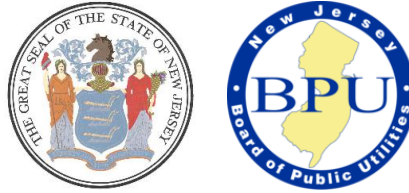


State of New Jersey  
Governor Philip D. Murphy  
Lt. Governor Sheila Y. Oliver

Board of Public Utilities



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Upendra Chivukula  
Bob Gordon  
Commissioners

## NOTICE<sup>1</sup>

### IN THE MATTER OF MEDIUM AND HEAVY DUTY ELECTRIC VEHICLE CHARGING ECOSYSTEM

#### NEW JERSEY ELECTRIC VEHICLES INFRASTRUCTURE ECOSYSTEM 2021 – MEDIUM AND HEAVY DUTY STRAW PROPOSAL

**[Docket No. QO21060946](#)**

Pursuant to the “Open Public Meetings Act”, N.J.S.A. 10:4-6 et seq., the New Jersey Board of Public Utilities (“Board”) hereby gives notice of a Public Meeting to discuss the below New Jersey Electric Vehicles Infrastructure Ecosystem 2021 – Medium and Heavy Duty (“MHD”) Straw Proposal (“Straw Proposal” or “Straw”). The details of this public meeting are included in this notice.

#### **I. Introduction**

The Board is continuing to work to build out an equitable, reliable electric vehicle (EV) Ecosystem infrastructure. In 2020, the Board established minimum filing requirements (MFR) for light-duty publicly accessible charging. The utility programs that will result from those MFRs will increase access to EV charging in community locations, workplaces, and Multi-Unit Dwellings, address obstacles to adoption, and provide valuable data on residential and commercial use.

Staff acknowledges that light-duty and personal-use vehicles are only one part of the transportation sector. This Straw will address larger light-duty fleet charging, as well as the charging of Medium and Heavy Duty (MHD) vehicles, as the energy needs and uses are closely aligned.

New Jersey is in the process of implementing the California Low Emission Vehicle Program pursuant to P.L.2003, c.266 (C.26:2C-8.15 et al.) and, as noted by the Legislature, part of that program includes increasing the use of low emission vehicles and zero emission vehicles. The California regulations promulgated to implement the program include proposals for medium-duty vehicles and amendments to cover heavy-duty vehicles.

The Board is committed to Governor Phil Murphy’s stated goal of having 330,000 EVs registered in New Jersey by 2025. These objectives were further elucidated in the 2019 Energy Master Plan (“EMP”), which called for, among other things:

- Increased EV adoption in NJ Transit’s fleet;

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<sup>1</sup>Not a Paid Legal Advertisement

- Increased clean transportation options in low- and moderate-income and environmental justice communities<sup>2</sup>;
- Industry partnerships to develop incentives to electrify Medium– and Heavy-Duty vehicle fleets;
- Reduced congestion and idling;
- Exploring policies to accelerate adoption of EVs and alternative fuels in the transportation sector;
- Supporting electrification of diesel-powered transportation and equipment at transportation hubs and airports; and
- Supporting a diesel truck buy-out program.

In order to move towards the goals listed above, Board Staff developed this Straw Proposal aimed at furthering the adoption of electrified MHD fleet vehicles. Board Staff recognize that New Jersey needs to create a comprehensive EV Ecosystem that provides both light-duty and MHD EVs with public access to charging infrastructure on travel corridors and at work places. This must be done in partnership with stakeholders, including New Jersey companies, employers, property owners, electric distribution companies (“EDCs”), and investors. Many of the issues that this Straw Proposal seeks to explore include questions about who should construct, own, operate, and pay for the MHD network necessary to make New Jersey a national leader in the adoption of electrified MHD fleets and the build-out of a MHDV EV Ecosystem. Board Staff is seeking feedback on the following framework for a comprehensive MHD EV Ecosystem:

1. A modified “shared-responsibility” model for MHD charging infrastructure that promotes appropriate roles for both the EDC and private investors and promotes private efforts to drive MHD adoption. Under this model:
  - EDCs would be responsible for the wiring and backbone infrastructure necessary to enable a robust number of publicly accessible or public-serving MHD Make-Ready locations (collectively “Public Accessible MHD Charging”), along with the ability to own and operate Electric Vehicle Service Equipment (“EVSE”) in specified circumstances, as further described in Section V. EDCs would be responsible for program elements and offerings related to the support and build-out of MHD charging infrastructure or as otherwise determined by the Board; and
  - EVSE Infrastructure Companies, site owners, and industry using private capital, would be primarily responsible for installing, owning and/or operating, and marketing MHD EVSE to customers.
  - An EDC-Industry working group would be created to address concerns regarding non-publicly accessible MHD EV Ecosystem infrastructure, which may not be eligible for direct ratepayer support, but still involves complicated interconnection, local generation and storage, potential wholesale market participation, and other technical issues.

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<sup>2</sup> Hereafter referred to as “Overburdened Communities” as per [N.J.S.A. 13:1D-158.]

