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January 24, 2023

SUBMITTED ONLINE
Carmen Diaz, Acting Secretary
New Jersey Board of Public Utilities
Post Office Box 350
Trenton, New Jersey 08625

Re: Docket No. QO21060946 – In the Matter of Medium and Heavy Duty Electric Vehicle Charging Ecosystem

Dear Acting Secretary Diaz:

Environmental Defense Fund ("EDF") submits this comment on behalf of itself and CALSTART to New Jersey Board of Public Utilities ("Board" or "BPU") Docket No. QO21060946, In the Matter of Medium and Heavy Duty Electric Vehicle Charging Ecosystem. As directed in the Notice dated December 22, 2022 these comments are submitted to the docket before 5:00pm ET on January 24, 2023, and thus are timely filed.

Respectfully submitted,

Cole Jermyn

Cole Jermyn

COMMENTS OF ENVIRONMENTAL DEFENSE FUND AND CALSTART ON REVISED STRAW PROPOSAL FOR THE MHD EV CHARGING ECOSYSTEM

Docket No. QO21060946 – In the Matter of Medium and Heavy Duty Electric Vehicle Charging Ecosystem

I. Introduction

Transforming the medium- and heavy-duty vehicle sector from internal combustion of fossil fuels to non-emitting technologies is essential for any strategy to avert the worst impacts of climate change and to advance public health and justice, especially in disadvantaged communities. Given the extent of our society's dependence on diesel fuel and the historic disregard for the profound environmental and public health harms associated with diesel emissions, this transformation is no small challenge. New Jersey has recognized this, setting ambitious goals for reducing both greenhouse gas emissions and local air pollution generally,[1] and transitioning to zero-emissions medium and heavy-duty vehicles ("MHDVs") in particular.[2] But making this transition a reality will require deployment of charging infrastructure, and preparation of the electric grid, at a scale sufficient to meet New Jersey's important goals.

The good news is the technology has arrived.[3] Trucks and buses that are entirely without tailpipes are available for a large and growing range of use cases, and from a vehicular standpoint, the pathway to a stable climate and clean air is reasonably clear. As daunting as the challenges might be, the most promising approach will be to look at these transformational needs together, because therein lies opportunity. Electric trucks and buses are a significant new load, but they are also well suited to pairing with on-site renewables and fixed batteries, and the vehicles themselves can be harnessed to provide grid-level storage benefits at orders of magnitude lower cost than conventional batteries. This is also an unprecedented time in history for federal funding specific to zero emissions transportation and more model availability than

[1] *See* Global Warming Response Act of 2009, N.J. STAT. ANN. §26:2C-37, *et seq.* (2009); New Jersey Board of Public Utilities, *2019 New Jersey Energy Master Plan* (Jan. 2020).
[2] *See* Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding (July 14, 2020), *available at* https://www.nescaum.org/documents/multistate-truck-zev-governors-mou-20200714.pdf; Advanced Clean Trucks Program and Fleet Reporting Requirements, 53 N.J.R. 2148(a) (Dec. 20, 2021).
[3] *See Zero-Emission Technology Inventory*, Global Commercial Vehicle Drive to Zero, https://globaldrivetozero.org/tools/zeti/ (cataloging commercially available zero-emission MHDVs).

ever before.[4] New Jersey was an early leader in passing EV legislation in 2020 and adopting the Advanced Clean Trucks rule in late 2021.[5] However, progress toward a BPU framework for MHDV electrification has been largely stalled since October 2021. CALSTART and EDF hope that with the updated straw proposal currently under consideration (the "Revised Straw Proposal," as further described in the procedural history section of these comments), New Jersey can resume its leadership in the transition to zero emission vehicles.

EDF and CALSTART's top-level comments on the Revised Straw Proposal can be summarized as follows:

- The Revised Straw Proposal makes significant improvements over the earlier medium- and heavy-duty (MHD) straw proposal, issued in June 2021, including in its consideration of New Jersey's clean air and ZEV goals, its inclusion of some support for private fleets, and its recognition of the value of DERs to EV charging customers and the grid as a whole.
- The Revised Straw Proposal includes burdensome requirements for private fleets to participate in electric distribution company ("EDC") programs that may significantly limit the value of these programs to the MHDV sector. Among other things, a more targeted managed charging proposal would better balance the feasibility of implementation with grid and ratepayer impacts.
- The Revised Straw Proposal is silent on the issues of charging standards and proactive utility planning, two things that are critical for maximizing MHDV electrification, minimizing ratepayer impacts, and avoiding stranded assets.
- The Revised Straw Proposal wrongly omits reporting requirements for the EDCs and customers receiving make-ready support. These requirements are necessary for ensuring programs are meeting their goals and are effectively spending ratepayer dollars, and cannot be left to the EDCs to set.
- The Revised Straw Proposal fails to include important directives for the EDCs to complete robust outreach to, and engagement with, community groups and fleets that will be affected by their programs.

We thank you for the opportunity to submit these comments.

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[4] *See id.*

[5] New Jersey S2252 (Signed Jan 17, 2020); Advanced Clean Trucks Program and Fleet Reporting Requirements, 53 N.J.R. 2148(a) (Dec. 20, 2021).

II. Interests of the Parties

Environmental Defense Fund ("EDF") is a membership organization whose mission is to preserve the natural systems on which all life depends. Guided by science and economics, EDF seeks practical solutions to resolve environmental problems, using the power of markets to speed the transition to clean energy resources. EDF has been focused on driving the adoption of clean trucks and buses for over 20 years, including advocacy before state and federal environmental regulators, as well as utility regulators in several states, where EDF has advocated for charging infrastructure programs and business models that are cost-effective, beneficial for the grid and the environment, and equitable. EDF marries its extensive background working towards a transformation of the medium- and heavy-duty vehicles ("MHDV") sector with a robust history of engagement focused on ensuring a clean, cost-effective, and equitable utility energy system. In multiple states and in federal fora, EDF has advocated for reductions in pollution associated with these vehicles, as well as the build-out of a market and electric grid that give intermittent renewable resources an opportunity to thrive in the near term—while also providing the additional reliability and resiliency needed to prepare the electric system for a high-renewables future. Here in New Jersey, we have advocated, in various matters before the BPU as well as in other State fora, for robust vehicle electrification and charging infrastructure deployment, as well as efficient electric rate designs that optimize environmental outcomes while minimizing costs.

CALSTART is a nonprofit organization working nationally and internationally with businesses and governments to develop clean, efficient transportation solutions. CALSTART has offices in New York, Michigan, Colorado, and California, as well as industry partners worldwide, and has more than 300 member companies and agency innovators working to build a prosperous, efficient, and clean high-tech transportation industry. CALSTART is a recognized authority with respect to workplace electric vehicle ("EV") charging programs and the commercialization of zero- and near-zero-emission technologies for MHDVs. CALSTART has engaged in utility proceedings in Michigan, New York, Maryland, California and many other states. CALSTART has maintained a Northeast regional office in Brooklyn, NY since 2013, and is currently implementing 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, regulations, supportive policies, and infrastructure preparedness. 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.

