 2020 Straw Proposal.<sup>1</sup> CALSTART applauds the Board of Public Utilities (BPU) for advancing a framework for furthering electric vehicle (EV) adoption in New Jersey and appreciates the opportunity to participate in this ambitious and timely effort as the State embarks on a holistic process to facilitate rapid transportation decarbonization through electrification.

With this year's release of the comprehensive Energy Master Plan (EMP) and the recent passage of landmark legislation to boost EV adoption, New Jersey now has among the strongest frameworks to tackle climate change of any state in the nation. And because transportation is the single most greenhouse gas-intensive sector in New Jersey, comprising 42% of the State's emissions in 2018,<sup>2</sup> strategies to mitigate emissions attributable to that sector must be a major part of that overall policy mandate. Indeed, the State must act quickly to reach its adopted goals of 330,000 zero-emission vehicles (ZEVs) by 2025 and 2 million by 2035.

New Jersey cannot meet its ZEV, climate, and air quality goals without clear policies from the BPU that enable all EV use cases through infrastructure deployment and rate design. Significant utility investment in medium- and heavy-duty vehicle (M-HDV) charging infrastructure and shrewd rate design will be necessary to increase the trajectory of EV adoption in New Jersey, including by M-HDV fleets like freight carriers and NJ Transit.

## I. Background

CALSTART is a national not-for-profit clean transportation technology consortium, with more than 250 members all dedicated to the growth of the clean transportation industry. CALSTART works with the public and private sectors to drive innovation in the clean transportation sector, and its membership is comprised by vehicle manufacturers, parts and components suppliers, EV charging station providers, transit agencies, low carbon fuel

<sup>1</sup> New Jersey Board of Public Utilities. New Jersey Electric Vehicles Infrastructure Ecosystem 2020 Straw Proposal. Released May 22, 2020. [https://www.nj.gov/bpu/pdf/Final\\_EV\\_Straw\\_Proposal\\_5.18.20.pdf](https://www.nj.gov/bpu/pdf/Final_EV_Straw_Proposal_5.18.20.pdf)

<sup>2</sup> State of New Jersey Department of Environmental Protection. 2018 Statewide Greenhouse Gas Emissions Inventory. Released October 2018.

[https://www.nj.gov/dep/aces/pdf/GHG%20Inventory%20Update%20Report%202018\\_Final.pdf](https://www.nj.gov/dep/aces/pdf/GHG%20Inventory%20Update%20Report%202018_Final.pdf)

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producers, electric and gas utilities, and more. CALSTART has offices located in California, Colorado, Michigan, and New York.

CALSTART has maintained a Northeast regional office in Brooklyn, NY since 2013. Since that time, CALSTART has specialized in administering programs that facilitate the adoption of cleaner, more efficient vehicle technologies throughout the region. In particular, CALSTART has worked closely with the New York State Energy Research and Development Authority (NYSERDA) to design and administer incentive- and outreach-based programs to accelerate clean vehicle adoption; since 2014, CALSTART has provided technical assistance, incentive administration, and outreach support to NYSERDA to implement the New York Truck Voucher Incentive Program (NYTVIP),<sup>3</sup> a point-of-sale discount program for fleet purchasers of all-electric and alternative fuel M-HDVs. From 2017 through early 2020, CALSTART administered Charge to Work NY,<sup>4</sup> a point-of-sale incentive program providing \$4000 per port for Level 2 charging station purchases for downstate New York workplaces to support commuters in switching to EVs. CALSTART has established itself as a trusted broker in the Northeast between government agencies and the clean transportation industry, including through its leadership role in the Northeast Diesel Collaborative convened by United States Environmental Protection Agency Regions 1 and 2 and the air agencies of states in those regions.<sup>5</sup>

CALSTART is a recognized authority with respect to workplace EV charging programs and the commercialization of zero- and near-zero-emission technologies for M-HDVs. In late 2018, CALSTART launched the Global Commercial Vehicle Drive to Zero Program,<sup>6</sup> a worldwide, collaborative program to support the rapid transformation of people and goods movement to advanced clean technologies in key cities and regions across the globe. This strategy was developed by CALSTART in conjunction with the California Air Resources Board (CARB) and industry, and CALSTART will soon initiate a *Drive to Zero: Northeast* campaign to accelerate markets in the Northeastern United States for zero-emission commercial vehicle technology through a harmonized regional recipe of vehicle incentives, supportive policies, and infrastructure preparedness.