2. Funding of the MHD EV Ecosystem, which builds on the shared responsibility model as laid out in the Light-Duty EV Ecosystem minimum filing requirements:
  - EDCs will invest in, and earn on, the wiring and backbone infrastructure necessary to prepare MHD Make-Ready locations that are publicly accessible or public-serving, as well as on any Board approved EVSE owned by the EDCs. It is possible that additional “areas of last resort” provisions will need to be developed for approval of EDC expansion if adequate adoption of charging for MHD vehicles and light-duty fleets does not occur.
  - EVSE Infrastructure Companies would expect to see returns from their sales of electric charging equipment and services – sales that would be made either to the public directly, or to institutions that provide MHD EVs that directly serve the public interest.
3. A commitment that all communities within the State of New Jersey will have equitable access to the EV Ecosystem, which may include incentives for MHD vehicles and associated charging to be used in Overburdened Communities.
4. A commitment to encourage the electrification of MHD vehicles and larger light-duty fleets through support of the necessary charging infrastructure, which must be capable of supporting the emerging High-Powered DC Fast Charging standards while maintaining compatibility with existing lower-powered DC chargers.
5. Funding technical and planning support necessary to electrify all MHD fleets utilized by:
  - Government agencies; and
  - Public-serving institutions like transportation hubs, airports, and mass-transit providers.
6. Technical and planning support for private entities seeking to establish proprietary EV Ecosystems for their fleets.
7. The development and expansion of MHD vehicle charging, including the use of battery storage and the capability to charge and discharge specific EVs at certain locations and times, such that grid flexibility services are possible from the vehicle battery.
8. The development of charging infrastructure supported by renewable energy.
9. The reform of utility rate structures, which may act as barriers to mass deployment of EV infrastructure, including the management of commercial and

industrial demand charge structures such that the effective cost of electricity for public charging facilities does not exceed an agreed to amount on a per kilowatt-hour (“kWh”) basis.

Staff is keenly aware of the need to move expeditiously toward a low-carbon future and of the critical role successful EV policies will play in meeting New Jersey’s long-term emissions targets and EV adoption goals. Staff anticipates that resolving key issues around MHD vehicle electrification as part of a generic docket will be more expeditious than addressing these same policy issues in isolated EDC filings. This proceeding seeks to encourage uniform treatment and standard footprint solutions in all EDC territories, which should greatly accelerate commercial scaling. Using a generic docket also ensures a consistent statewide approach to the electrification of the MHD EV Ecosystem, which is critical to the health of New Jersey residents and the successful fulfillment of New Jersey’s EV adoption goals.

The Board’s consideration of these and other generic policy issues will proceed in parallel with its evaluation of EV-related filings from individual EDCs and ultimately result in a faster development of a successful EV Ecosystem. To that end, Staff has included a partial list of additional information sought from the EDCs in Section V.E. of this Straw Proposal.

This Straw Proposal is intended to provide an opportunity for stakeholder feedback; instructions for providing that feedback can be found in the last section of this Straw Proposal.

## **II. Statutory Authority**

On January 17, 2020, Governor Murphy signed S2252 into law (N.J.S.A. 48:25-1 et seq.), which included an extensive set of new goals for a comprehensive EV Ecosystem throughout New Jersey. Among other things, N.J.S.A. 48:25-1 et seq. calls for at least 330,000 EVs registered in New Jersey by December 31, 2025 and at least 2 million EVs by December 31, 2035. The legislation gives the Board broad authority to “adopt policies and programs to accomplish the goals established pursuant to this section.”

N.J.S.A. 48:25-1 et seq. also includes specific EV Ecosystem goals, including requiring publicly-accessible charging infrastructure as follows:

- The installation of at least 400 DC Fast Chargers and 1,000 Level Two publicly-accessible chargers installed across New Jersey by December 31, 2025.
- The DC Fast Chargers located on travel corridors must be capable of delivering a minimum of 150kW of charging power, and be no more than 25 miles apart.
- By December 31, 2025, at least 15% of multi-unit dwellings (“MUDs”) must have a combination of Level One, Level Two, or completed Make-Ready parking spaces.
- By December 31, 2025, 20% of all franchised overnight-lodging establishments shall be equipped with EV charging for routine EV charging by guests of the establishment.
- By December 31, 2025, at least 25% of State-owned non-emergency light-duty vehicles shall be plug-in EVs.
  - By December 31, 2035 and thereafter, 100% of State-owned non-emergency light-duty vehicles shall be plug-in EVs.

- By December 31, 2024, at least 10% of the new bus purchases made by the New Jersey Transit Corporation shall be zero emission buses.
  - The percentage of zero emission bus purchases shall increase to 50% by December 31, 2026 and 100% by December 31, 2032 and thereafter.
- By December 31, 2020, the department, in consultation with the board, shall establish other goals for vehicle electrification and infrastructure development that address Medium and Heavy Duty on-road diesel vehicles and associated charging infrastructure, similar to the State goals for light-duty vehicles, and consistent with the technology and plug-in EV markets for those vehicle types.

In addition, Governor Murphy joined 14 other states and the District of Columbia in signing a joint memorandum of understanding (“MOU”), committing to work collaboratively to advance and accelerate the market for MHD EVs, including large pickup trucks and vans, delivery trucks, box trucks, school and transit buses, and long-haul delivery trucks (big-rigs). The goal of the MOU was to ensure that 100% of all new MHD vehicle sales be zero emission vehicles by 2050 with an interim target of 30% zero-emission vehicle sales by 2030.

Furthermore, N.J.S.A. 48:25-1 et seq. clarified that the “charging of a plug-in electric vehicle shall be deemed a service and not a sale of electricity by an electric power supplier or basic generation service provider,” which allows EVSE Infrastructure Companies to charge for charging services either on per-kW-hour basis or on a time basis, without subjecting them to unnecessary regulation.

Finally, N.J.S.A. 48:25-1 et seq. provided the Board with the authority to utilize Societal Benefit Charge (“SBC”) funds to effectuate programs to provide funding for “energy efficiency, plug-in EVs, and plug-in EV charging infrastructure, as well as Class I renewable energy programs that provide environmental benefits above and beyond those provided by standard offer or similar programs” in effect as of the effective date.

