



June 17, 2020

Aida Camacho-Welch, Secretary  
New Jersey Board of Public Utilities  
Post Office Box 350  
Trenton, New Jersey 08625

**Re: In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out  
(Docket No. QO20050357)**

Dear Secretary Camacho-Welch,

Pursuant to the May 18, 2020 *Notice* in Docket No. QO20050357,<sup>1</sup> Enel X North America, Inc. (Enel X) is pleased to submit the following comments on the *New Jersey Electric Vehicle Infrastructure Ecosystem 2020 Straw Proposal* (Straw Proposal) issued by the New Jersey Board of Public Utilities (“Board” or “BPU”).

Enel X e-Mobility, formerly known as eMotorWerks and a subsidiary of Enel, the global utility company, is a leading provider of electric vehicle (EV) charging technologies. Enel X manufactures and sells the JuiceBox, the market-leading Level 2 home EV charger, along with a comprehensive line-up of commercial Level 2 and DC fast charging (DCFC) hardware solutions for workplace, fleet, and public charging applications. These products run on JuiceNet, Enel X’s cloud-based software platform used for asset management, EV charging submetering and data transfer, and flexible control for managed EV charging. Enel X’s smart charging solutions complement a broad portfolio of customer-facing clean energy offerings including demand response, front-of- and behind-the-meter energy storage, solar photovoltaic, and advisory services for commercial / industrial customers and fleet electrification.

**I. Introduction**

The recent passage of Senate Bill (S) 2252 signals New Jersey’s strong intent to catalyze the market for EV charging infrastructure in support of the state’s interrelated goals and policies to decarbonize the economy,<sup>2</sup> transition to clean energy,<sup>3</sup> and promote EV adoption. Chiefly, S 2252 codifies Governor Murphy’s target of 330,000 light-duty EVs on state roads by 2025, increasing to 85% of all light-duty vehicle registrations by 2040. Electrifying the state’s transportation sector would address New Jersey’s largest source of carbon emissions and air pollution and would generate significant economic, environmental, and societal benefits that would accrue to its residents.

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<sup>1</sup> [https://www.nj.gov/bpu/pdf/publicnotice/Notice\\_Stakeholder\\_Meeting\\_EV\\_Straw\\_Proposal\\_5-18-20.pdf](https://www.nj.gov/bpu/pdf/publicnotice/Notice_Stakeholder_Meeting_EV_Straw_Proposal_5-18-20.pdf)

<sup>2</sup> The Global Warming Response Act of 2007 sets a long-term greenhouse gas reduction target of 80% below 2006 levels by 2050.

<sup>3</sup> See “2019 New Jersey Energy Master Plan: Pathway to 2050,” [https://nj.gov/emp/docs/pdf/2020\\_NJBPU\\_EMP.pdf](https://nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf)

By one estimate however, the state is only around 10% of the way towards meeting its 2025 objective.<sup>4</sup> Additionally, per the Straw Proposal, New Jersey is also ranked near the lowest 10<sup>th</sup> percentile of all US states in terms of EV charging stations per registered vehicle.<sup>5</sup> Significant effort and investment are thus needed by state agencies, Electric Distribution Companies (EDCs), EV original equipment manufacturers (OEMs), EV Service Providers (EVSPs), and advocates if the state is to successfully foster a transition to EVs in the face of commonly-cited barriers to adoption like up-front cost, range, consumer awareness, and charging infrastructure availability.

The Board's recently-launched "Charge Up New Jersey" rebate, initiated per S 2252, will help mitigate the cost premium of EVs in the near-term, while continued investment and innovation on behalf of EV OEMs and suppliers will autonomously increase EV ranges and is expected to result in price parity between EVs and internal combustion engine (ICE) vehicles within the next 3-5 years.<sup>6</sup> S 2252 also tasked the New Jersey Department of Environmental Protection (DEP) with launching a statewide campaign to educate consumers about the availability and benefits of plug-in EVs, state goals for EV deployment, and the availability of the "Charge Up New Jersey" EV incentives.<sup>7</sup>

On the other hand, EV infrastructure deployment is currently hampered by poor economics, primarily stemming from low levels of EV adoption and station utilization as well as the impact of traditional commercial electric rates on ongoing operating costs, creating a vicious cycle that inhibits the business case for the rapid deployment of charging infrastructure. The BPU correctly seeks to break out of this business-as-usual scenario and catalyze the EV charging market through developing a comprehensive "EV Ecosystem" framework, which is based on:

1. A "shared responsibility" model for EV infrastructure deployment between EDCs and private investors;
2. Funding;
3. A commitment that all New Jersey communities have equitable access to the EV Ecosystem; and
4. Reforming utility rate structures that serve as barriers to grid-integrated and/or high capacity EV charging.