III. Procedural History

In May 2020, the BPU issued the New Jersey Electric Vehicles Infrastructure Ecosystem 2020 Straw Proposal (the "2020 Straw Proposal"). This document opened with a statement of the BPU's commitment to Governor Murphy's stated goal of having 330,000 electric vehicles on New Jersey's roads by 2025.[6] For the most part, it did not address MHDV electrification at all, although it proposed that the minimum filing requirements for EDCs would include some MHDV-relevant information, including a list of airports, seaports, bus and rail terminals owned and/or administered by entities like the Port Authority or New Jersey Transit or other public carrier, and proposals for electrification of school bus fleets. EDF and CALSTART participated in the stakeholder process that followed this filing, and each of our organizations emphasized the need for the BPU to address MHDVs in its Order.[7] Unfortunately, the Final Order in that proceeding stepped back from even the most modest efforts to support MHDV electrification, stating with respect to minimum filing requirements that those would pertain to light-duty vehicles only, because "[w]hile a robust EV Infrastructure Ecosystem will eventually involve all types of EVs including light-, medium- and heavy-duty, in an effort to advance the policy objectives in the desired timeline, Staff recognizes that focusing on light-duty vehicles initially is sensible."[8] The order went on to specify a procedural pathway for MHDV electrification, as follows:

> "In addition, Staff recognizes that equity is closely tied to the electrification of the medium- and heavy-duty sector. As a result, there will be a separate straw proposal, currently scheduled for Fiscal Year 2021, on medium- and heavy-duty electrification, which may address electric transit and school buses, as well as other methods to ensure

[6] QO20050357, *In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out*, New Jersey Electric Vehicles Infrastructure Ecosystem 2020 Straw Proposal, at 4 (May 18, 2020).
[7] QO20050357, *In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out*, Comments of Environmental Defense Fund (June 17, 2020); Comments of CALSTART (June 17, 2020).
[8] QO20050357, *In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out*, Order Adopting the Minimum Filing Requirements for Light-Duty, Publicly-Accessible Electric Vehicle Charging, at 17 (Sep. 23, 2020).

equitable electrification."[9]

On June 30, 2021, the BPU issued the long-awaited New Jersey Electric Vehicles Infrastructure Ecosystem 2021 – Medium and Heavy Duty Straw Proposal issued in June 2021 (the "2021 Straw Proposal" or "Original MHDV Straw Proposal"), and then held a robust stakeholder process throughout August and September 2021, culminating in an October 5 filing deadline for comments.[10] EDF and CALSTART followed the stakeholder process closely, and representatives of each of our organizations participated in stakeholder panels, where we focused on practical realities of MHDV vehicle and fleet operations and needs, rate design as a component of vehicle-grid integration and the critical connection between managed charging, behind the meter distributed energy resources, and affordable grid decarbonization. Overall, our respective written comments to the 2021 Straw Proposal argued that while the 2021 Straw Proposal incorporated some elements that are vitally important, some critically important elements were missing, with the result that overall it would not successfully lay the groundwork for transportation/freight sector transformation at the scale that New Jersey is seeking.

On December 22, 2022, the BPU issued the revised version of the New Jersey Electric Vehicles Infrastructure Ecosystem – Medium and Heavy Duty Straw Proposal (the "2022 Straw Proposal" or "Revised Straw Proposal").[11] The stakeholder process established for the 2022 Straw Proposal is far more limited than that which followed the issuance of the 2021 Straw Proposal, consisting solely of a single hearing on January 17, 2023, and a January 24, 2023 opportunity to file written comments, to which this filing is a response.

IV. Significant Improvements over the 2021 Straw Proposal

In the year and a half that transpired between the issuance of the 2021 Straw Proposal and that of the 2022 Straw Proposal, the policy landscape for MHDV electrification matured considerably in both New Jersey and at the federal level. In New Jersey, the Department of Environmental Protection ("DEP")'s December 2021 adoption of the Advanced Clean Truck ("ACT") Rule was a salient development, one that firmly aligned New Jersey with other leading

[9] *Id.* at 7.
[10] QO21060946, *In the Matter of Medium and Heavy Duty Electric Vehicle Charging Ecosystem*, Notice of public meeting to discuss New Jersey Electric Vehicles Infrastructure Ecosystem 2021 – Medium and Heavy Duty Straw proposal (July 2, 2021.
[11] The pages of the 2022 Straw Proposal are not expressly numbered; page references in these Comments are based on the pagination of the pdf file.

states and sent a clear signal to the marketplace. New Jersey's ACT Rule requires the sale of zero-emission MHDVs, beginning with Model Year 2025 (which begins in 2024). Versions of the ACT Rule have been adopted by seven (7) states: California, Washington, Oregon, New York, New Jersey, Massachusetts, and Vermont.[12]

At the federal level, key developments include landmark legislation, including the Infrastructure Investment and Jobs Act ("IIJA") and the Inflation Reduction Act ("IRA"). The IRA contains significant incentives to accelerate the adoption of zero-emission transportation technologies, including: an extension of the light-duty zero-emission vehicle credits; a new tax credit for zero-emission commercial vehicles; a new production tax credit for U.S. battery manufacturing; additional funding for the Environmental Protection Agency ("EPA") and other federal agencies for clean transportation programs; and funding for the United States Postal Service to transition its fleet to zero-emission vehicles.[13] IIJA presents major funding opportunities for ZEVs including: $7.5 billion for infrastructure ($5 billion formula funding via NEVI and $2.5 billion in competitive funding), $1.2 billion for Lo-No Emission Bus Funding, $5 billion for Zero Emission school buses, and increased Congestion Mitigation and Air Quality Improvement (CMAQ) Program funding that can be used for a variety of ZEV-related investments such as point-of-sale voucher incentives, needs assessments, depot charging incentives, and zero emissions zone pilots.[14] Additionally, the EPA recently proposed and finalized new standards for Heavy Duty Vehicles that will take effect beginning with Model Year 2027.[15]

Against this backdrop, the 2022 Straw Proposal incorporates some key changes that reflect an understanding that the shift to non-emitting medium- and heavy-duty vehicles is now underway in earnest, and an emerging understanding of how the operational realities of this shift are fundamentally different from what is involved in electrifying light-duty vehicles. These changes reflect significant areas of improvement over the 2021 Straw Proposal.

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[12] Moe Khatib, *Clean Trucks from Coast to Coast*, Atlas EV Hub (Nov. 28, 2022), https://www.atlasevhub.com/clean-trucks-from-coast-to-coast/.
[13] Congressional Research Service, *Inflation Reduction Act of 2022: Incentives for Clean Transportation* (Sep. 6, 2022), https://crsreports.congress.gov/product/pdf/IN/IN12003.
[14] CALSTART, *Investment Strategies to Accelerate Clean Transportation in the Northeast*, at 2 (May 31, 2022), https://calstart.org/wp-content/uploads/2022/05/Investment-Strategies-for-NE-WP.pdf.
[15] Final EPA Standards for Heavy-Duty Vehicles to Slash Dangerous Pollution and Take Key Step Toward Accelerating Zero-Emissions Future, U.S. EPA (Dec. 20, 2022), https://www.epa.gov/newsreleases/final-epa-standards-heavy-duty-vehicles-slash-dangerous-pollution-and-take-key-step.

