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Aida Camacho-Welch  
Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
P.O. Box 350  
Trenton, New Jersey 08625-0350

**Re: Straw Proposal on Electric Vehicle Infrastructure Build Out; Docket No. QO20050357**

Dear Secretary Camacho-Welch,

The Edison Electric Institute (EEI) respectfully submits this letter to the New Jersey Board of Public Utilities (BPU) in response to the call for comments in Docket No. QO20050357, *In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out* (Proposal). EEI has been monitoring electric vehicle (EV) proceedings across the country and appreciates the opportunity to provide the BPU with a national perspective on the integral role electric companies can play in advancing the deployment of EV infrastructure, highlighting some of the positive attributes of EVs that benefit all customers, and providing recommendations for areas of further consideration in the Proposal.

EEI is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for 220 million Americans and operate in all 50 states and the District of Columbia. Collectively, the electric power industry supports more than 7 million jobs in communities across the United States. EEI's member companies, which include Public Service Electric & Gas Company, Atlantic City Electric, and Jersey Central Power & Light, deliver safe, reliable, affordable and increasingly clean electricity that powers the economy and enhances the lives of all Americans.

### **A Robust and Competitive EV Ecosystem Needs Significant EDC Participation**

Electric companies are well-positioned to make targeted and strategic investments in EV charging infrastructure that benefit the broader community and accelerate EV adoption. The enactment of Senate Bill 2252 earlier this year set the ambitious goal of having at least 330,000 EVs on New Jersey's roads by the end of 2025 and at least 2 million EVs by the end of 2035.<sup>1</sup> Nationally, the current lack of EV charging infrastructure is one of the primary barriers to widespread EV adoption. EEI and the Institute for Electric Innovation (IEI) released a report in

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<sup>1</sup> See Senate and General Assembly the State of New Jersey, "Senate Bill 2252," approved January 17, 2020, [https://www.njleg.state.nj.us/2018/Bills/PL19/362\\_PDF](https://www.njleg.state.nj.us/2018/Bills/PL19/362_PDF).

2018 forecasting 18.7 million electric vehicles on the road by 2030.<sup>2</sup> To support that many EVs by 2030, 9.6 million charging ports will be needed.<sup>3</sup> This penetration is unlikely to be achieved without significant electric company investment.

Automakers and suppliers are also making substantial commitments to EVs and are expected to invest \$225 billion in EV development and technology through 2023.<sup>4</sup> However, it is also important to highlight that the availability of infrastructure can drive the adoption of EVs. Within two years of Evergy deploying its Clean Charge Network in the Kansas City region, it had experienced a 95 percent increase in EV adoption across its service territories, making Kansas City one of the fastest growing EV markets in the country.<sup>5</sup> Continued growth in the EV market requires automakers to increase EV model availability and electric companies (along with other entities) to increase the availability of charging infrastructure.

To date, 48 electric companies in 26 states and the District of Columbia have invested more than **\$1.51 billion** in EV programs.<sup>6</sup> While this is an impressive number, more is needed. The type of EV program can vary by state and electric company, but usually includes at least one of the following elements: (1) investments in, or ownership of, charging infrastructure; (2) rebates and incentives to customers for charging infrastructure deployment; (3) customer education and outreach; and (4) EV-specific rates. Together, these programs can unlock value for all customers by growing the EV market for all participants, by helping to integrate EV charging into the energy grid in a cost-effective manner, and by driving outcomes that protect customer interests and maximize customer value.

EI applauds the Staff's Proposal for recognizing that developing a comprehensive EV Ecosystem can include significant roles for both Electric Distribution Companies (EDCs) and Electric Vehicle Service Equipment (EVSE) Infrastructure Companies while remaining competitive. Many states have found that electric company investment can be complementary to and supportive of a competitive market for charging services. For example, in approving Portland General Electric's public transportation pilot program, Oregon's Public Utility Commission acknowledged that electric company investment to deploy more charging infrastructure leads to greater EV adoption, which, in turn, creates the need for more infrastructure and allows for additional opportunities to provide charging equipment and services.<sup>7</sup> More EVs on the road would lead to greater utilization of the charging infrastructure and likely attract more private investment.<sup>8</sup>

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<sup>2</sup> See Edison Electric Institute and the Institute for Electric Innovation, *Electric Vehicle Sales Forecast and the Charging Infrastructure Required Through 2030*, November 2018, available at [https://www.edisonfoundation.net/-/media/Files/IEI/publications/IEI\\_EEI-EV-Forecast-Report\\_Nov2018.ashx](https://www.edisonfoundation.net/-/media/Files/IEI/publications/IEI_EEI-EV-Forecast-Report_Nov2018.ashx)