Enel X commends the Board for initiating this timely inquiry into the establishment of a sustainable EV Ecosystem in the Garden State. The Straw Proposal puts forth a good starting point for discussing the roles, responsibilities, and processes for EV Ecosystem members in

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<sup>4</sup> As of December 2019, there are 30,017 EVs registered in New Jersey, spanning Battery Electric Vehicles and Plug-in Hybrid Electric Vehicles. <https://www.drivegreen.nj.gov/dg-electric-vehicles-basics.html>

<sup>5</sup> Straw Proposal, at 2.

<sup>6</sup> E.g., <https://www.bloomberg.com/opinion/articles/2019-04-12/electric-vehicle-battery-shrinks-and-so-does-the-total-cost>.

<sup>7</sup> Aside from the state sponsored EV campaign, EDCs also play a critical role in marketing, education, and outreach on the availability and benefits of EVs and generating interest in any EV infrastructure programs they host, given their pre-existing relationships and communication channels with customers.

constructing, owning, operating, and paying for a comprehensive EV charging network, as well as optimally integrating new EV charging load into the grid.

That said, Enel X believes that the scope and details of the Straw Proposal are too narrow and rigidly prescribed for the Board to deliver on its goal to develop a comprehensive EV Ecosystem. As written, the Straw Proposal would effectively amount to picking winners and losers in terms of both private sector business models for EV infrastructure buildout and the specific charging use cases that benefit from EDC ratepayer funding. Many elements of the Straw Proposal require further revision and refinement to ensure that the Board fosters a diverse, competitive, innovative, and truly comprehensive marketplace for EV charging infrastructure across all relevant light-duty market segments,<sup>8</sup> and does not close the door on different approaches to deploying infrastructure at such an early juncture in the market. This is assuming the Board's intention to set broad and binding policy guidance for all subsequent EDC investments in EV charging infrastructure.

Our comments below focus on the roles, funding sources, and process to access EDC investments; eligibility of, and allowable business models deployed by, private EV infrastructure providers; how to equitably distribute and provide access to EV supply equipment (EVSE); guidance for residential EVSE incentives; and the Straw Proposal's relationship to EDCs' pending EV infrastructure filings. We respectfully urge the Board to modify its Straw Proposal in the ways described to ensure that the buildout of EV charging infrastructure is achieved in the most efficient and cost-effective manner possible while supporting the development of a competitive and sustainable EV charging market that assists in the timely achievement of New Jersey's climate and energy goals.

## **II. The Proposed "Shared Responsibility" Business Model**

### **a. Background**

In laying out its vision for a "shared responsibility" model for EV infrastructure investment and deployment, the Straw Proposal defines roles and responsibilities of EDCs and private "EVSE Infrastructure Companies" (referred to subsequently herein as "EV Service Providers" or EVSPs, for reasons described below) and delineates a process by which the latter can request the former to make a location "Charger Ready."<sup>9</sup> Under this model, EDCs would invest in and earn a return on the wiring and backbone infrastructure necessary to enable EV charging infrastructure at a site, while the private sector would own, operate, and advertise the EVSE, with private capital the primary means of EVSE funding.<sup>10</sup>

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<sup>8</sup> S 2252 provides for the Board and DEP to "establish other goals for vehicle electrification and infrastructure development that address medium-duty and heavy-duty on-road diesel vehicles and associated charging infrastructure."

<sup>9</sup> The Straw Proposal (at 4) defines "Charger Ready" as "the pre-wiring of electrical infrastructure at a parking space, or set of parking spaces, to facilitate easy and cost-efficient future installation [EVSE], including, but not limited to, Level Two EVSE and [DCFC]. Making a site Charger 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. 'Charger Ready' is synonymous with the term [customer-side] 'Make Ready.'"