## **II. Responses to Selected Questions**

### **A. The “Shared Responsibility” Business Model for Ownership, Maintenance and Advertising of EV Infrastructure**

*1) The Board requests comment on how to treat infrastructure costs in multi-family buildings where spots are assigned to, or owned by, a single user.*

Customers who live in multi-unit dwellings (MUDs), which make up a vast number of New Jerseyans, will have a high barrier to purchasing, or sharing, an EV without charging infrastructure installed in parking structures at or near their buildings. California and other states have designed MUD-specific incentive programs to assist building owners in installing these chargers, which can have especially high upfront costs in older buildings. The BPU should work with other state and local agencies to ensure that chargers are

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<sup>3</sup> NYSERDA. <https://nyserda.ny.gov/truck-voucher-program/>

<sup>4</sup> <https://www.chargetoworkny.com/>

<sup>5</sup> See CALSTART presentations listed on the Northeast Diesel Collaborative website:

<https://northeastdiesel.org/>

<sup>6</sup> <https://globaldrivetozero.org/>



installed in all new MUDs with more than four units where parking is already included in the project. The BPU should consider how to incentivize neighborhood “charging hubs” that utilize both fast charging (DCFC) and Level 2 charging. For new construction, California is tackling this issue through the statewide building code and creating an EV-ready code requirement, recognizing that it is generally exponentially cheaper to install EV infrastructure at the time of construction vs. retrofitting parking at MUDs. At a sub-state level, leading municipalities such as Atlanta,<sup>7</sup> Chicago,<sup>8</sup> and San Francisco<sup>9</sup> have in recent years introduced or tightened “EV-ready” ordinances to require greater infrastructure preparedness at MUDs.

## **B. Process for Making a Location Charger Ready**

*1) EDC would have twelve (12) months from the date of the request to make a site Charger Ready. Staff anticipates that any delay greater than 12 months would result in reduced EDC earnings on that portion of the Charger Ready infrastructure, unless an appeal is granted by the Board. Staff requests comment on how this should be handled.*

CALSTART’s experience with make-ready infrastructure indicates that processes such as interconnections and permitting can take up to 18 months. The Straw Proposal notes that EDCs would make a location Charger Ready upon request from an EVSE Infrastructure Company or a state, local, or municipal entity. However, the speed of the process often depends on external factors like the duration of the local permitting process, which can delay the installation of interconnections. It may not be fair to penalize EDCs for extended timelines in these circumstances, but it may be appropriate to provide an incentive to ensure that interconnections are completed as quickly as possible, since that is the element that the EDC can control.

## **C. Ensuring Equitable Distribution of EVSE**

*1) Staff specifically requests comment on how to identify Equity Areas, how to define when a market is not sufficiently mature to drive investment, how long to wait for the market to respond, or whether certain communities should be immediately identified (based on Census Tract or other data) as areas where additional financial support may be necessary.*

Efforts and investments that provide community access to EVs or appealing mobility options can more effectively address equity and mobility access than solely ensuring the level distribution of EV chargers throughout the state. Given financial constraints, funding may be better spent by ensuring that all communities have access to clean mobility options, such as electric transit buses and school buses, community electric carshare programs, or on-demand electric shuttle programs. Accelerating the use of electrified transportation in and around these communities is key to achieving the state’s environmental justice and air quality goals. The provision of more EV chargers in equity areas does not necessarily

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<sup>7</sup> [http://atlantacityga.iqm2.com/Citizens/Detail\\_LegiFile.aspx?MeetingID=2068&ID=13626](http://atlantacityga.iqm2.com/Citizens/Detail_LegiFile.aspx?MeetingID=2068&ID=13626)

