Jersey Central Power & Light
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Via email to EVStakeholder.Group@bpu.nj.gov

Michael Winka
New Jersey Board of Public Utilities
Office of Clean Energy
44 South Clinton Avenue
P.O. Box 350
Trenton, New Jersey 08625

Re: Request for Comments – New Jersey Electric Vehicle Infrastructure

Dear Mr. Winka:

Jersey Central Power & Light Company ("JCP&L" or the "Company") is pleased to submit comments on the Board of Public Utilities ("BPU") Staff's ("Staff") request for comments regarding "New Jersey Electric Vehicle Infrastructure" issued September 6, 2017. JCP&L thanks the BPU for allowing the EDCs as well as other interested parties to have the opportunity to comment on this important emerging innovative issue. The Company is a supporter of electric vehicles and electric vehicle supply equipment ("EVSE"), including charging infrastructure development.

At the stakeholder kickoff meeting on September 15, 2017, Staff held some discussion pertaining to the two questions posed to interested parties:

1. Do EVs fall under the definition of demand side management and energy efficiency as set forth at N.J.S.A. 48:3-51 and/or N.J.S.A. 48:3-98.1.d?

2. Should owners and operators of EVSE that provide electric vehicle charging service be regulated as electric utilities? Are operators of EVSE reselling electricity or providing a charging service?

At that time, the Company had not fully formulated its position. In the following document, JCP&L will provide its response and support for its position.

1.) Do EVs fall under the definition of demand side management and energy efficiency as set forth at N.J.S.A. 48:3-51 and/or N.J.S.A. 48:3-98.1.d?

JCP&L does believe that EVs operated under an appropriate utility program do fall under the definitions of demand side management and energy efficiency. N.J.S.A. 48:3-51, defines, "Demand side management" as the management of customer demand for energy service through the implementation of cost-effective energy efficiency technologies, including, but not limited to,

installed conservation, load management, and energy efficiency measures on and in the residential, commercial, industrial, institutional, and governmental premises and facilities in this State.

Considering a key element of the definition of energy efficient technology, EVs are an energy efficient technology when compared to their gasoline counterparts. EVs convert about 59%–62% of the electrical energy from the grid to power at the wheels. Conventional gasoline vehicles only convert about 17%–21% of the energy stored in gasoline to power at the wheels.[1] Consequently, as supported by the Electric Power Research Institute (EPRI) studies, the lifetime cost of ownership of an EV is lower than the lifetime cost of gasoline powered vehicles.

With the management of customer demand for energy service, EVs are a cost-effective, energy efficient technology. Reductions in battery costs in recent years have made EVs affordable, making EVs a cost-effective technology. Also, depending on electricity and gasoline prices, the fuel costs for EVs is about half of the cost of conventional gasoline-powered motor vehicles. For example, for EVs, if electricity costs $0.11 per kWh and the vehicle consumes 34 kWh to travel 100 miles, the cost/mile is about $0.04[2]. For conventional gasoline powered motor vehicles, if the cost of gasoline is $2.50/gallon and the fuel efficiency is 30 miles/gallon, the cost/mile is about $.08. Recent research by EPRI indicates that the average electric vehicle typically goes 3.5 Miles per kWh; approximately 29 kWh per 100 miles or $0.039 per mile.

With respect to the measures listed as examples EVs also have attributes that are associated with conservation and smart charging use. As set forth by the title of the act itself, the Regional Greenhouse Gas Initiative is generally to promote the conservation of the environment by lowering greenhouse gas emissions. EVs clearly reduce carbon emissions as compared to gasoline-powered motor vehicles. Based on US DOE data on emissions from plug-in electric vehicles, plug-in vehicles in NJ reduce CO_2 emissions by 76%, as compared to conventional, gasoline-powered motor vehicles.[3] Lastly, with the installation of proper infrastructure and controls, EV battery charging activities can occur in conjunction with time of use or demand response programs.

In addition, N.J.S.A. 48:3-98.1.d, defines, "Energy efficiency and conservation program" as any regulated program, including customer and community education and outreach, approved by the board pursuant to this section for the purpose of conserving energy or making the use of electricity or natural gas more efficient by New Jersey consumers, whether residential, commercial, industrial, or governmental agencies. In addition, in N.J.S.A. 48:3-98.1. b., the Board may take into account the potential for job creation from such programs, the effect on competition for such programs, existing market barriers, environmental benefits, and the availability of such programs in the marketplace. An electric public utility may provide and invest in energy efficiency and conservation programs in its respective service territory regardless of whether the energy efficiency and conservation programs involve facilities on the utility-side or customer-side of the point of interconnection. Electric utilities can act as key

1 See US DOE website on Fuel Economy https://www.fueleconomy.gov/feg/evtech.shtml#end-notes.
2 See US DOE Alternate Fuels Data Center at https://www.afdc.energy.gov/fuels/electricity_charging_home.html
3 Based on US DOE table "Compare Electricity Sources and Annual Vehicle Emissions" (https://www.afdc.energy.gov/vehicles/electric_emissions.php), Plug-in electric vehicles in NJ emit 2,744 lbs. CO2 equivalent as compared to 11,435 lbs. CO2 equivalent for gasoline-powered motor vehicles.

partners for early and sustainable deployment programs to assist in this technological area. Electric vehicles and the related charging infrastructure are an efficient use of electricity as they are more energy efficient than internal combustion engine powered motor vehicles, in addition electric vehicles offer a tremendous environmental benefit by reducing emissions from gasoline fueled vehicles and utilizing clean electricity sources.

JCP&L believes that EVs squarely fall within the definition of demand side management and energy efficiency as set forth at N.J.S.A. 48:3-51 and/or N.J.S.A. 48:3-98.1.d.

2.) Should owners and operators of EVSE that provide electric vehicle charging service be regulated as electric utilities? Are operators of EVSE reselling electricity or providing a charging service?

The Company suggests that perhaps the question should be constructed in efforts to first determine what the optimal solution for early advancement of EVs and associated infrastructure is, then determine whether existing laws or regulations need to be changed in order to implement that solution. The public interest would be best served by a well thought out, planned expansion of the availability of public EV charging infrastructure, including the charger. The regulated EDCs would be best positioned to offer public charging services. Utilities can plan and manage regular maintenance and upkeep to avoid long EVSE downtime, customize the EV charging retail rates to account for peak/off-peak use and plan for long-term infrastructure rollouts that are not subject to short-term profitability goals. EDCs can also identify EV charging stations sites in optimal locations across the service territory, taking into account low income/disadvantaged neighborhoods, travel corridors and proper placement for grid interconnections. JCP&L encourages the Board to consider methods to optimize solutions first then seek the appropriate changes to laws or regulations, as necessary.

In closing, the regulated EDCs are well positioned to develop public electric infrastructure particularly in early market transformation development phases. In order to promote this development, the BPU should consider the advantages and societal benefits for EDCs to identify locations and install the infrastructure required to support EV operation, including ownership of EV charging stations, while allowing for cost recovery through a non-bypassable rate mechanism on a full and current basis. When the EDCs have the opportunity to receive adequate and timely cost recovery, planning for and installation of public infrastructure is more likely to be where most suitable to enable greater EV adoption and thus, maximize attainment of the associated energy efficiency and environmental benefits cited above.

The Company appreciates the opportunity to provide these comments, and hopes to continue to work with and be helpful to Staff as it works toward further development of electric vehicle infrastructure in New Jersey. If there are any questions, please contact me.

Very Truly Yours,

Thomas R. Donadio

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