<sup>10</sup> Straw Proposal, at 7-11.

EDCs would be responsible for performing upgrades on the utility side of the meter and Charger Ready wiring on the customer side of the meter; develop hosting capacity maps in conjunction with the EV Mapping Effort;<sup>11</sup> and assume costs for ensuring equitable distribution of EVSE as a “Last Resort.” The Straw Proposal would allow EDCs to recover all costs associated with distribution system upgrades, the costs of making a location Charger Ready, and the costs of any mapping exercises, provided the EDCs make an adequate showing that the costs are reasonable and prudently incurred.

EVSPs would be tasked with determining where charging stations are sited; requesting that sites be made Charger Ready; installing, owning, maintaining, and marketing EVSE as to maximize consumer acceptance and revenue; and performing these functions under contract to the EDC as a “Last Resort.” EVSPs could either “use Charger Ready locations funded by ratepayers, or to establish their own Ecosystems without financial support from ratepayers.”

EDCs would make a location Charger Ready upon a request from an EVSP or governmental entity and would have one year from the request to complete the work. EDCs would give priority to recommended locations from the EV Mapping Effort in “sequencing” their buildout of Charger Ready wiring. In order to access ratepayer funding for Charger Ready wiring, EVSPs would have to commit to having operational EVSE at a site within one year of Charger Readiness; keeping the site operational and publicly accessible for at least two years; providing per-use or subscription payment options; utilizing dual-port EVSE whenever technically feasible; and returning Charger Ready infrastructure back to the EDC in instances of poor performance or abandoning EVSE operations the site. Finally, EDCs would be required to establish criteria for “Poor Performing EV Infrastructure Companies” and an associated statewide *pro forma* contract that could be used to revoke an EVSP’s use of a Charger Ready Location for failing to adequately maintain operational equipment.

## **b. Discussion**

Enel X agrees that EDCs making locations “Charger Ready” is essentially an extension of the distribution system and builds on EDCs’ deep experience in delivering electricity and operating distribution infrastructure. Allowing EDCs to earn a rate of return on Charger Ready investments, even though this goes beyond the typical line of demarcation at the customer meter, should also provide an adequate incentive for these companies to expeditiously respond to requests for Charger Ready wiring. We certainly agree that EDCs should be permitted to seek recovery of their reasonably incurred costs following the execution of their roles and responsibilities delineated here.

Enel X does not oppose the Straw Proposal’s high-level approach to splitting the responsibility for EV infrastructure buildout and funding between EDCs and private sector actors. However, we strongly disagree with certain foundational elements of the proposal, both explicit and implied, pertaining to private sector roles, business models, and funding access. Given the Straw Proposal’s objective to resolve key policy issues in a generic docket and ensure a consistent statewide approach to EV Ecosystem development, it is imperative that the Board rectify these issues to avoid unnecessarily stunting the growth of the EV charging market.

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<sup>11</sup> Lead by the DEP.

First, we note that, as proposed, the shared responsibility model seems to singularly respond to – or at least be preferentially driven by – the requirements of S 2252 that pertain to publicly accessible EV chargers. This is inferred by the proposed criterion that an EVSE Infrastructure Company must make a site open to the public as a prerequisite to accessing EDC ratepayer funding.<sup>12</sup> This is despite the fact that S 2252 includes requirements for private-access EVSE deployments at multi-family dwellings and hotels, and also enables the Board to establish and implement a program to provide incentives for the purchase and installation of residential EVSE.<sup>13</sup>

Second, the Straw Proposal uses the term “EVSE Infrastructure Companies” to describe the non-EDC private sector entities that partner with EDCs to deploy infrastructure. This term should be amended. The EV charging marketplace consists of a diverse array of actors that provide different combinations of the discrete elements that comprise the EV charging value chain – e.g., hardware manufacturers, software developers, charge point operators, mobility service providers. Distilling these functions into the term “EVSE Infrastructure Companies” connotes a very specific type of EV charging company, one that either manufactures and / or installs EVSE (i.e., hardware). This might amount to a minor detail, but if taken literally, this definition could have significant implications on the eligibility of different EV charging market participants for EDC funding and programs. We recommend that the Board amend this term to “EV Service Provider” or EVSP: a commonly used, catch-all term for a company that provides EV charging services