## **Background on Terminology**

Staff proposes to adopt the following terminology for discussing MHD EV infrastructure and the electrified MHD charging experience, many of which are adopted from N.J.S.A. 48:25-1 et seq. as implemented through the Minimum Filing Requirements for Light-Duty, Publicly-Accessible Electric Vehicle Charging (Docket No. QO20050357) Order dated September 23, 2020. Capitalized terms in this document refer to these definitions. Staff welcomes comment on these terms, as well as suggestions for other items that should be included on this list:

- “Demand Charges” are an existing feature of many rates whereby large users of the electric system pay for their contribution to the fixed costs of operating the electric system. In most cases, Demand Charges are set at a customer’s peak annual usage.
- “EDC” refers to an electric distribution company regulated by the Board.
- “EV Ecosystem” or “Ecosystem” refers to all of the physical equipment necessary to charge a vehicle (light-, medium-, or heavy-duty), which includes the Electric Vehicle Service Equipment (i.e., “charging station infrastructure”), the Make-Ready portion of the

electrical system, as well as distribution upgrades on the utility-side of the meter and any customer-owned support equipment needed for reliable, resilient, and cost effective ongoing operation of the charging services.

- “EVSE Infrastructure Company” refers to an entity using private capital to deploy Electric Vehicle Service Equipment (i.e., “charging station infrastructure”). An EVSE Infrastructure Company cannot be an EDC, affiliated with an EDC, or controlled by an EDC, unless otherwise approved by the Board.
- “Electric Vehicle Service Equipment” or “EVSE” means the equipment, including the cables, cords, conductors, connectors, couplers, enclosures, attachment plugs, power outlets, switches and controls, network interfaces, and point of sale equipment and associated apparatus designed and used for the purpose of transferring energy from the electric supply system to a plug-in EV. EVSE may deliver either alternating current or direct current electricity consistent with fast charging equipment standards. “Electric Vehicle Service Equipment” is synonymous with “Charging Station Infrastructure.”
- “Fleet” refers to a group of vehicles owned or operated by a single entity, serving a specific purpose, with defined roles or tasks.
- “Heavy Duty Vehicle” means any motor vehicle having a manufacturer's gross vehicle weight rating greater than 14,001 pounds, except passenger cars, designed primarily for transporting persons or property. These vehicles are Class 7-9, and examples include city transit buses, mobile cranes, cement mixers, refuse trucks, and tractors designed to pull refrigerated trailers, dry vans and other equipment.
- “High-Powered DC Fast Charger” means EVSE that provides at least 150 kW of direct current electrical power for charging a plug-in EV through a connector based on fast charging equipment standards, and which is approved for installation for that purpose under the National Electric Code through an Underwriters Laboratories Certification or an equivalent certifying organization.
- “Last Resort” are locations that have not generated private investment interest for a minimum of 12 months after an EDC program has begun for Overburdened Communities, or 18 months for other areas. EDCs may petition the Board to own and operate MHD specific EV charging stations in these areas after those timeframes.
- “Light-Duty Vehicle” refers to light-duty vehicles weighing less than 10,000 pounds, except trucks with two or more axles or with six or more tires. Light-duty vehicles are further divided between vehicles classified by federal emission control regulations as either passenger cars or trucks (Classes 1-3).
- “Light-Duty Fleet” refers to a group of light-duty vehicles, as defined above, which perform a specific function to transport goods or people. These are noted to perform similar functions and have comparable service patterns to Medium and Heavy Duty Fleets.

- “Make-Ready” means the pre-wiring of electrical infrastructure at a parking space, or set of parking spaces, to facilitate easy and cost-efficient future installation of Electric Vehicle Service Equipment, including, but not limited to, Level Two EVSE and DC Fast Chargers. Make-Ready includes expenses related to service panels, junction boxes, conduit, wiring, etc., necessary to make a particular location able to accommodate Electric Vehicle Service Equipment on a “plug and play” basis. “Make-Ready” is synonymous with the term “Charger Ready.”
- “Make-Ready Map Proposal” is a proposal from an EDC which pre-identifies areas that are suitable for MHD Level Two or DC Fast Charging without a need to upgrade the grid.
- “Medium-Duty Vehicle” refers to medium-duty vehicles which weigh between 8,501 and 14,000 pounds, including trucks with two or more axles or with six or more tires. Medium-duty fleet vehicles are further divided between vehicles classified by federal emission control regulations and serve a specific function that is pre-determined by the fleet owner or operator. These vehicles are Classes 4-6, and examples include box trucks, firetrucks, and school buses.
- “MHD EV Ecosystem” or “Ecosystem” refers to all of the physical equipment necessary to charge a medium- or heavy-duty vehicle, which includes the Electric Vehicle Service Equipment (i.e., “charging station infrastructure”), the Make-Ready portion of the electrical system, as well as distribution upgrades on the utility-side of the meter and any customer-owned support equipment needed for reliable, resilient, and cost effective ongoing operation of the charging services.
- “Network Interoperability” is the continuous ability to send and receive data among the interconnected EV charging networks, providing the quality level expected by the customer without any negative impact to the sending and receiving networks. Interoperability refers to the compatibility of key system components—vehicles, charging stations, charging networks, and the grid—and the software systems that support them, allowing all components to work seamlessly and effectively.
- “Operational” means a charging location that an EVSE Infrastructure Company would be required to maintain and promptly fix, in accordance with industry standards, in the event of malfunctioning hardware or software that would impede the use of the equipment by a consumer.
- “Overburdened Community” is any census block group, as determined in accordance with the most recent United States Census, in which at least one half of the households qualify as low-income households and either: (1) at least 40% of the residents of the census block group identify as Black, African American, Hispanic or Latino, Asian, Pacific Islander, or as members of a State-recognized tribal community; or (2) at least 40% of the households in the census block group have limited English proficiency. Overburdened Community is synonymous with the previously used term “Equity Area.”