<sup>8</sup>

[https://www.chicago.gov/city/en/depts/cdot/provdrs/conservation\\_outreachgreenprograms/news/2020/april/chicago-city-council--approves-ordinance-to-increase-chicago-s-e.html](https://www.chicago.gov/city/en/depts/cdot/provdrs/conservation_outreachgreenprograms/news/2020/april/chicago-city-council--approves-ordinance-to-increase-chicago-s-e.html)

<sup>9</sup> <https://sfmayor.org/article/mayor-lee-signs-new-ordinance-make-san-francisco-electric-vehicle-ready>



increase equity for residents—equity in clean mobility can take many different forms and address the communities needs as they see them.

CARB’s Clean Mobility Options (CMO) Voucher Pilot Program<sup>10</sup> in California, which CALSTART administers, is the leading example of a state investing in access for disadvantaged communities to shared, zero-emission modes of transportation. CMO explicitly aims to address historical patterns of urban planning that have pushed low-income individuals into neighborhoods without robust transit access and increase car-dependency—a cycle that is effectively a poverty trap. By empowering communities to identify their own mobility needs and receive grants to implement cutting-edge shared mobility solutions, CMO enhances mobility access and associated economic opportunity for some of California’s most vulnerable populations. A similar program in New Jersey could effectively enhance the State’s burgeoning portfolio of clean mobility investments while advancing critical objectives relating to equity and environmental justice.

#### **D. Rate Reforms Designed to Encourage Adoption of Electric Vehicles**

*2) Straw directs each EDC to either waive demand charges associated with EV charging or develop a rebate methodology that ensures that the effective \$/kW-hour rate remains below a specified “set point.” Staff requests feedback on the best way to achieve demand charge reductions.*

CALSTART is supportive of waiving demand charges associated with EV charging, at least temporarily, and the development of a rebate methodology while the State considers more appropriate permanent rate designs for various types of EV charging as it learns more about the corresponding load patterns. We find that the most important rate design principle to speed EV adoption is to ensure that the costs of charging a vehicle can be easily understood by customers of all types, and that charging a vehicle should be cheaper on a per-mile basis than fueling one with gasoline or diesel. For businesses looking to electrify fleet operations, operational costs associated with charging are critically important, making it imperative that EV charging be cheaper than diesel fueling.

Incumbent rates can be a key barrier to public charging station deployment, fleet adoption of EVs, workplace charging, etc. Generally, while home charging is an affordable option, it is not available to all consumers. Fleets will be disincentivized to buy EVs in the presence of large demand charges. If New Jersey were to provide optional rates that align well with grid constraints and that accommodate the low load-factor of EV charging, this could remove barriers to EVSE installation and EV adoption by various types of users.

The BPU should ensure that commercial EV adoption is cost-effective by requiring EDCs to file programs aimed at making cost-based, technology-neutral commercial rates available to EV customers. The BPU should consider additional options to mitigate other impacts of charging, such as managed charging strategies (to right-size infrastructure build-out) and time-variant (e.g., time-of-use) pricing to minimize contributions of EVs to peak load.

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<sup>10</sup> <https://www.cleanmobilityoptions.org/>



California has been a prime example of how rate designs and utility programs can rapidly expand EV adoption. Pacific Gas & Electric offers a new optional commercial EV rate, that replaces demand charges with a “subscription rate” and Time-of-use pricing, and the utility must track costs and revenues for this class over time to consider modifications.<sup>11</sup> Alternatively, General Service rates in New Jersey could be modified to send customers more precise signals about when to charge, or that include components such as demand limiters that enable lower load-factor accounts. Examples of utilities that offer technology-neutral tariffs with components like demand limiters include Xcel Minnesota, Dominion Energy, Madison Gas & Electric, and Ameren Illinois.