Third, and most critically, the shared responsibility model cites a single business model and process by which the private sector can deploy EV infrastructure: wherein EVSPs are responsible for “installing, owning, maintaining, and marketing the EVSE,” and are responsible for requesting that an EDC make a location Charger Ready. This gives further evidence to the hypothesis that the Straw Proposal is primarily geared towards enabling the public DCFC portion of S 2252, as this business model is typically employed by companies that own and operate public DCFC networks.

The Straw Proposal’s reliance on this model fails to consider that S 2252 sets separate requirements and allowances for EV charging deployments – namely, EVSE deployment requirements at multifamily building and hotels; minimum deployment targets for publicly-accessible Level 2 EVSE; and the Board’s ability to adopt incentives for residential EVSE purchase and installation – that are often fulfilled through a business model wherein EVSPs sell EVSE hardware to property owners and site hosts, who are then responsible for owning, operating, and maintaining the stations through network service subscriptions. It should be mentioned that publicly available DCFC can also be deployed through selling EVSE hardware to site hosts or property owners.

Taken together, these critiques amount to a call for the Board to reevaluate the parameters of the shared responsibility model against the stated objectives of the Straw Proposal to establish guidelines for “a comprehensive EV Ecosystem.” If the Board’s intent is to only focus on publicly accessible chargers, then the Straw Proposal should be clarified as such. Otherwise,

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<sup>12</sup> Straw Proposal, at 10-11.

<sup>13</sup> The Straw Proposal does include guidance for the residential and multifamily segments with regards to rates and EDC showings on the additionality of proposed residential EVSE incentives, but the point here is that neither segment is explicitly considered in the context of the shared responsibility model.

the Board should look to establish a shared responsibility model that provides solutions beyond a single market segment and business model, to consider the roles of EDCs, EVSPs, and ratepayer funding to catalyze Charger Ready deployment across a broad cross-section of light-duty segments, including single- and multi-family residential, workplace, fleet, and public destination using multiple different business models, funding sources, and ownership structures.

We recognize that the Board's proposal to solely use private capital to fund EVSE and Charger Readiness at private-access locations stems, at least in part, from the following directives laid out in New Jersey's Energy Master Plan pertaining to the affordability of the state's electrification efforts:

1. attract private capital into the EV infrastructure sector and substitute shareholder dollars for ratepayer capital wherever possible;
2. minimize the risk of ratepayers paying for stranded EV infrastructure investments, such as the risk that charging station infrastructure becomes technologically obsolete or is simply never utilized at a high level, through strategic mapping and encouraging private investment; and
3. design EV infrastructure policies that are fair to both EV-driving ratepayers and non-EV driving ratepayers, to ensure the benefits of EVs are shared by all ratepayers.<sup>14</sup>

We would argue, however, that the balance of the Straw Proposal is overly concerned with the first two of these affordability pillars without adequately considering the beneficial impacts of the third. Widespread EV adoption across vehicle classes is poised to bring considerable new load to the electric system, which will generate significant new revenues in the process. To the degree that this new load can be optimally integrated into the existing system and increase overall system utilization, these incremental revenues will have the effect of driving down electric rates for all ratepayers, including non-EV drivers.

To this end, the Straw Proposal correctly requires the creation of time-of-use rates for EV charging, which not only maximizes the fuel savings from switching from an ICE to an EV, but also communicates the correct price signals to "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."<sup>15</sup> In California, studies have demonstrated that EV charging on TOU rates in PG&E and SCE territories from 2012 through 2018 generated almost \$450 million more in revenues than associated costs.<sup>16</sup> Without considering the additional expected revenue associated with a specific EDC proposal, the Board should not carry the default assumption that ratepayer funding for EV infrastructure creates an unaffordable situation for ratepayers. Quite the opposite: ratepayer funding for EV infrastructure can generate a positive return on those investments.