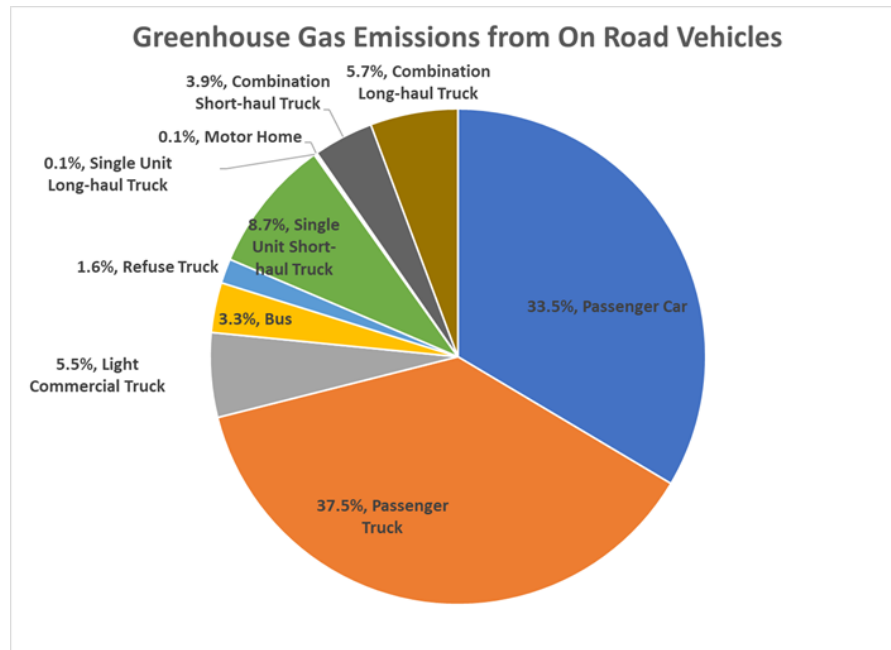
- “Port” is the energy dispensing circuit that terminates to a standard coupler through conductive or wireless methods of the charging station that connects to the EV, defined as the number of simultaneously operable connectors at the rated power.
- “Proprietary charging connector” is defined as a charging connector that is incompatible with vehicles that utilize “standard connector port” as defined in this section.
- “Publicly-Accessible Medium and Heavy Duty Charging” refers to a medium- and heavy-duty charger that is available to the public either on a drive up, subscription, or scheduled basis. Such chargers are owned and operated by site owner, property manager, or management company, EVSE Infrastructure Company or, in limited cases as approved by the board, an EDC.
- “Site owner and operator” means site host, property manager, the utility customer of record, an EVSE Infrastructure Company, or an EDC with Board approval that is responsible for installing, owning, operating, and maintaining EVSE on the premises. The site host may or may not be the same entity as the station operator.
- “Smart charging station” is defined as a charging station that is capable of collecting charging data and has a network connection capable of conveying that data to the cloud.
- “Standard connector port” is defined as a port that meets the technical specifications of Combined Charging System (CCS) and Charge de Move (CHAdeMO) connectors for DCFC stations and J1772 connectors for Level Two charging stations.
- “Transportation Hub” means a place where passengers and/or cargo are exchanged between vehicles and/or between transport modes.
- “Travel Corridor” means heavily used public roads in the state, as designated by the New Jersey Department of Environmental Protection (NJDEP), which shall include, but need not be limited to, the Garden State Parkway, the New Jersey Turnpike, the Atlantic City Expressway, federal interstate highways, and the subset of federal or state roads which collectively support the majority of long distance travel through and within the state as well as the majority of daily travel by local drivers.

### **III. Objectives Underlying this Straw Proposal**

In developing this document and its recommendation governing the preferred business model, Staff took note of the extensive research around the need to rapidly transition our transportation sector, including the following:

- Transportation fuels account for approximately 40% of CO<sub>2</sub> emissions in the state today, the largest single sector of carbon emissions. MHD vehicles make up one third of those emissions.

- The pollutant PM2.5 disproportionately produced by this class segment of legacy vehicles harms urban communities due to the concentration of emissions.
- New Jersey cannot meet its ambitious clean energy goals or its goal of reducing CO<sub>2</sub> emissions 80% below 2006 levels by 2050 unless it can electrify its transportation section, as shown in the following chart:



- Vehicle electrification reduces the cost of meeting New Jersey’s 2050 targets. Conversely, failing to electrify the vehicle fleet increases the cost of decarbonization from 2035 to 2050 by an average of \$1.6 billion per year, according to the research underlying the 2019 EMP.
- NJDEP’s 80x50 Report calls for an 80% reduction in emissions by 2050. One of the report’s strategies calls for the State to “[i]dentify regulatory, funding and financing mechanisms to convert MHD vehicles to electric, renewable biodiesel and hydrogen fuel sources.”

As noted in the 2019 EMP, affordability of EV infrastructure is also critically important. To keep these efforts affordable, this Straw Proposal follows the framework laid out in the EMP that New Jersey should seek to:

- Attract private capital into the EV infrastructure sector and substitute shareholder dollars for ratepayer capital wherever possible;
- Minimize the risk of ratepayers paying for stranded EV infrastructure investments, so that ratepayers do not bear the risk that charging station infrastructure, or EVSE, becomes technologically obsolete or is simply never utilized at a high level, through strategic mapping, strictly limiting utility investment, and encouraging private investment; and

- Design EV infrastructure policies that are fair to both EV-driving ratepayers and non-EV driving ratepayers, to ensure that the benefits of EVs are shared by all ratepayers.

In developing the recommendations in this Straw Proposal, Staff conducted an extensive review of best practices across the country, including reviews of utility programs, legislation, MOUs, and rate structures in California, Maryland, New York, Washington State, Massachusetts, and others. This Straw proposes that New Jersey adopt a modified “shared responsibility” model for MHD-specific EV infrastructure that promotes appropriate roles for both the EDC and private investors, as discussed in more detail below.