A. Some harmonization with statewide goals and the actions of other agencies

EDF's comments on the 2021 Straw Proposal noted a distressing lack of evidence that the Proposal was in any way in alignment with state MHDV electrification policy, including the ACT Rule, which the DEP was then preparing to adopt. We cautioned that:

> Unfortunately, the [2021 Straw Proposal] is silent on the ACT. Failure to align the BPU's policies with the requirements of the ACT could mean that fleet owners are forced to purchase electric vehicles without sufficient charging infrastructure in place, or even that the ACT's purpose of requiring a share of MHDV vehicle sales to be electric MHDVs after a date certain could be frustrated. Instead of BPU and DEP creating independent MHDV policy frameworks in separate siloes, which will mean higher costs and worse outcomes for fleet owners and ratepayers alike, BPU has an opportunity to model leadership by actively working with DEP and other relevant state agencies to harmonize their respective policy approaches. Effective interagency engagement, early and often in the MHDV electrification process, will mean the opposite, with faster, cheaper electrification benefitting all.[16]

In stark contrast to the 2021 document, we are very pleased to see that the 2022 Straw Proposal evinces a strong awareness of state policy and the need to coordinate with other state agencies, including the DEP, whose ACT Rule is specifically named in the document. This represents real progress toward ensuring that the EDCs' approach to charging will be reasonably well aligned with what the vehicle marketplace requires. It will be important for such interagency engagement to be ongoing and iterative, to ensure that agencies' respective programs are mutually supportive where anticipated, and enable course corrections if and when they wind up out of sync. This includes aligning goals with possible future DEP regulations such as the Advanced Clean Fleet Rule currently being finalized in California,[17] and coordinating program requirements with that of the New Jersey Economic Development Authority ("EDA")'s Zero-Emission Incentive Program ("NJ ZIP"). NJ ZIP, funded with Regional Greenhouse Gas Initiative ("RGGI") proceeds, is the EDA's voucher program for Medium and Heavy Duty Zero-Emission Vehicles. The program was created in 2021 and expanded later that year.[18] Finally, the Straw and the

[16] EDF comments on 2021 straw at 9.
[17] *Advanced Clean Fleets*, California Air Resources Board, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets.
[18] *NJEDA Expands NJ ZIP Program to Support Additional Zero-Emission Vehicle Purchases*, New Jersey Economic

EDC's programs should coordinate with activities stemming from the BPU's Fall 2022 Order directing the use of RGGI proceeds for a new MHDV charging program.[19]

B. Support for private fleets, with a focus on overburdened municipalities

In both EDF's and CALSTART's comments on the 2021 Straw Proposal, we identified the absence of any provision for private fleets as both a serious misstep and a symptom of a larger problem: failure to appreciate the fundamental nature of MHDV electrification and the perspective of the customers who will be undertaking it.[20] The Revised Straw Proposal reflects significant progress in this area, insofar as it recognizes at a minimum the need for providing support to operators of MHDV fleets whose vehicles are operating in Overburdened Municipalities.[21] Expanding the proposal to cover more than just public charging and public fleets appropriately reflects the reality that private fleets reliant on private depot charging are a significant fraction of the MHDV sector and addressing the pollution from this sector, both local air pollution and greenhouse gases, necessitates a program that addresses private depot charging needs. But, as discussed further in section V.B of these comments, the Revised Straw Proposal still does not do enough to address the electrification needs of privately owned MHDVs that don't fall into the Proposal's narrow eligibility categories.

C. Support for DERs

EDF's 2021 comments discussed the value of distributed energy resources ("DERs") including solar and battery storage for shifting load and minimizing peak demand, and recommended that "it would be wise to allow some forms of on-site renewables and storage to be eligible for inclusion in make-ready costs."[22] The Revised Straw Proposal significantly improves on the 2021 Straw Proposal, proposing to "Allow a project developer to request that the EDC evaluate the Make-Ready and distribution system upgrade costs without the load-modifying technologies and provide up to the 'but for' level of funding for the project, including all load-modifying technologies."[23] By allowing fleets to receive these incentives solar, storage,

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Development Authority (Sep 29. 2021), https://www.njeda.com/njeda-adds-to-nj-zip-program-to-support-additional-zero-emission-vehicle-purchases/.

[19] QO22080479, *In the Matter of the Establishment of Programming for the 2020-2022 RGGI Strategic Funding Plan*, Order Establishing a new Medium- and Heavy-Duty Charging Program using funds from the Regional Greenhouse Gas Initiative (Oct. 26, 2022), https://nj.gov/bpu/pdf/boardorders/2022/20221026/8B%20ORDER%20RGGI%20EV%20Program.pdf.

[20] *See* EDF Comments on 2021 Straw Proposal at 5-7; CALSTART Comments on 2021 Straw Proposal at 4-7.

[21] 2022 Straw Proposal at 16.

[22] EDF comments on 2021 straw at 14.

[23] 2022 Straw Proposal at 20.

automated load management ("ALM") tools, and other "load-modifying technologies," the proposal encourages fleet owners to leverage these tools to lower their charging costs while mitigating the grid impacts of unmanaged charging, all without dedicating additional ratepayer dollars above what would be spent on make-ready without this option. As discussed further in Section V.C.1 of these comments, deployment of these technologies alongside their charging infrastructure may be essential for some fleets to manage their load. In this context, the Revised Straw's proposal for DERs represents an improvement over the 2021 Straw Proposal, which lacked any consideration of support for DERs, and should be retained in the Board's Order.

D. Technical support for all fleets

The Revised Straw Proposal retains the language of the 2021 Straw Proposal on technical assistance by the EDCs for public and private fleets, and expands the eligible recipients to include publicly-accessible charging sites over 500 kW.[24] The Straw states that this assistance would be designed "to ensure that MHD and public charging is well-planned and appropriate to fulfill the needs of the fleet and the public. Such planning should address timing and size of charging, incorporation of storage to reduce grid impact and ensure resiliency, and address any interconnection issues that may arise."[25] We support making such assistance widely available to commercial charging customers, including all fleets. In order to adequately address the needs of fleets, including small fleets who often lack dedicated fleet managers, we recommend this language be modified to clarify that the EDCs' filings must include advisory services that cover the following: discussion of commercially-available EV models and chargers that meet the fleet's operating needs; analysis of DERs including storage, solar, and ALM as tools for reducing grid impact and ensuring resiliency, rate analysis that estimates expecting charging costs and the potential of managed charging to mitigate these costs, and proactive efforts to avoid interconnection delays before they arise. In addition, given the EDCs' central role in the shared-responsibility model that Staff proposes, they are well-positioned to share information with fleets on available programs and incentives. Technical assistance programs are proven to be helpful tools for fleet education and acceleration of electrification goals; a best practice includes tying technical assistance programs to available vehicle or EVSE incentives. An innovative approach to technical assistance and incentives may be to structure incentives such that private fleets who

[24] 2022 Straw Proposal at 6.
[25] *Id.* at 15.

participate in a technical assistance program receive a higher percentage of available incentives. Incentives should be structured with straightforward requirements that avoid limitations that have limited program accessibility in other jurisdictions, such as scrappage requirements; while requiring removal of older and higher polluting diesel engines is a worthy goal, this often provides a barrier to adoption.

The Revised Straw Proposal states that private parties, not the EDCs, would be "primarily responsible for installing, owning and/or operating, and marketing MHD EVSE to customers."[26] We agree that installation, ownership, and operation of EVSE should not be a primary responsibility of the EDCs, but marketing includes proactively sharing information on the programs and incentives available to support the installation of EVSE serving MHDVs, and the ultimate order should make clear that the EDCs are not handcuffed in their ability to engage in this marketing and education on their offerings. Letting the EDCs wait for fleets to reach out to them—rather than identifying, contacting, and sharing information with potential program participants—is likely to slow the achievement of the State's electrification goals by only supporting those customers who are independently interested in electrification. We recommend that the EDCs be required to include in their filings plans and strategies to identify and contact fleets in their service territory to share this information on options for electrification, rather than simply waiting for fleets to reach out. This proactive identification of—and outreach to—fleets is also an important part of grid planning, as discussed further below in Section V.D.

V. Areas where Questions Remain

A. The Straw still lacks a goal for MHDV infrastructure deployment

EDF's written comments on the 2021 Straw Proposal made the following observation on the lack of stated goals:

> [T]he absence of any stated goals or timetable for preparing the electric system for the arrival of electric MHDVs at scale means that there is no yardstick for success or failure, nor to identify whether EDCs are progressing at an appropriate pace, nor to identify the need for course corrections. In other words, the absence of any goals or timeline means that under the BPU's Straw Proposal, the EDCs could conceivably make only de minimis steps in the direction of electric charging infrastructure over any foreseeable timeline, and

[26] 2022 Straw Proposal at 5.