<sup>3</sup> See *Id.*

<sup>4</sup> See ABC News, "Has cheap fuel pulled the plug on electric vehicles?" <https://abcnews.go.com/Business/cheap-fuel-pulled-plug-electric-vehicles/story?id=70619683>

<sup>5</sup> See Clean Charge Network, "Five Years: A Timeline of EV Growth in Our Region," March 2020, <https://cleanchargenetwork.com/five-years/>

<sup>6</sup> See Edison Electric Institute, "Electric Transportation State Biannual Regulatory Update: June 2020," [https://www.eei.org/issuesandpolicy/electrictransportation/Documents/FINAL\\_ET%20Biannual%20State%20Regulatory%20Update\\_June%202020.pdf](https://www.eei.org/issuesandpolicy/electrictransportation/Documents/FINAL_ET%20Biannual%20State%20Regulatory%20Update_June%202020.pdf)

<sup>7</sup> See *Application for Transportation Electrification Programs, Order No. 18-54*, Docket No. UM 1811 (Feb. 16, 2018) at 10-11, available at: <https://apps.puc.state.or.us/orders/2018ords/18-054.pdf>.

<sup>8</sup> See *id.* at 11.

## **Flexible Rate Design Will Not Only Encourage EV Adoption But Also Maximize Grid Efficiencies**

As EV adoption grows, both the energy grid and the electric company's role as an integrator of energy resources becomes more important. Significant EV adoption without a coordinated or managed charging program could lead to capacity constraints or require upgrades to the distribution grid. Managed charging refers to any strategy that provides a signal to influence how drivers charge their EVs, including time-varying rates, demand response programs, and other types of smart charging. EVs that are charged either at home (*e.g.*, single family or multi-family dwellings) or at work provide the greatest opportunity to manage charging in the near term.<sup>9</sup> Managed charging can enhance the EV customer experience by saving drivers money, lowering their carbon footprint, and simplifying their charging process. Electric companies can also use managed charging programs to more directly engage and interact with customers.

EVs also benefit all customers by improving energy grid utilization. Programs that encourage charging to occur when the energy grid has available capacity will minimize costs and help the energy grid operate more efficiently, effectively lowering the average system cost, which provides direct benefits to all electric customers. A June 2019 report by Synapse Energy analyzed the energy grid costs and revenues associated with EVs in the service territories of Pacific Gas & Electric and Southern California Edison, which have the most EVs in their service territory of any other electric company. From 2012 through 2018, revenues from EVs were \$584 million greater than costs.<sup>10</sup> One reason is because EV customers on time-of-use (TOU) rates tend to charge during off-peak hours, which helps utilize the energy grid's resources more efficiently and keeps costs down for everyone.<sup>11</sup> This is not a California-only dynamic: a study by E3 for AEP Ohio's service territory similarly found that EV adoption results in net customer benefits, as the revenue collected from EVs charging on the energy grid exceeds the cost to serve them.<sup>12</sup>

Additionally, a study by the Illinois Citizen's Utility Board (CUB) calculated hourly and flat-rate charging costs and compared the total charging costs for various vehicles and charging scenarios. EV drivers on a time-based rate, such as Ameren's Power Smart Pricing, would save up to 51 percent on their energy costs when compared to customers on flat rates.<sup>13</sup> Accordingly, CUB concluded that time-base rates are effective at incentivizing EV drivers to charge when there will be minimal strain on the energy grid.

The Proposal should be commended in attempting to strike a balance by addressing all uses (both home and public charging), by looking for equity between residential and multi-family charging, and by encouraging the use of managed charging through inclusion of time-of-use

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<sup>9</sup> Vehicle-to-grid is not considered, as this opportunity is limited for these use cases in the near term.