#### **IV. Program Elements**

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

Staff recommends a modified “shared responsibility model” for the deployment of a MHD EV Ecosystem, building on the model used for light-duty EV rules. For MHD, Staff recommends that EDCs invest in (and earn on) the wiring and backbone infrastructure necessary to enable a robust MHD EV Ecosystem and that the private sector own, operate and advertise the EVSE. Although the assumption is that private investors will typically install, operate, and market the charging stations, assigning responsibility for Make-Ready sites across the state takes advantage of existing EDC expertise and existing infrastructure.

Staff proposes that the cost of MHD charging station infrastructure, or EVSE, be generally borne by private investors, with recourse to ratepayer funds only where the EDC acts as owner/operator of last resort, when investment in EVSE is not occurring, or is not occurring in specific geographic areas. EDCs shall continue to bear the burden of demonstrating that any investments made to serve such areas are reasonable, prudent, and that rate recovery of such investments is appropriate.

The policies laid out in this Straw take into account the investment time horizon and the likely risk of various segments of the MHD EV Ecosystem and attempt to portion responsibilities out in a way that represents each partner’s expertise and risk appetite. For example, the EDCs have deep experience in delivering electricity and operating distribution infrastructure; therefore, it makes sense to prioritize EDC involvement in Make-Ready sites. In many ways, Make-Ready sites look like an extension of the distribution system and mimic the utility’s ownership of meters on customer-owned land.

This Straw proposes that the EDCs do the work necessary for Make-Ready for MHD charging for those vehicles that are accessible to or that serve the public, and socialize the costs associated with this work. Such socialization is appropriate since, as noted in the 2019 EMP, EV adoption for the transportation sector will have a significant impact on the health of New Jersey residents. According to a 2016 American Lung Association report, “Clean Air Future: Health and Climate Benefits of Zero Emission Vehicles,” pollution from motor vehicles resulted in \$4.6 billion in public health and climate costs to New Jersey residents in 2015. Given the need to embed this work in the State’s electric grid, and the fact that it will drive down related costs in other areas,

Staff proposes that the EDCs undertake this task when the fleet is designed for public use, whether the new infrastructure is located on private property or on public property.

In contrast, the portions of the MHD EV Ecosystem that are likely to become obsolete the fastest are the EVSE. Staff expects that as technology changes, there is significant risk associated with this rapid pace of technological change, particularly with respect to networking hardware and payment systems, and the software tied to this equipment. This risk is appropriately assigned to the private sector. Further, while the EDCs may have a role to play as the providers of last resort, they have no particular expertise in maintaining, marketing or operating EVSE. EVSE Infrastructure Companies and commercial entities, on the other hand, specialize in providing these and other similar services.

Through this distribution of responsibilities, this Straw seeks to attract private capital into the MHD EV market while reducing the risk that ratepayers are left responsible for stranded costs, *and* including a strong incentive for the EDCs to participate as full partners in the expansion of the system. Further, by allowing the EDCs to build-out (and earn on) the Make-Ready infrastructure, and also undertaking effective rate design reform, Staff believes that this approach will reduce the total cost outlay for EVSE Infrastructure Companies and improve the likelihood of a robust market response. This fulfills the goal of substituting non-utility, investor-supplied capital for ratepayer capital wherever possible, particularly in portions of the EV Ecosystem that may change with time or, in some cases, may never be utilized at a high level.

#### 1. Proposed EDC Role in the MHD EV Ecosystem

The EDCs play several indispensable roles in the EV Ecosystem under the shared responsibility model for MHD infrastructure, including the four key roles detailed below. This Straw proposes that the EDCs would request recovery of their investments and other costs through a traditional rate case, the Societal Benefits Charge (“SBC”), or any other applicable rate recovery mechanism authorized by statute or regulation. EDCs should be permitted to seek recovery of their costs associated with the first four items listed below. The EDCs would need to seek recovery of the administrative costs associated with owning and operating Medium and Heavy Duty charging infrastructure only in a Last Resort role, and this recovery is discussed separately below. Specifically, under the Shared Responsibility model, the EDCs would be responsible for:

- Performing any upgrades on the utility-side of the meter necessary to accommodate charging station infrastructure and the anticipated increase in load on the distribution system caused by the rapid expansion of the MHD EV Ecosystem;
- Wiring various locations upon request by an EVSE Infrastructure Company, an operator of a MHD fleet, or a state, local, or municipal entity, with priority given to sites which serve publicly-accessible fleets, in a process known as “Make-Ready;”<sup>3</sup>

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<sup>3</sup> Effectively, a location is Make-Ready if it includes service panels, junction boxes, conduit, wiring, etc., necessary to make a particular location able to accommodate a charging station on a “plug and play” basis.

- Providing technical assistance to public and private fleets to ensure that MHD charging is well planned and appropriate to the needs of the fleet. 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; and
- Developing hosting maps that identify where to prioritize Make-Ready sites for potential MHD charging depots, as well as identify locations where charging infrastructure can be located so as to meet the requirement of N.J.S.A. 48:25-1 et seq. while avoiding lengthy and costly distribution upgrades.

Finally, should the EDCs be authorized to perform any Last Resort function to ensure equitable distribution of EVSE for MHD vehicle charging, which may include use cases such as charging depots, the EDCs may recover the associated costs in the same manner proposed above.

Staff notes that, historically, the costs of upgrades on the EDC's side of the meter that are necessary to accommodate new development - including EVSE - are assigned under a "beneficiary-pays" model. In this model, the entity creating the need for the upgrades (here, presumably the site owner or EVSE Infrastructure Company) pays for the upgrade costs, consistent with the Board's regulations on extensions of utility service in N.J.A.C. 14:3-8 et seq. Staff believes that given the overwhelming human health and environmental benefits associated with electrification of the transportation sector, and in particular the MHD sector, and the beneficial impact that such grid updates will have on all ratepayers, that these costs should not be required to meet the earnings test. Staff seeks comment on what other measures should be implemented to address allocation of these costs. In addition, Staff seeks comment on potential business models, such as microgrids containing some local generation that may provide cost mitigation on the distribution system upgrade.