> although New Jersey's statewide efforts to meet climate and public health goals would be frustrated, neither the EDCs nor the Board could be said to be falling short in any particular respect.[27]

Despite the 2022 Straw Proposal incorporating significant improvements over the 2021 Straw Proposal, including a nod toward New Jersey policy commitments such as the ACT Rule, the 2022 Straw Proposal still does not specify a goal or timetable for preparing the electric system for any particular level of electrification. In fact, the Revised Straw Proposal reiterates that "the Board is committed to Governor Phil Murphy's stated goal of having 330,000 light-duty EVs registered in New Jersey by 2025"[28]—which while laudable is not relevant to this proceeding—while refraining from making any comparable commitment to any particular level of MHDV deployment. While we appreciate that the anticipated level of MHDV deployment to which New Jersey has committed may not conventionally be expressed as a number of vehicles, an express Board commitment to some measurable level of achievement, such that EDC programs can be evaluated to ensure that they are scaling up at the pace that matches vehicle deployments, is essential to success.

B. While the focus on overburdened municipalities is laudable, the full exclusion of fleets that don't operate in those areas is problematic

The 2021 Straw Proposal limited the EDCs' support for private fleets to providing technical assistance to those fleets interested in electrification. Several parties, including EDF and CALSTART, recommended that this be modified to include support for make-ready infrastructure for private fleets charging at private depots, and highlighted theimportance of private depot charging for the MHDV sector, the economics of installing this infrastructure, and the societal benefits of supporting the sector's electrification.[29] The Revised Straw Proposal does improve on this original proposal, instead allowing the EDCs to provide support for 50% of make-ready costs up to $200/kW of charger capacity.[30] Fleets receiving this support would be subject to several requirements, as discussed further below in Section V.C. But, as a threshold limitation, this support would only be available to private fleet depot charging where the fleet is "located in or primarily operating in" Overburdened Municipalities, where "primarily operating

[27] EDF Comments on 2021 Straw Proposal at 5.
[28] 2022 Straw Proposal at 4.
[29] *See* EDF Comments on 2021 Straw Proposal at 5-7; CALSTART Comments on 2021 Straw Proposal at 4-7.
[30] 2022 Straw Proposal at 18.

in" means that at least 50% of the vehicle miles traveled ("VMT") of the vehicles using the charging infrastructure.[31] This restriction, while well-intentioned, is overly restrictive given New Jersey's clean air and ZEV goals and will likely exclude many fleets that will not be able to electrify without make-ready support. We refer to EDF's and CALSTART's comments on the 2021 Straw Proposal for further discussion of the unique characteristics of MHDV fleets that makes private depot charging so important, and fleets' economic decision-making that should inform the limitations of the Board's Order.

Not only does the proposed restriction wrongly exclude a large portion of private fleets, it will also be incredibly burdensome for both fleets to navigate and the EDCs to administer. Many fleets charge more than one vehicle on a charger, or use a mixture of both level 2 chargers and DCFCs depending on the day's operational needs. Creating a requirement tied to the specific charging infrastructure used by the vehicles would create significant complexity in tracking total VMT of those vehicles. This is particularly true if the fleet receives make-ready support at one time, but also installs separate charging infrastructure before or after without make-ready support or relies occasionally on chargers other than the particular ones it had installed pursuant to an EDC program. Under the Revised Straw's framework, it is not self-evident that emissions-free VMT powered by chargers that were installed without EDC-supported make-ready, for example, would even be included in calculating the overall fleet VMT, making this requirement an administrative nightmare for any fleet manager to track and EDC to verify.

The Revised Straw also does not specify how the VMT would be tracked. Direct tracking of the vehicles themselves through transponders would likely be the most accurate, but creates an additional cost for those customers whose vehicles do not come with such transponders as standard. Up-front attestations would be the easiest to administer, but would not ensure compliance. If such a program design decision is left to the EDCs to decide, they may create starkly divergent requirements in different parts of the state, a challenge for those fleets operating in and between multiple EDC's territories. And, a single cutoff point of 50% of VMT risks creating a stark incentive cliff, where a fleet at 51% receives significant incentives, while a fleet at 49% is completely ineligible.

There are several ways the Board could ensure the EDCs' programs prioritize MHDV electrification in those areas disproportionately suffering from MHDV emissions today while

[31] *Id.* at 16.

avoiding the pitfalls described above. The EDCs could be directed to dedicate a share of their program budget to only those fleets charging or operating in those areas, while still making some funding available for other fleets. They could also make higher incentive levels available for fleets charging or operating in those areas. This should be paired with simplified definitions of "operating in" that recognizes the value of replacing fossil-fueled MHDVs with EVs in those areas while avoiding the administrative burdens and incentive cliff risk discussed above.

C. The requirements for private fleet receiving support are ambiguous and may be unattainable for many fleets

The Revised Straw Proposal includes multiple requirements and limitations eligible private fleets would be subject to in order to receive make-ready support through their EDC's program. These proposed requirements and limitations, however, are ambiguously described in the Revised Straw Proposal and risk severely limiting uptake of EDC's programs by private fleets.

1. The managed charging requirements are not clear, and will likely be a challenge for many fleets to meet

The 2021 Straw proposed that customers receiving make-ready incentives would need to "[c]ommit to utilizing managed charging for a significant portion of its charging."[32] The Revised Straw Proposal elaborates on this by proposing to require customers seeking incentives for private fleet depot charging to "abide by a managed charging program for at least 90% of its charging needs and no more than a 10% increase in their on-peak instantaneous demand, both measured on an annual basis."[33] This language suggests that these customers would need to limit increases in their peak annual demand, from both charging and existing load, to 10% above their existing peak demand. From conversations with Staff, we understand this language is not intended to set any requirement with respect to increases over pre-electrification load at a given site, and is instead intended merely to signal that only 10% of charging load could occur on-peak, with the remaining 90% needing to occur off-peak. As a threshold matter, the Board's order should clarify the true intention of this requirement. But regardless of which approach Staff intends for the Board to take, this proposal misses the mark on what appropriate and achievable managed charging looks like in the MHDV context.

[32] 2021 Straw Proposal at 15.
[33] 2022 Straw Proposal at 18.

As discussed in EDF's and CALSTART's comments on the 2021 Straw Proposal, managed charging is important for both decreasing charging customers' costs and for minimizing grid impacts that can require system upgrades and drive up costs for all customers.[34] The Revised Straw Proposal, however, appears to conflate managed charging with off-peak charging. In reality, managed charging can take several forms, including pairing software to control charging timing and speed with participation in a time-variant rate, using ALM to limit peak charging demand, and giving the EDC the ability to slow or pause charging during times of particularly high demand on the grid. Given this diversity in what a managed charging program can look like, it is inaccurate to characterize participation in such a program as necessarily requiring off-peak charging.

The reality of some fleets' typical duty cycles also means that a 90% off-peak charging requirement may be unachievable without significant disruptions to operations or investment in fixed storage; this is particularly true for high-mileage fleets, which are often the ones emitting the most. Even when a fleet is able to minimize and/or shift their demand, they may, absent adequate storage on-site, still have significant on-peak demand simply because that is the only available time for their vehicles to charge. Meanwhile, some fleets' depots are likely to have land constraints that will prevent them from installing sufficient battery storage even when it is economically feasible. Unless it is paired with adequate tools, including battery storage, that make it possible for charging customers to charge in accordance with their operational needs despite the need to avoid drawing grid power at certain times, such a strict off-peak charging requirement as the Revised Straw Proposal appears to propose may create a disincentive for certain fleets to electrify, even where the fleet is in fact intent on electrifying. Fleets with such operational profiles should not be completely excluded from accessing make-ready support through the EDCs' programs for this reason alone, particularly if these fleets, such as those with round-the-clock operations, are likely to be larger users of fossil fuels whose electrification would provide significant emissions reductions.