<sup>10</sup> See Synapse Energy, "Electric Vehicles Are Driving Electric Rates Down: June 2019 Update," <https://www.synapse-energy.com/sites/default/files/EV-Impacts-June-2019-18-122.pdf>

<sup>11</sup> See *id.*

<sup>12</sup> See Energy and Environmental Economics, "Cost-Benefit Analysis of Plug-in Electric Vehicle Adoption in the AEP Ohio Service Territory," [https://www.ethree.com/wp-content/uploads/2017/10/E3-AEP-EV-Final-Report-4\\_28.pdf](https://www.ethree.com/wp-content/uploads/2017/10/E3-AEP-EV-Final-Report-4_28.pdf)

<sup>13</sup> See Illinois Citizen's Utility Board, "Charge for Less: An Analysis of Electricity Pricing for Electric Vehicles in Ameren Territory," February 2020, [https://www.citizensutilityboard.org/wp-content/uploads/2020/02/ChargeForLess\\_Ameren\\_Final.pdf](https://www.citizensutilityboard.org/wp-content/uploads/2020/02/ChargeForLess_Ameren_Final.pdf)

(TOU) rates. As the Proposal inherently recognizes, when designing EV rates, there are a number of strategies that electric companies can employ in order to help increase the deployment of EV infrastructure. These strategies include creating a separate rate, providing rate options for customers with particular focus on incentivizing charging during off-peak hours, and providing more detailed pricing signals that reflect the true costs to the energy grid.<sup>14</sup> To date 25 electric companies have an approved EV-specific rate for a variety of customer use types including residential, public charging, electric buses, and commercial fleet charging.<sup>15</sup>

Since the EV market is nascent in New Jersey, now is the time to experiment with rate designs that will best encourage efficient use of the grid without inhibiting the market's growth. This can be done through the use of different strategies that change over time. While the Proposal includes good guideposts of suggested rate attributes, EDCs should be given the flexibility to propose other rates and rate structures for EVs that include those considerations, keep costs low, and adjust to changing market conditions.

### **Equitable Distribution and Availability of EVSE Cannot be Achieved Without EDC Ownership**

As mentioned above, EVs provide benefits to drivers and non-drivers by putting downward pressure on electricity rates, but it is also important to emphasize that electric companies' direct participation in the EV market is vital to ensure that these benefits are realized by all customers, regardless of socio-economic situation, geographic location or whether they own an EV. Approximately a quarter of all approved investment in electric company programs have an equity component.<sup>16</sup> This can include dedicating a portion of program funds to deploying infrastructure in a low-income community or investing a certain portion of funds to the electrification of transit or school buses. Regardless of the mechanism, electric companies can (and do) support markets that private investors may not find attractive because of unfavorable economics. This is because electric companies take seriously their role of serving all customers. However, when evaluating whether an EV program is equitable, the BPU should not only consider equity in customer rates, but also the impacts on the community including increasing access to zero-emission transportation options, impacts on jobs, and reducing air pollution.

In addition to all these direct customer benefits, EVs emit less air pollution than traditional gasoline powered vehicles, which enhances communities' efforts to reduce their carbon emissions. Currently, the transportation sector accounts for 42 percent of greenhouse gas

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<sup>14</sup> See The Brattle Group, "Increasing Electric Vehicle Fast Charging Deployment," January 2019, [http://files.brattle.com/files/15077\\_increasing\\_ev\\_fast\\_charging\\_deployment\\_-\\_final.pdf](http://files.brattle.com/files/15077_increasing_ev_fast_charging_deployment_-_final.pdf)

<sup>15</sup> See Atlas Public Policy EV Hub, "Electric Utility Filings Dashboard," accessed June 6, 2020, <https://www.atlasevhub.com/materials/public-policy/>

<sup>16</sup> See Atlas Public Policy EV Hub, "25 Percent of Approved Utility Investment Going to Underserved Communities," December 2, 2019, [https://www.atlasevhub.com/data\\_story/25-percent-of-approved-utility-investment-going-to-underserved-communities/](https://www.atlasevhub.com/data_story/25-percent-of-approved-utility-investment-going-to-underserved-communities/)

(GHG) emissions New Jersey,<sup>17</sup> which is “the largest single sector of carbon emissions.”<sup>18</sup> As the Proposal recognizes, New Jersey will be unlikely to meet its ambitious clean energy or carbon reduction targets without widespread transportation electrification.<sup>19</sup>

### **Specific Recommendations to Straw Proposal**

While the Proposal does a good job ensuring that the responsibility of developing of the EV Ecosystem is shared, there are some elements of the Proposal that may require a bit more flexibility and, if not revised before adoption, could inadvertently slow down EV deployment in New Jersey. In addition to providing rate design flexibility and ensuring an integral role for EDCs in EV Ecosystem infrastructure development, this includes reconsideration of the Straw Proposal’s restriction around EDC ownership of EVSE, the timing associated when making locations Charger Ready, and the suggestion that EDCs act as “reporters” or “enforcers” of poor performing EVSE Infrastructure Companies.