To recover the costs identified above, this Straw proposes that the EDCs must make an adequate showing that the costs are reasonable and prudently incurred, and that such investments are otherwise appropriate for recovery through the rate recovery mechanism proposed by the EDC.

## 2. Proposed Role for Private Investment and EDCs for Public Fleets

Given the proven detrimental impacts of emissions disproportionately experienced by Overburdened Communities, particularly from MHD vehicles, moving towards EV adoption for public transit in these areas must be a top priority. As indicated in the 2019 EMP, pollution from transportation resulted in \$4.6 billion in public health and climate costs to New Jersey residents in 2015, due to the intensity of MHD emissions in urban areas because of population density and increased truck and bus use in those areas. The physical and monetary costs of emissions in Overburdened Communities, particularly in urban settings, require ratepayer investment to ensure that EV adoption's positive impacts are distributed equitably across the state. Overburdened Communities are more likely to access public and quasi-public transportation options and are more likely to have greater exposure to emissions from MHD vehicles in general. To 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% incentives for

Make-Ready for charging infrastructure for public fleets, prioritizing those fleets serving urban and Overburdened Communities. The ownership, maintenance, and operation of the charging station must be done by the site owner, property manager, or EVSE company. Staff also seeks input on how to address quasi-public fleets (i.e., buses contracted by NJTRANSIT or other local governments, transportation hubs, etc.).

### 3. Proposed Role for Private Investment and EDCs for Private Fleets

The proven detrimental impacts of emissions on Overburdened Communities, discussed in the previous section, also makes moving towards EV adoption for private MHD fleets critical and supports requiring ratepayer investment. Staff proposes that while EDCs should not incentivize charging infrastructure for private fleets, the EDCs should provide technical assistance, including the development and hosting of customer accessed fleet planning and modeling tools, to private fleets interested in EV adoption to ensure adequate charging infrastructure is planned for and incorporated into the grid. Additionally, Staff does not propose EDC incentives for private-owned fleets, but notes that the New Jersey Economic Development Authority (NJEDA) is currently working on programs in this area. To ensure equitable access to EVs and their positive impact on emissions, Staff seeks input on what best practices might be applied and what funding sources are most appropriate to fund private fleet programs.

### 4. Proposed Role for Private Investment and EDCs for Publicly Accessible MHD Charging

Understanding that a significant portion of MHD vehicles are independently owned and operated, and that investment in charging for one MHD vehicle is cost prohibitive, there is a need to provide publicly accessible MHD charging for those vehicles and for vehicles that may need to charge along their route. This charging may or may not be co-located with private MHD vehicle charging, but is open to the public either by appointment, subscription or on a first-come, first-served basis. To ensure equitable access to electrified transportation and to the positive impact electrified transportation has on emissions, EDCs may provide up to 100% incentives for Make-Ready for charging infrastructure for publicly accessible MHD charging sites. The ownership, maintenance, and operation of the charging station must be done by the site owner, property manager, or EVSE company.

### 5. Proposed Role for Private Investments and EVSE Infrastructure Companies

Under this shared responsibility business model, private capital would be used as the primary means of funding EVSE. EVSE Infrastructure Companies would be expected to earn their revenues in the marketplace through the sale of charging services, which may include grid flexibility services that would offer valuable balancing or capacity resources that may help offset the fixed investment cost hurdles.<sup>4</sup> Private investment would be the primary mechanism for deploying privately held fleet charging across the state and chiefly responsible for:

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<sup>4</sup> EVSE Infrastructure Companies could charge customers either based on the time of charging or the amount of electricity the customer consumes. N.J.S.A. 48:25-1 et al. clarifies that neither option subjects the EVSE Infrastructure Company to regulation as a seller of electricity or as a public utility.

- Determining where charging can be sited to maximize accessibility in conjunction with their own market research and the EDC’s hosting maps; and
- Requesting that the identified sites be Made-Ready by the EDC.

#### 6. Proposed EDC Role for MHD Vehicle and Fleet Planning Services

Investment in charging for a small number of MHD vehicles or for a fleet of light duty vehicles is a costly and complicated endeavor that also has a significant impact on the grid. The EDCs can play a unique role in helping MHD and fleet operators to develop their electrification adoption plan to ease the cost of investment and manage grid impact. This proposal is designed to enable the EDCs to work with fleet owners to properly site charging locations, plan for fleet and charging growth, and determine when and if additional grid support is needed.

#### 7. Proposed Process for Areas of Last Resort

Limiting or eliminating potential stranded investment by EDCs in Make-Ready locations is an important component in the development of a robust and equitable EV Ecosystem, and this Straw generally advocates for the private investment of EVSE. However, there may be situations in which the market does not adequately respond to provide publicly accessible or public-serving charging in a geographically equitable manner. Staff considers that the Board may need to develop these “areas of last resort” provisions for approval of EDC expansion if adequate adoption of charging for MHD vehicles and light-duty fleets does not occur.

### **B. Process for Approval of Make-Ready Sites**

Under this Straw Proposal, the EDCs would be the entity primarily responsible for Make-Ready sites. EDCs would begin Make-Ready upon request from a site owner, EVSE Infrastructure Company, or a State, local, or municipal entity, with priority given to sites that will provide greater access to electrified transportation to the general public and in particular to Overburdened Communities. The EDC would be entitled to request recovery of such upgrade costs through rates.