The Revised Straw Proposal does potentially create support for the load-modifying technologies such as battery storage and ALM that can help fleets to manage their charging load,

[34] EDF Comments on 2021 Straw Proposal at 15 ("Managing charging can help fleet operators shift vehicle charging away from peak demand periods to times with lower demand and lower electricity costs, and even provide voltage support and frequency regulation."); CALSTART Comments on 2021 Straw Proposal at 7 ("managed charging is very important to keep fleet's charging costs down and to minimize any potentially negative grid impacts.").

but it is not obvious that this will be enough. We also understand that, in theory, funding available through EDCs' electrification programs is supposed to be "stackable" with funding available through other EDC programs, such as the battery storage docket programs currently under development, but it is not clear to us whether or to what extent those programs will in fact support the type and amount of behind-the-meter storage and other resources that will likely be required to comply with this requirement. The Revised Straw Proposal includes no financial analysis to consider whether the proposed but-for incentive for load-modifying technologies (discussed in greater detail above in Section IV.C), potentially paired with such other programs, will create an incentive large enough to allow fleets to economically meet such a strict charging requirement.

Because of the wide variety of managed charging programs the EDCs could offer, the reality of charging needs for some fleets, and the uncertain economics of installing load-modifying technologies for some fleets, the Board should modify the Revised Straw Proposal to instead require participation in an EDC-managed charging program or time-variant rate, rather require a specific percentage of off-peak charging, in order for private fleets to be eligible for make-ready support. As further discussed in Section V.H of these comments, the Board should also direct the EDCs to work with fleet customers to ensure that their rate offerings include options that are understandable and manageable for the full range of fleet customers.

2. The VMT reduction requirement is burdensome and unnecessarily punitive for fleets

The Revised Straw Proposal would require private fleets receiving make-ready support to reduce their VMT by "emitting" vehicles in Overburdened Municipalities by at least 25% within two years.[35] While we support the BPU's goals of prioritizing the benefits of the EDCs' programs in Overburdened Municipalities, this proposal has several flaws that make it likely to limit private fleet participation in this program.

First, meeting this requirement will be more challenging for large fleets than smaller fleets. While a small fleet may be able to meet such a requirement with the addition of only a single EV to their fleet, large fleets with significant VMT in Overburdened Municipalities today may need to replace a large number of vehicles with EVs to continue their operations. This rate of electrification may be economically infeasible even for a fleet interested in electrification, and

[35] 2022 Straw Proposal at 17.

may dissuade them from even attempting to participate in its EDC's make-ready program. Larger fleets are also more likely to need substantial make-ready work—including future-proofing—to meet their charging needs, work that will typically take longer than the equivalent make-ready work for a small fleet. While the EDC completes this work, the fleet may be faced with this significant VMT reduction requirement without having the charging infrastructure in place to replace those miles with emissions-free vehicles.

At the same time, the proposal may in effect favor mature businesses that are essentially done growing over those businesses, including small businesses, that are still growing their fleets. If a growing fleet is seeking to begin the electrification process with make-ready support from their EDC, but does not yet have the financial capacity to electrify their fleet at the scale necessary to meet this requirement, that fleet would be completely excluded from eligibility. This requirement may be particularly punitive with respect to those businesses that primarily work in Overburdened Municipalities, as they would need to substantially reduce the total VMT of their existing fleet, or shift services out of the community, in order to receive funding. In that situation, the VMT reduction requirement would produce the exact opposite result the Board intends by creating an additional barrier to fleets in these communities beginning the electrification process.

We recommend that this requirement be removed, and the Board's order instead focus on the increased incentives and dedicated budget for depots in Overburdened Municipalities, discussed above in Section V.B, as avenues for encouraging fleets to deploy EVs in ways that avoiding increasing VMT from emitting vehicles in these areas.

3. The $200 per kilowatt cap for make-ready support may be insufficient to encourage the needed scale of electrification

The Revised Straw Proposal would limit make-ready support for private fleets to $200/kW of charger capacity.[36] Staff states that this "approximately matches the incentive provided by New York's MHD incentive program, at the 50% level." We agree that setting an incentive cap is appropriate to ensure incentives are broadly available to eligible customers and reasonably limit the use of ratepayer dollars. We caution, however, that the New York MHDV incentive program to which the Revised Straw refers may not be a particularly instructive example, as that program is currently no success story, insofar as the overall eligibility

[36] 2022 Straw Proposal at 18.

requirements for participation in that program are so restrictive they have deterred 96% of interested fleets from participating.[37] The Board should ensure that the final approved cap is appropriately tailored to the true cost of installing make-ready for MHDV charging use cases, based on real-world data.

D. The need for proactive planning by EDCs still needs to be addressed

Both EDF's and CALSTART's 2021 comments noted a need for robust, long-term planning by EDCs, specifically pointing out that the Make-Ready maps proposal, while a good thing, would not suffice, for multiple reasons.[38] First, the Make-Ready maps bear no particular relation to where electrification needs to be focused for air quality relief. Second, giving customers information about where *they* could most easily site their charging infrastructure in the near term simply does not constitute planning the utility system for the long-term. In short, the EDCs will need to do more if they are to understand when and where EV load will materialize and the impact it will have on their distribution grids.

The Revised Straw Proposal recognizes the need to avoid additional concentration of MHDVs in certain areas, particularly overburdened communities,[39] but if the EDCs' planning for MHDV electrification is limited to developing hosting maps, this electrification may remain primarily concentrated in those areas identified on the maps as *currently* having sufficient additional capacity, and the EDCs will be poorly positioned to address fleet electrification needs when the demand expands beyond just these grid-optimal areas. This is particularly true for the wide swath of private fleets that would not be eligible for make-ready support under the Revised Straw Proposal, and instead would have to entirely shoulder any customer- and utility-side make-ready costs. These fleets may be able to electrify in the near-term when these optimal areas remain under-utilized, but as this excess capacity decreases and fleet electrification expands to more areas in New Jersey, electrification will become more and more expensive absent forward-looking planning and investment by the EDCs. Given New Jersey's robust goals to transition to zero-emission MHDVs, including the ACT Rule, truck and bus electrification will need to happen across EDCs' service territories, not just in the select areas identified on the make-ready

[37] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, Presentation of the Joint Utilities of New York: EV Make-Ready Program (MRP) Midpoint Review, at 10 (Dec. 1, 2022), https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={EE4FB283-9A2E-4551-8B24-682D6F3A7007}.
[38] EDF Comments on 2021 Straw Proposal at 7-8; CALSTART Comments on 2021 Straw Proposal at 13.
[39] 2022 Straw Proposal at 17

maps. This will require greater assessment of the long-term distribution system needs that will be driven by transportation electrification—in conjunction with the electrification of other end uses—work that the EDCs are in the best position to complete.