First, as proposed, EDC ownership of charging stations would only be permissible under specific conditions that equates to a last resort and would disallow EDC ownership of new charging stations after December 31, 2025, unless extended by the BPU after a market analysis.<sup>20</sup> These restrictions could have unforeseen consequences preventing the state’s achievements of aggressive EV goals. Thirteen other states have allowed electric companies to invest in at least two of the following infrastructure models: make-ready, ownership of charging stations, and rebates.<sup>21</sup> The BPU should consider a more flexible investment model that allows EDCs to contribute to the deployment of infrastructure through a variety of means, including both infrastructure upgrades and ownership of EVSE charging stations. As was addressed by EEI’s Adam Benshoff during the June 3, 2020 technical conference, California initially excluded electric companies from participating in the EV market. When the growth of EV charging infrastructure was not keeping pace to meet the state’s EV goals, the commission reversed its decision to consider electric company proposals on a case by case basis. The state later went further and enacted SB 350, which required electric companies to file electric transportation plans and actively participate in the EV market.<sup>22</sup> Limiting EDCs role in this market may unintentionally and unnecessarily delay the markets growth. Because the SB 2252 targets are set to be achieved in such a short timeframe, the Proposal, if anything, should be more inclusive of EDC ownership of EVSE equipment.

Second, the Charger Ready portion of the Proposal, if left unchanged, could also have negative impacts by adding extra time and complexity to the process. As currently drafted, EDCs are allowed 12-months from the date of request by an EVSE company to make a location “Charger Ready.” However, the time allotted for an EVSE Infrastructure Company to determine whether

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<sup>17</sup> See State of New Jersey Department of Environmental Protection, “Transportation & Emissions,” accessed June 9, 2020, <https://www.nj.gov/dep/ages/opea-trans-emissions.html#:~:text=While%20emissions%20from%20individual%20cars,air%20toxics%20and%20greenhouse%20gases>.

<sup>18</sup> *Straw Proposal* at 6.

<sup>19</sup> See *id.*

<sup>20</sup> See *id.* at 12.

<sup>21</sup> See EEI, “Electric Transportation State Biannual Regulatory Update: June 2020.”

<sup>22</sup> See State of California Legislature, “Clean Energy and Pollution Reduction Act of 2015 (SB. 350), approved October 7, 2017, [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB350](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350).

they want to install a charging station should be limited as well. Allowing too much time for EVSE Infrastructure Companies to make decisions when 1,400 chargers (including Charger Ready infrastructure upgrades) needs to be completed in less than five years could impact an EDC's ability to meet their 12-month deadline. This is even more important as the Proposal seeks to reduce an EDCs' earnings on that portion of EV infrastructure if somehow delayed beyond 12-months, unless an appeal is granted by the BPU. In addition, a cornerstone of the entire Proposal is the creation of EV maps, but there is no inherent recognition in the Proposal that the EDCs' role in creating these maps in such a short timeframe will be a heavy lift. It is imperative to leave enough lead time for the maps to be developed accurately and not require multiple rounds of approval, so that EDCs can ensure selected locations are ready in a timely fashion. If this is not allowed, the ambitious targets in SB 2252 will already be in jeopardy of not being met.

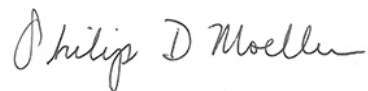
Finally, assigning EDCs the role of identifying, reporting, and revoking EVSE Infrastructure Companies' use of poorly maintained charging infrastructure<sup>23</sup> is highly unusual, puts the burden of proof on EDCs, and inappropriately delegates enforcement functions that are better left with the BPU. EDCs are regulated entities – they are not (and should not) be enforcers of BPU plans or Orders.

## **Conclusion**

As New Jersey works to finalize policies that support the deployment targets in SB 2252 and grow the EV market for all participants, EDCs should not only be permitted to participate in this space but also be given an integral role in designing and implementing programs that best meet the needs of their customers. A healthy and competitive electric transportation market with significant EDC involvement will benefit EV and non-EV drivers alike.

Thank you for the time and opportunity to provide comment on these important issues. We commend the BPU for releasing a well thought out Proposal and encourage consideration of the recommendations herein before issuing a Final Order.

Respectfully submitted,



Philip D. Moeller  
Executive Vice President,  
Business Operations Group and  
Regulatory Affairs  
Edison Electric Institute  
701 Pennsylvania Avenue, N.W.  
Washington, DC 20004-2696  
202-508-5500  
PMoeller@eei.org

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<sup>23</sup> See *Proposal* at 11.