After receiving such a request, the EDC would have 12 months to install Make-Ready infrastructure. Staff anticipates that any delay greater than 12 months would result in reduced EDC earnings on that portion of the Make-Ready infrastructure, unless an appeal is granted by the Board. Staff requests comment on how this should be handled. In addition, the private third party that wishes to invest in EVSE at a particular location has several options.

1. The EVSE Infrastructure Company could request that the EDC begin Make-Ready work.
2. The EVSE Infrastructure Company could elect to take over an existing Make-Ready site that is currently identified by the EDC as unused on a first-come, first-served basis.
3. The EVSE Infrastructure Companies could finance the cost of Make-Ready for the site itself.

In sequencing all Make-Ready requests, the EDC would prioritize Make-Ready locations that are identified as priorities by a series of criteria which seek to provide the greatest public benefit,

including those that will provide greater access to electrified transportation to the general public and in particular to Overburdened Communities. However, if using an EDC-funded Make-Ready site (i.e., electing Option #1 or #2 above), it would be required to accept certain performance requirements. The EVSE Infrastructure Company would be required to:

1. Commit to installing the EVSE within a period of time from when the Make-Ready is installed (Staff proposes an initial 12-month period, with up to two (2) six (6) month extensions);
2. Commit to keeping the Make-Ready site Operational<sup>5</sup>;
3. Commit to utilizing managed charging for a significant portion of its charging;
4. Commit to returning Make-Ready infrastructure back to the EDC for redeployment in the event that the EVSE Infrastructure Company no longer wishes to maintain EVSE at that location, fails to meet the performance criteria as discussed below, or ceases its commercial operations; and
5. Commit to network interoperability and data sharing with the EDC in order to ensure proper management of the load and general grid needs due to the high-anticipated draw at a site meant for MHD vehicle charging.

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

This Straw seeks to ensure equitable geographic diversity, particularly with respect to ensuring a viable EV Ecosystem in low-income, urban, and environmental justice communities, referred to collectively as Overburdened Communities, or along designated evacuation routes.

In particular, this Straw focuses on Overburdened Communities that may be identified as suitable locations for emerging EV mobility options – including electrified transit buses, mobility-on-demand, electric car sharing services, and local delivery fleets. Staff specifically requests comment on (1) how to identify and address unique transit opportunities in Overburdened Communities, (2) how local fleet investment would improve environmental and health factors, and (3) how to best utilize EV technology for expanded transportation options.

In addition, Staff is aware that the electrification of public transit, specifically New Jersey’s transit buses, would reach the greatest number of New Jersey communities. Staff is seeking comment on the best mechanisms to invest in public transit to promote equity in EVs and their benefits.

### **D. Rate Reforms Designed to Encourage Adoption of Electric Medium and Heavy Duty Vehicles**

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<sup>5</sup> Staff notes that “operational” is not intended to require an unrealistic level of up-time, however, EVSE Infrastructure Companies would be required to maintain and promptly fix malfunctioning locations in accordance with industry standard practices.

This Straw proposes rate reforms designed to encourage rapid deployment of EV Infrastructure for MHD vehicles across the state. These reforms center on addressing concrete problems, including:

1. Ensuring that demand charges applicable to MHD charging are not an obstacle to investment in MHD EV adoption.
2. Ensuring that each EDC offers a voluntary time-of-use rate for MHD EV charging that rewards consumers that elect to charge during off-peak periods.

This Straw also proposes that each EDC ensure that the commercial and industrial rates associated with chargers are reasonable. Staff notes that many new advanced charging technologies, such as DC Fast Chargers, have a large instantaneous draw, which can create large demand charges, particularly in the MHD sector. This problem is expected to be particularly acute in the early days of EV adoption, where some stations may have relatively few monthly charging sessions over which to recoup a high demand charge.

To aid in the adoption of this new technology, this Straw proposes that each EDC be directed to develop a mechanism to mitigate demand charges associated with EV charging in the early days of adoption. This methodology may include an EV charging rate, or a rebate methodology that ensures that the effective \$/kW-hour rate (i.e., the demand charge averaged over the number of kW-hours used in a given month added to the standard \$/kW-hour rate) remains below a specified “set point.” This Straw requests feedback on the best manner in which to achieve demand charge reductions. Staff anticipates that the actual level of the set point would be agreed to by the EDCs in conjunction with interested stakeholders and then filed with the Board. The Straw anticipates that the set point would be benchmarked so that EV charging remains below the equivalent cost of diesel or gasoline on a per-mile traveled basis. Alternatively, an EDC could elect to waive a percentage of a station’s demand charges for the first five (5) years of a station’s operations, with the right for low utilization stations (those where the station is used less than 25% of the hours in a given month) to seek a five (5) year extension. This Straw also seeks input on use-based rates for various sectors of MHD charging.

This Straw would require that each EDC offer a time-of-use rate for MHD Fleet EV chargers designed to reward customers who charge during periods where electricity is less expensive. Managed charging can avoid the incurrence of large additional fixed costs that could occur if most vehicle charging were to take place during peak or super-peak hours. Each EDC proposal should focus on keeping metering costs low and ensuring that the program is open to customers on a non-discriminatory basis.

#### **E. Other Policy Considerations and Minimum Filing Requirements for the Medium and Heavy Duty Sector**

In addition to the other aspects of this Straw Proposal, Staff seeks other information necessary to ensuring an expeditious and consistent deployment of MHD EVs in New Jersey. This Straw proposes that the EDCs will include (or update, as applicable) the additional information discussed below in their MHD EV filings and long term EV plans, and further directs all EDCs to file MHD EV plans and proposed MHD EV programs by February 28, 2022, with implementation dates commencing no later than September 1, 2022. Such filings shall include the following information.