In order for this planning to be informed by the best available information, the EDCs should be proactively identifying and contacting fleets in their service territories to discuss their electrification plans, including the timing and location of this transition. As discussed above in Section IV.D, the technical support role the Revised Straw envisions for the EDCs would make them well-positioned points of contact for fleets in their territories. Incorporating proactive outreach into this support would not only directly help fleets by providing them with more information on electrification options, it would also help the EDCs themselves to improve their load forecasting and resulting grid investments. This includes prioritizing grid investments where expected electrification will require grid upgrade work that must start now, and future-proofing these upgrades by accounting for the medium- and long-term expected increase in load from electrified MHDVs in an area, rather than customer-by-customer. This work would benefit fleets by shortening interconnection timelines, and benefit ratepayers by mitigating the need for duplicative system investment. Because this outreach and planning can shorten interconnection timelines for customers requiring simpler system upgrades, while informing needs for larger, longer-timeline grid upgrades, the Board should modify the Revised Straw Proposal's uniform 12-month deadline for make-ready installation to require faster interconnection for smaller projects, while allowing for reasonable extensions where interconnecting large customers will require more extensive work.

This proactive planning should be paired with system-level studies that account for all electric load growth expected on the EDCs' systems, and grid-scale planning informed by those studies. New Jersey's 2019 Energy Master Plan includes Goal 5.1.1, which states that integrated distribution planning ("IDP") is needed to "optimally and most cost effectively plan for and accommodate increased demand through electrification and further penetration of DERs" such as storage, microgrids, and EVs.[40] This planning should include "modeling demand growth and prioritizing grid upgrades where they are most needed to accommodate anticipated electrification," including "fleet and port electrification."[41] The Board, however, has yet to direct

[40] New Jersey Board of Public Utilities, *2019 New Jersey Energy Master Plan*, at 176 (Jan. 2020), https://nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf.
[41] *Id.*

the EDCs to complete any IDP work, an omission that continues to limit the effectiveness of any grid planning the EDCs are completing in the face of the multifaceted energy transition New Jersey is undergoing. As recommended in EDF's comments on the 2021 Straw proposal, the Board should direct the EDCs to begin the IDP process, and should pair this with regular distribution grid impact studies ("DGIS") that analyze likely future fleet electric needs as well as the grid upgrades and non-wire solutions—such as vehicle-grid integration and distributed energy resources—to determine how fleet electrification can occur at the lowest overall costs to ratepayers and the community. One EDC, Public Service Electric & Gas, as well as BPU Staff, have agreed pursuant to a stipulation approved by the BPU that the IDP process should include a DGIS component,[42] but the continued delay in commencing the IDP has meant a corresponding delay in undertaking the vitally important DGIS. Implementing these requirements now, and setting a regular schedule for the EDCs to complete and update DGISs and related grid planning activities, can put the EDCs in a stronger position to actually meet the long-term electrification needs of fleets, beyond what can be supported by the existing, under-utilized portions, of their distribution grids. At a minimum, BPU, in its final order in this matter, should require the resulting EDC filings to include a timeline for undertaking distribution grid impact studies for their systems.

E. Port Authority fleets, to the extent operating in New Jersey, should be eligible for the same treatment as comparable fleets operated by state entities

The Revised Straw defines "Government Entity" as "a customer that is a State entity, school district, county, county agency, county authority, municipality, municipal agency, municipal authority, New Jersey, public college, or New Jersey public university." This definition omits a variety of entities that are in fact government entities in the plain sense of that phrase, notably federal entities, and leaves the status of the Port Authority of New York and New Jersey, which is to some extent a New Jersey entity, simply unclear.

The precise contours of what counts as a "government entity" for purposes of this proceeding are entirely dispositive how certain fleets that are in fact serving the public are to be treated under the Revised Straw. "Public Fleets" are defined as "those vehicles that are owned and operated by a government entity"—and under the Revised Straw, those fleets are eligible for

[42] EO18101111, *In the Matter of the Petition of Public Service Electric and Gas Company For Approval of its Clean Energy Future – Electric Vehicle and Energy Storage ("CEF-EVES") Program on a Regulated Basis*, Decision and Order Approving Stipulation (Jan. 27, 2021)

special treatment, insofar as "[t]o ensure access to electrified transportation itself and equitable access to the benefits of electrification and to the positive impact they have on decreasing emissions, EDCs may provide up to 100% for Make-Ready for charging infrastructure for public fleets, prioritizing those fleets serving urban and Overburdened Municipalities." Entities that are deemed to be excluded from the definition of "Government entity" will not necessarily be eligible for this favorable treatment—even if such treatment is essential to ensure equitable outcomes in Overburdened Municipalities, as contemplated by the language quoted in the foregoing sentence. To the extent that an entity is in fact operating a transportation fleet serving an Overburdened Municipality, the exclusion such a fleet from this treatment would seem to undermine the policy imperatives embodied in the Revised Straw. In the case of the buses operated by the Port Authority at Newark Airport—which is located on the border of Newark and Elizabeth, both of which are Overburdened Municipalities—a transportation fleet serving Overburdened Municipalities is precisely what is happening. And freight movement within the ports profoundly affects those same Overburdened Municipalities.

The end of the Revised Straw Proposal section quoted above states that "Staff also seeks input on how to address quasi-public fleets (i.e., buses contracted by NJTRANSIT or other local governments, transportation hubs, etc.)." The Port Authority has made commitments for electrifying its vehicles, including its MHDV fleet.[43] The treatment buses and trucks operated by the Port Authority could in theory by addressed by clarifying that the Port Authority is in fact a "government entity," or, alternatively, by providing for "quasi-public fleets" to be treated comparably with "public fleets." However, it makes little sense for charging of these vehicles that are polluting New Jersey air to be treated as a private matter to the extent they are operated by a New Jersey entity, simply because that entity also happens to be a New York entity.

F. The Straw should contemplate charger standards with the unique needs of MHDVs in mind

The Revised Straw Proposal makes little progress on the issue of charger communications standards, a critical element of ensuring ratepayer dollars are efficiently and effectively deployed through the EDC's MHDV programs. The 2021 Straw Proposal did not

[43] *Ahead of United Nations Climate Conference, Port Authority Embraces Biden Administration's New Goals of Net-Zero-Emissions by 2050 and 50% Reduction by 2030 in Greenhouse Gas Emissions*, Port Authority of New York and New Jersey (Oct. 28, 2021), https://www.panynj.gov/port-authority/en/press-room/press-release-archives/2021-press-releases/ahead-of-united-nations-climate-conference-port-authority-embraces-biden-administrations-new-goals.html.

contemplate any such standards. EDF's 2021 comments recommended a number of communications standards, including Open Charge Point Protocol ("OCPP"), Open Charge Point Interface, and Open Automated Demand Response.[44] The specific use cases and benefits of each of these standards is discussed in greater detail in EDF's 2021 comments, but at a high level, these standards simplify and standardize communications between vehicles, charging stations, EVSPs, and EDCs to better facilitate payment, allow for demand response by vehicles and chargers, and ensure charging stations can transfer ownership and stay in operation if their original EVSP ceases operations.[45]

Since the 2021 Straw Proposal was released, there have been multiple developments on the topic of charger communications standards that demonstrate the growing industry consensus around particular standards. The California Public Utilities Commission established a requirement that by July 1, 2023 all charging stations supported by ratepayer dollars must be capable of operating on OCPP and must be installed with the hardware to operate on ISO 15118.[46] And the U.S. Department of Transportation has proposed regulations for the National Electric Vehicle Infrastructure ("NEVI") program that would also require OCPP- and ISO 15118-ready chargers for EVSE funded through the program.[47] The NEVI program would also require all EVSE funded through the program be certified by a Nationally Recognized Testing Laboratory ("NRTL"), and all level 2 EVSE be ENERGY STAR certified to ensure stations be safe to operate and energy efficient. Requiring that the EDCs' programs require all EVSE be OCPP and ISO 15118-ready and NRTL-certified, and that all level 2 EVSE be ENERGY STAR certified, would align New Jersey with a growing number of statewide and national programs, provide for a more seamless customer experience, and help to avoid stranded assets – all of which will be helpful in ensuring a successful and sustained transition to zero-emission MHDVs.