We also recommend that the Board not close the door on the possibility of ratepayers funding EVSE incentives, especially following S 2252's allowance for the board to adopt rebates for EVSE purchase and installation for residential customers. In our view, any perceived risk of technology obsolescence and stranded assets with regards to EVSE is overblown. Most EVSE

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<sup>14</sup> Straw Proposal, at 7. EMP, at 65.

<sup>15</sup> Straw Proposal, at 13.

<sup>16</sup> <https://www.synapse-energy.com/sites/default/files/EV-Impacts-June-2019-18-122.pdf>

have expected useful lives of at least 10 years, and it is far from the case that EV charging technology is changing so rapidly that deployed stations must be completely abandoned or become unworkable.

Regarding business models, we implore the Board to not prescribe the approaches that an EVSP or other private-sector entities must employ in order to receive Charger Ready wiring from the EDC, not to mention participation in the EV Ecosystem more broadly. Relatedly, the Board should not prescribe that an EVSP or government entity must be the customer of record in submitting a request for an EDC to make a location Charger Ready. The Board should instead aim to be broadly inclusive in allowing the responsibilities for EVSE ownership, operation, and maintenance to fall to wide range of entities and customers. This recommendation extends to enabling a more flexible option for EDC ownership in different market segments beyond the Board's proposal for EDCs to serve as the provider of "last resort" for Equity Areas.

Ultimately, the role of this Straw Proposal should be to provide high-level guidance to EDC filings across market segments to meet the entirety of applicable statutory requirements and other state policy goals, while setting up a framework for continual review and revision of EDC investments given the achievement of said goals, ongoing market and technology maturation, and the actual learned experience from EDCs and EVSPs in implementing, managing, and participating in those programs. As it stands though, the vision presented in the Straw Proposal is too narrow to develop a comprehensive EV Ecosystem. We respectfully request that the Board revise its proposal as described herein to achieve the state's near-term EV and EVSE deployment goals and support a robust and sustainable EV charging market.

### **III. Equity Areas**

We wholeheartedly agree with the Board that the equitable geographic distribution of EV infrastructure is critical to ensuring a viable EV Ecosystem in the state. The Straw Proposal considers how to define "Equity Areas" to ensure adequate EVSE coverage across low-income, urban, environmental justice communities, rural communities, or evacuation routes. In our view, "Equity Areas" should largely be defined by metrics of income and pollution burden. All things being equal, urban areas should be assumed to attract adequate levels of utilization, while EVSE deployment in rural areas should initially be focused along travel corridors. The EV Mapping Effort could also add criteria to its suitability scoring to reflect evacuation routes.

However, the proposal to estimate a timeframe in which to evaluate the market's deployment of charging services in these Equity Areas before allowing EDC-owned solutions as a last resort is unworkable. There is no set definition of "market failure," and arguably, the need for incentives to drive the business case for EV charging points to the conclusion that the market is not sufficiently mature *across the board* to build EVSE on a purely merchant basis. Plus, the end-of-2025 deadlines for EVSE deployment in S 2252 require that the state act immediately in setting a plan in motion to, e.g., more than double the amount of existing public DCFC stations in the state.<sup>17</sup>

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<sup>17</sup> The US Department of Energy's Alternative Fuels Data Center notes 345 DCFC charging outlets as of June 17, 2020. <https://afdc.energy.gov/stations/states>

Enel X believes that the process for deploying EVSE in Equity Areas should align with the process that is determined for determining “high priority sites” per the EV Mapping Effort and EDC hosting capacity maps. In other words, Equity Areas should overlay the map of “high priority sites.”<sup>18</sup> Once Equity Areas are defined, given the Straw Proposal’s focus on Equity Areas that “may be identified as suitable locations for a Charger Ready location by the EV Mapping Effort, but where the market is not sufficiently mature to build EVSE without financial assistance,” the Board should provide additional incentives for EVSE deployed at “high priority sites” within Equity Areas, beyond any incentive made broadly available for EDC programs. The Board could also set certain targets for EVSE deployment in Equity Areas within EDC investment programs, specific to the objectives and market segments entailed by such programs. These incentives and targets would signal the state’s emphasis on deployment in these areas to attract developers and make up for the assumed lack of utilization.