Staff notes that this list is not comprehensive and does not include all relevant information necessary to review and approve such filings):

- While it is clearly defined that MHD charging would be used by Medium and Heavy Duty Vehicles, Staff recognizes that many large light-duty fleets have similar energy requirements as smaller MHD charging needs. Staff seeks information on where that threshold should be – is it in the number of light-duty vehicles that need to charge at once, or at some energy capacity threshold?
- Specific citation to and discussion of the statutory authority for any rate recovery proposals associated with EDC deployment of infrastructure required to serve Make-Ready locations and EVSE, whether owned by the EDC or third parties.
- A description of how participation in other State-sponsored EV adoption programs should be weighed in consideration for utility incentives. For example, should companies purchasing vehicles through the State voucher program or through New Jersey’s share of the Volkswagen Mitigation Trust funds<sup>6</sup> (“VW”) or Regional Greenhouse Gas Initiative<sup>7</sup> (“RGGI”) funding receive priority for charging incentives? Or, alternatively, should entities that have not benefitted from other incentives be prioritized?
- How can the program encourage incorporation of renewable energy, storage, or Vehicle to Grid technologies into MHD charging solutions?
- Is there a threshold at which incorporating renewable energy, storage, or Vehicle to Grid technologies into the charging infrastructure should be a condition of Make-Ready? If so, what is that threshold?
- When considering the load associated with MHD charging, should solar and energy storage be coupled with these sites, wherever possible?
  - Should there be a permissible window of time for the site to remain as an island from the grid if supported by solar and energy storage, and interconnected at a later date?
  - Should the solar present at MHD charging sites be incorporated into the solar successor program?
  - Should the storage present at MHD sites receive incentives on par with energy storage at other, non-EVSE sites if it does not participate in demand response?
- What types of outreach and education are most likely to be successful in the MHD sector? Are there tools that utilities or EVSE Infrastructure Companies can provide to fleet owners to access the feasibility of electrification?

## **F. Stakeholder Process and Schedule for Comments**

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<sup>6</sup> <https://www.state.nj.us/dep/vw/>

<sup>7</sup> <https://www.nj.gov/dep/aqes/rggi.html>

Staff is committed to an open and transparent process in which to further develop the ideas laid out in this Straw Proposal. To that end, Staff is establishing an online technical conference-format meeting where interested stakeholders can provide comments on the topics discussed in this Straw Proposal.

The technical conference format will include a series of panels held over several days on the specific topics discussed below. Interested parties on a particular topic are requested to self-nominate for a particular panel. To self-nominate, please provide the following information to [EV.Programs@bpu.nj.gov](mailto:EV.Programs@bpu.nj.gov) by July 16, 2021:

1. Name, title, and affiliation;
2. Desired panel (please also provide a secondary panel selection); and
3. Short description (no more than a page) explaining why you should be selected for the panel.

Selected panelists will be notified by July 26, 2021 that they have been selected for a particular panel. The Board will endeavor to ensure that various interests and a diversity of opinions, constituencies, and business models are represented. An agenda and list of panelists will be published in advance of the technical conference. Each panelist will be afforded the opportunity to make a short presentation, followed by a discussion between the panelists and Board Staff, as well as questions from the audience. Parties not selected as panelists will still have the opportunity to ask questions and make public statements, time permitting. Panels will discuss the following topics, bullet points are meant as examples of issues that should be addressed within a topic:

1. Medium and Heavy Duty Ecosystem
  - The appropriate role for the EDCs and EVSE Infrastructure Companies
  - Cost Recovery for EDC investment in Make-Ready sites
  - How to encourage MHD adoption of EVs and expansion of EV fleets
  - Which light-duty fleets are large enough and/or what is the energy threshold to be part of Medium Heavy duty charging
2. Medium and Heavy Duty Impact on Overburdened Communities
  - Which use types have the largest impact in these communities
  - How to ensure equity in electrifying transportation
3. How to Determine Rates
  - How does AMI impact EV specific rates, and how can we use AMI to set appropriate EV rates
  - How to address demand charge concerns in the early years of adoption
  - Best practices and other models
4. Renewables, Storage, and Charging
  - How can integrated renewables and storage capacity concerns be addressed
  - How should renewables and storage be incentivized, and do they need to be incentivized
  - Is Vehicle to Grid (V2G) ready for rate-payer investment
5. Understanding What MHD Vehicle Use Looks Like and How Charging Will Occur

- Public fleets
  - Private-owned Heavy Duty fleets (multi-state travel)
  - Private-owned Medium Duty (drayage, local delivery)
  - Independently-owned and operated MHD vehicles
6. Determining Areas of Last Resort
- How long should an effective program last
  - What are determining factors

**The schedule of topics shall be released once panelists have been confirmed, interested panelists should note which dates and times they are available. Stakeholder meetings will be held on the following dates:**

- **Thursday, August 5 at 10 a.m.**
- **Friday, August 6 at 1 p.m.**
- **Tuesday, August 24 at 10 a.m.**
- **Thursday August 26 at 1 p.m.**
- **Wednesday September 15 at 1 p.m.**
- **Friday September 17 at 10 a.m.**
- **Tuesday September 21 at 10 a.m.**

**The deadline for comments on each topic is two (2) weeks after the meeting.** Please submit comments directly to the specific docket listed above using the “Post Comments” button on the Board’s [Public Document Search](#) tool. Comments are considered “public documents” for purposes of the State’s Open Public Records Act and any confidential information should be submitted in accordance with the procedures set forth in N.J.A.C. 14:1-12.3. Written comments may also be submitted to:

**Aida Camacho-Welch**  
 Secretary of the Board  
 44 South Clinton Ave., 9<sup>th</sup> Floor  
 Post Office Box 350  
 Trenton, NJ 08625-0350  
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Aida Camacho-Welch  
 Secretary of the Board

Dated: June 30, 2021