Requiring these standards across the EDCs' territories via a Board order would provide statewide consistency. Importantly, a decisive statewide approach would avoid a mistake made in other states, where statewide policymakers have empowered utilities to propose such standards in their territories only for the utilities to respond with inaction, insisting that standards

[44] EDF Comments on 2021 Straw at 18-19.
[45] *Id.*
[46] *Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols*, Order Instituting Rulemaking to Continue the Development of Rates and Infrastructure for Vehicle Electrification, at 45, CPUC R. 18-12-006 (Aug. 4, 2022), https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M496/K419/496419890.PDF.
[47] National Electric Vehicle Infrastructure Formula Program, 87 Fed. Reg. 37,262 (June 22, 2022).

should be set by the state or federal government. For example, in the ongoing Beneficial Electrification proceedings before the Illinois Commerce Commission ("ICC"), both ICC-jurisdictional electric utilities, Ameren Illinois[48] and Commonwealth Edison[49], have argued that they are not the appropriate entity to decide on charger standards—despite having a clear statutory directive to consider such standards.[50]

The Revised Straw Proposal also does not do enough to support submetering as an alternative to separate metering requirements. EDF's 2021 comments recommended that the Board's order in this proceeding include "authorization [for EV charging customers] to use submetering capabilities in EVSEs for billing purposes."[51] In the context of EV charging, submetering is the use of the EVSE to measure electricity usage rather than a utility meter, and has been found by other state utility regulators to provide sufficiently accurate consumption measurement to be used as a basis for billing the portion of total consumption attributable to vehicle charging under a specialized tariff where the submetering is taking place behind a utility-grade meter.[52] Such use of submetering capability can significantly reduce the cost barrier to transitioning to an electric vehicle by allowing EV customers pay for service pursuant to EV-specific rates or participate in managed charging programs, as discussed further in Section V.C.1 above, without having to install a costly separate utility meter. For example, analysis done in California by Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric as part of their Plug-In Electric Vehicle Submetering Pilot found that the average infrastructure cost of metering EV charging load with a separate utility meter was $1,640, with costs for some

[48] ICC Docket 22-0431/0443, Surrebuttal Testimony of William H. Reany, II, Ameren Exhibit 10.0, at 7 (arguing that charging standards "not in line with the role of a distribution utility and is better placed with federal and state regulations and associated charging grant specifications.").
[49] ICC Docket 22-0432/0442, Surrebuttal Testimony of Melissa Washington, ComEd Ex. 11.0, at 15 (Stating that for charging standards, "ComEd prefers these requirements be set by state and federal policymakers, not ComEd.").
[50] 20 ILCS 627/45(d)(vii) ("The Beneficial Electrification Plan shall specifically address…whether to establish charging standards for type of plugs eligible for investment or incentive programs, and if so, what standards.").
[51] EDF Comments on 2021 Straw Proposal at 16.
[52] *See* Minnesota PUC Docket No. M-19-559, *Order Approving Electric Vehicle Home Service and Voluntary Electric Vehicle Charger Service Programs as Modified*, In the Matter of Xcel Energy's Petition for Approval of an Electric Vehicle Home Service Program (Oct. 6, 2020), https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=eDocketsResult&userType=public#{20E1FE74-0000-C715-9765-D3D7DC10DE0A}; *Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols*, Order Instituting Rulemaking to Continue the Development of Rates and Infrastructure for Vehicle Electrification, CPUC R. 18-12-006 (Aug. 4, 2022).

customers as high as $8,000.[53] This was compared to average costs of infrastructure for metering using charging stations with embedded submeters of $1,266, resulting in average cost savings of 192 $374 per customer.[54] A submetering time-of-use rate pilot conducted by Xcel Energy in Minnesota found even greater savings, with the utility reporting that the average customer in the pilot saved "over $2,000 on upfront metering and charger installation costs."[55] The 2022 Straw Proposal does acknowledge that metering costs can be a inhibiting factor in the deployment of commercial EV charging infrastructure, stating that "[e]ach EDC proposal should focus on keeping metering costs low and ensuring that the program is open to customers on a non-discriminatory basis."[56] The Revised Straw does not, however, direct the EDCs to permit submetering to be used for rate or programmatic purposes related to EV charging, an omission that should be rectified in the Board's order.

G. The 2022 Straw Proposal includes some residual confusion about the relationship between light-duty charging and medium- and heavy-duty charging

The 2021 Straw Proposal reflected a pervasive confusion about the fact that medium- and heavy-duty vehicle charging, compared to light-duty charging, represents on the whole a completely different set of needs and challenges from the customer perspective. To a significant extent the 2022 Straw Proposal reflects significant movement away from that confusion, but the new straw proposal nonetheless asks EDCs, when they file their long-term EV plans, to respond to the following question:

> While it is clearly defined that MHD charging would be used by MHD vehicles, Staff recognizes that many large light-duty fleets have similar energy requirements as smaller MHD fleets. Staff seeks information on where the threshold should be – is it in the number of light-duty vehicles that need to charge at once, or at some energy capacity threshold?[57]

It is unclear on its face what this question is asking EDCs to provide. Is it asking what

[53] Pacific Gas & Electric, *Epic 1.22 – Demonstrated Subtractive Billing with Submetering for EVs to Increase Customer Billing Flexibility*, at xxxi (Nov. 27, 2019), https://www.pge.com/pge_global/common/pdfs/about-pge/environment/what-we-are-doing/electric-program-investment-charge/PGE-EPIC-Project-1.22.pdf.
[54] *Id.* at xxxii.
[55] Minnesota PUC Docket No. M-19-559, *Order Approving Electric Vehicle Home Service and Voluntary Electric Vehicle Charger Service Programs as Modified*, In the Matter of Xcel Energy's Petition for Approval of an Electric Vehicle Home Service Program (Oct. 6, 2020).
[56] EDF Comments on 2021 Straw Proposal at 23.
[57] 2022 Straw Proposal at 24.

types of vehicles or what types of fleets should be eligible to participate in the MHDV make-ready programs to be promulgated pursuant to the order that follows the current straw proposal, with the possibility that some light-duty fleets might be subject to the same program terms as MHDV fleets? If that is the intent, it should be noted that while it is true that some light-duty fleets will be large enough to require significant electric capacity, just as MHDV fleets do, the operational realities, environmental impacts, and policy considerations related to electrifying light-duty vehicles are fundamentally different. Compared to light-duty vehicles, electric MHDVs (especially early MHDV fleets) will be less likely to use public charging even occasionally; fossil-fueled MHDVs run primarily on diesel and are responsible for an outsize share of air pollution that harms public health especially in Overburdened Communities; and state and federal environmental policies concerning the electrification of light-duty vehicles are entirely separate from, and take effect on different time horizons from, those concerning medium- and heavy-duty vehicles. As such, there is no particular size or scale of light-duty fleet charging that is sufficiently analogous to medium- or heavy-duty fleet charging that it should be eligible to participate in the utility programs promulgated hereunder.

H. An intentional effort to engage with communities and fleets in the development of EDC programs will be critical

EDF's comments on the 2021 Straw Proposal discussed the importance of engagement with both community groups and fleets as part of the development of the EDCs' programs. Unfortunately, the Revised Straw Proposal makes no progress on this issue, completely omitting any discussion of engagement requirements for the EDCs.