#### **IV. Guidance Regarding EDC Residential Rebate Proposals**

S 2252 authorizes the Board to establish and implement a program to provide incentives for the purchase and installation of in-home EVSE. The Straw Proposal subsequently directs EDCs that propose residential rebates to include additional showings on how any proposed residential EVSE rebate is not “duplicative,” and instead complimentary, of any existing state-level rebate. The Straw Proposal also would require EDCs to include in their residential EVSE incentive program proposals “an analysis of the role of Advanced Metering Infrastructure (“AMI”) and EDC plans for AMI roll-out,” explaining that, “Staff is considering whether or not to recommend a requirement that all unique, individual residential charging incentives include deployment of an AMI or “smart meter” in preference, and/or in addition to, any installed charger regardless of the charger’s technical capabilities.”<sup>19</sup>

Enel X believes that it would be inappropriate to tie the availability of residential EVSE incentives to AMI deployment, as the latter is a longer-term proposition that would unnecessarily delay the availability of EVSE incentives. What is more, the technical capabilities of smart or networked Level 2 EVSE include embedded, revenue-grade submeters and cloud-based data transfer that can enable a wide variety of rates, incentives, and programs to encourage and reward off-peak charging, without the need to install a separate smart meter. Many utilities across the country take advantage of the metering capabilities of smart EVSE for their residential smart charging offerings. In a notable example, a residential smart charging pilot from Xcel Energy in Minnesota found that utilizing EVSE submeters for EV-only TOU billing saved customers an average of \$2,196 in up-front costs that would have otherwise been entailed by installing separate AMI for EV charging.<sup>20</sup> We urge the Board to instead recommend a requirement that residential charging incentives aim to utilize the full capabilities of smart Level 2 EVSE to encourage off-peak charging, especially due to the Board’s concerns around ratepayer affordability.

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<sup>18</sup> <https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=b05c57f8170c414e83046d04aeb64311>

<sup>19</sup> Straw Proposal, at 14.

<sup>20</sup> Xcel Energy, *Petition – Electric Vehicle Home Service Program*, Docket No. E002/M-17-817, August 30, 2019, at 6. <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7bE067E46C-0000-C51B-9F3A-CE1803EC2609%7d&documentTitle=20198-155611-01>



## **V. Straw Proposal Relation to Pending EV Filings**

Staff states that its consideration of generic policy issues via development of the Straw Proposal will proceed in parallel with its evaluation of EV-related filings from individual EDCs, which “will ultimately result in a faster development of a successful EV Ecosystem.” Staff directs all EDCs to file (or update, as applicable) EV plans and proposed EV programs by December 31, 2020, with implementation dates commencing no later than April 1, 2021. Section V.E. of the Straw Proposal includes a list of information sought from the EDCs in their new or updated filings.

Enel X notes that EV infrastructure filings from Atlantic City Electric<sup>21</sup> and Public Service Electric and Gas<sup>22</sup> have been pending without a hearing at the Board for an average of two years and include many programmatic elements that are not contemplated by the Straw Proposal. Given the significant and foundational revisions we seek, along with the uncertain timing of the Board’s ruling on this proposal, it is likely impractical for EDCs to revise their comprehensive EV filings based on revised Straw Proposal guidance by a December 31, 2020 deadline.

We believe that the Board should proceed in reviewing the EDCs’ existing filings without delay. The resulting Straw Proposal guidance should aim to continually review EDCs’ investment proposals and revise program design based on empirical data on a going-forward basis.

## **VI. Conclusion**

Enel X thanks Board Staff for its review and consideration of these comments. We are committed to helping New Jersey establish itself as a nationwide leader in EV adoption, which is predicated on the widespread availability of EV charging infrastructure. We again urge the Board to adopt the foregoing recommendations and look forward to working with Staff, other state and local agencies, EDCs, OEMs, EVSPs, and advocates in the service of creating a truly comprehensive EV Ecosystem in the Garden State.

**Sincerely,**



**Marc Monbouquette**  
Regulatory Affairs Manager  
Enel X e-Mobility

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<sup>21</sup> Docket No. E018020190, filed February 23, 2018

<sup>22</sup> Docket No. EO18101111, filed October 11, 2018