### **III. Recommendations for Addressing Medium- and Heavy-Duty Vehicles**

CALSTART is disappointed that the Straw Proposal does not discuss commercial EVs and the development of supportive infrastructure for commercial EVs. New Jersey’s freight and goods movement activity is among the greatest in the country, and accordingly the positive economic and environmental benefits commercial EVs can bring to the state are immense. New Jersey cannot meet its climate mandates for clean air and environmental justice goals without transforming all classes of vehicles. Lower-income communities in New Jersey disproportionately shoulder the burden of diesel pollution, and cleaner trucks and buses are the starting point for cleaner air in urban areas. What is more, New Jersey’s environmental justice communities are disproportionately affected by tailpipe pollution from commercial vehicles, as they rely more heavily on public transportation and are often surrounded by major highways and other roadways heavily trafficked by commercial vehicles.

Through New Jersey’s participation in Regional Greenhouse Gas Initiative (RGGI), the state is allocating significant funds to accelerate the transition to electric transportation. The State has taken the bold and commendable decision to allocate 75% of RGGI auction revenues from 2020 through 2022 toward catalyzing clean and equitable transportation. Specifically, the New Jersey Economic Development Authority (NJEDA) is expected to allocate 75-80% of its allocation for industrial, commercial and institutional entities to this initiative, including the promotion of EV adoption by commercial vehicle fleets.<sup>12</sup> Similarly, the New Jersey Department of Environmental Protection (NJDEP) administers the State’s \$76 million allocation of funds from the federal Volkswagen Settlement and is focusing on funding vehicle projects that replace inefficient diesel engines with cleaner or all-electric propulsion systems.<sup>13</sup> If the State is to invest significant sums in assisting commercial and industrial businesses to accelerate their transition to EV fleets, the BPU’s infrastructure planning should complement vehicle investments being prioritized by partner agencies.

CALSTART is actively involved in the transformation of the commercial vehicle sector to zero-emission technologies. EV options are now commercially available across a wide

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<sup>11</sup> PG&E. [https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC\\_SCHEDS\\_BEV.pdf](https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_SCHEDS_BEV.pdf)

<sup>12</sup> State of New Jersey Department of Environmental Protection. RGGI Strategic Funding Plan: Years 2020 through 2022. Released April 2020. <https://nj.gov/rggi/docs/rggi-strategic-funding-plan.pdf>

<sup>13</sup> State of New Jersey Department of Environmental Protection. Beneficiary Mitigation Plan For the Volkswagen Mitigation Trust. Released December 13, 2018. <https://www.state.nj.us/dep/vw/BMPfinal.pdf>



variety of M-HDV types, including transit, school, and shuttle buses, cargo vans, step vans, box trucks, yard tractors, sanitation trucks, and heavy-duty regional haul trucks. CALSTART's Zero-Emission Technology Inventory (ZETI) shows 96 medium- or heavy-duty EV models that are available currently in the United States, a figure that is projected to more than double in the next year.<sup>14</sup> Hundreds more commercial EV models will be available in the next 3-4 years.

The charging needs of these fleets will be significant: heavy-duty vehicles, in particular, may require high-speed charging of several hundred kilowatts per charger concentrated at a common site. Planning to serve the needs of electric fleets will take many years, so now is the time to send clear signals to this segment of the EV market.

For school districts, which may warrant specific attention by utilities, infrastructure is a crucial component of purchasing an electric school bus. Based on previous experiences, including the biggest deployment of electric school buses in North America, we recommend the utilities develop program proposals that would allocate a minimum of \$10,000 per electric school bus for charging infrastructure.

CALSTART recommends that the BPU immediately provide high-level guidance to the utilities on developing M-HDV charging programs to support commercial fleet electrification, and that utilities develop and file program proposals within the next twelve months. As an alternative, we recommend that BPU convene a workshop to explore best practices for commercial fleet programs and we would be pleased to speak at this event as well as to recruit industry participation.

#### **IV. Conclusion**

CALSTART is pleased to offer its suggestions in response to the strategies and questions posed by the BPU as it seeks to accelerate market transformation for clean transportation in New Jersey. We hope to be a resource to the BPU and partner agencies and look forward to the implementation of this transformative framework.

Sincerely,

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<sup>14</sup> CALSTART. Zero-Emission Technology Inventory (ZETI).  
<https://globaldrivetozero.org/tools/zero-emission-technology-inventory/>