This engagement is not simply a nice additional to the program development process, but a critical step to ensuring the resulting programs can meet New Jersey's clean air and ZEV goals. As stated in EDF's 2021 comments, "communities have unique understanding of where diesel vehicles are doing the most egregious harm to public health—that is, where the need for cleaner air is the most desperate and the opportunity to improve people's well-being is the greatest."[58] Given the Revised Straw Proposal's focus on prioritizing the benefits of MHDV electrification in those communities suffering disproportionate harm from local air pollution today, direct engagement by the EDCs in these areas is necessary to inform program characteristics both large and small to actually achieve this prioritization. Direct outreach by the EDCs is also important

[58] EDF Comments on 2021 Straw Proposal at 12.

because the individuals and community groups in these areas are comparatively unlikely to have the resources to substantively engage in proceedings such as this one to make their voices heard through the formal process. The stakeholder process for the Revised Straw Proposal has consisted of a single meeting—held during working hours—and a written comment deadline just one week later. This is not a process designed to maximize input from impacted community members. The Board can work towards rectifying this dearth of community involvement to-date by directing the EDCs to including multiple avenues for community engagement in their program development process, including direct outreach to community groups and leaders to solicit feedback to strengthen their proposals.

Similarly, this stakeholder process has lacked sufficient input from fleet owners and operators, and the EDC program development process must address that omission. Fleet owners and operators are a key category of charging customer, and no company can successfully roll out programs for customers it does not understand. Electric utilities have spent decades or longer getting to understand various types of customers, but fleets that are learning to use zero-emission truck technology in real time are a wholly new type of customer—one that might begin its journey with little or no experience as a large electric customer, but that might have novel needs including quite a lot of load at the outset and grow quickly. As discussed in the recommendations of the Fleet Readiness Group (a group of interested fleets convened by, inter alia, EDF and CALSTART) that were appended to EDF's 2021 comments, "The process used by utility regulators (commonly utility commissions) that informs the development of electricity rates, charging infrastructure investments, and incentive programs is opaque to fleets. It is also challenging for fleets to track and engage in rate cases across the thousands of utility service areas."[59] As the customers who will be expected to participate in the EDCs' MHD make-ready programs, and fleet owner and operator involvement is critical to designing these programs in a way that is actually accessible and beneficial for its intended customers. Without such involvement, the EDCs may design programs that look great on paper, but don't actually provide the scale or types of support fleets need in order to actually electrify. The EDCs should look to fleets to better understand, among other things, the economics of charging under existing rates and whether changes are needed to make charging economical, charging infrastructure needs, and the feasible load management technologies and strategies. It is likely that many fleet

[59] EDF Comments on 2021 Straw Proposal at 25.

customers will, as a consequence of their operational needs and their inexperience with complex electric pricing, find conventional C&I rates difficult to understand and/or unmanageable; the EDCs will need to engage robustly with those customers to develop rate options that are meet their needs while being economically sustainable.

With the MHDV deadlines from the ACT Rule already essentially upon us, New Jersey has run out of time to try poorly calibrated MHDV programs and then refresh them when the avoidable, foreseeable deficiencies present themselves over a period of years. To ensure that EDCs' MHDV programs will be effective and successful from the start, the Board must direct the EDCs to include direct outreach and engagement with a representative group of fleets to solicit feedback on their program proposals prior to submission of those proposals to the Board.

I. To ensure EDC and Board accountability, the Board should require that cost-effectiveness be determined in a consistent, robust manner, and should set clear reporting requirements and metrics for evaluating the success of utility electrification efforts

Neither the 2021 Straw Proposal, nor the Revised Straw Proposal, adequately addresses how cost-effectiveness of EDC programs will be measured, or what data must be collected and reported by the EVSPs and EDCs. As discussed in EDF's comments on the 2021 Straw Proposal, and as repeatedly acknowledged in the Revised Straw Proposal, MHDV electrification produces significant societal benefits in the form of avoided greenhouse gas emissions and avoided local air pollution.[60] The Board must ensure that the EDCs' proposed plans are evaluated using a cost-effectiveness test that recognizes the value of these societal benefits, and should apply the same test to all of the EDCs' proposals in this proceeding to ensure that these benefits are accurately accounted for statewide.

After approval, evaluation of the effectiveness of EDC programs will also require consistent data collection on a variety of topics related to environmental impacts, grid investments, ratepayer expenditures, and equity goals. EDF recommended a list in the comments on the 2021 Straw Proposal and reiterates those recommendations here:

- Equity – e.g., the number of publicly accessible chargers for MHDVs deployed in overburdened communities; the percentage of MHDV electrification program participants that are small businesses; improvements in air quality, particularly

[60] EDF Comments on 2021 Straw Proposal at 21-22; 2022 Straw Proposal at 3-4, 15-16.

along major transit corridors and in overburdened communities;

- Deployment Targets – e.g., the number of private chargers for MHDVs deployed; the number of transit bus, school bus, and other public fleet vehicles that have been electrified; the location of all EV chargers deployed to ensure there are no gaps in coverage;
- Vehicle to Grid Integration – e.g., the number of chargers deployed that incorporate VGI capabilities; amount of renewable energy utilized by electric MHDVs or load is shifted to times of low electricity demand and/or high renewable penetration;
- Behind-the-meter Distributed Energy Resources – e.g., number of chargers deployed with on-site storage and/or renewable energy generation;
- Electricity Rates – e.g., number of fleets enrolled in an EV-specific rate in each service territory, success at shifting to low demand or flattening demand for various market segments and/or applicable rates, relative affordability of charging for various segments based on rates;
- Marketing, Education, and Outreach – e.g., the number and types of fleets who have received education and/or technical assistance on the topic of electrification;
- Make ready investment – e.g., the average number of days from customer application to make-ready completion by utilities, average total construction cost per charging port by major cost category (i.e., site design, permitting, transformer, electrical panel, conduit, wiring, trenching, accessibility, other demolition and construction, EVSE equipment, and labor).

In light of the changes in the Revised Straw Proposal and industry trends, we also recommend two additional reporting categories:

- Uptime and Utilization – e.g. the percentage of time publicly accessible chargers are active and available for charging, and the percentage of time they are actually used for charging
- Managed Charging – e.g., the percentage of charging that is happening as part of a managed charging program, and the percentage of charging that is happening in on-peak/off-peak periods

The EDCs are in the best position to compile and report this data to the Board, Staff, and

stakeholders. The Board should also ensure that the EVSPs, fleets, or other entities receiving make-ready support are required to agree to providing relevant data as a prerequisite to receiving that support, and that EVSPs retained by fleets to meet on-site charging needs are contractually obligated to provide the relevant data.

MHDV electrification in New Jersey will not happen all at once, and the Board's order must recognize that the EDCs' programs will require regular reassessment and revision to identify successes, address failures, and redirect focus and funding where most necessary. By establishing appropriate cost-effectiveness analysis, reporting requirements, and regular review and reassessment of the EDC's programs, the Board can support greater MHDV electrification, maximize societal benefits, and minimize ratepayer impacts.

VI. Conclusion

It has been almost three years since Board Staff began, in the 2020 Straw Proposal, to consider "questions about who should construct, own, operate, and pay for the comprehensive network necessary to make New Jersey a national leader in the adoption of EVs," and over a year and a half since the 2021 Straw Proposal.[61] During that time, the MHDV market has matured considerably, and New Jersey's commitment to transitioning its MHDV sector to zero-emitting vehicles has taken a clear shape, and rapidly approaching ACT Rule deadlines have made BPU action an urgent need. EDF and CALSTART respectfully request that the Board consider the foregoing comments in taking any action in this docket and proceeding to expedite the State's readiness for widespread electrification of MHDVs. We appreciate the opportunity to comment on this crucial piece of New Jersey's energy transition, and look forward to prompt Board action in this urgent matter.

Respectfully submitted,

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[61] QO20050357, *In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out*, New Jersey Electric Vehicles Infrastructure Ecosystem 2020 Straw Proposal, at 2 (May 18, 2020).