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October 31, 2017

By Hand Delivery and Electronic Mail

Honorable Irene Kim Asbury, Secretary
NJ Board of Public Utilities
44 South Clinton Avenue, 3rd Floor, Suite 314
P.O. Box 350
Trenton, New Jersey 08625-0350

Re: **New Jersey Board of Public Utilities Electric Vehicle Stakeholder Group
Task 1 Questions: Reply Comments of the Division of Rate Counsel**

Dear Secretary Asbury:

Please accept this original and ten (10) copies of Reply Comments submitted on behalf of the New Jersey Division of Rate Counsel ("Rate Counsel") in connection with the above-captioned matter. Copies of the Reply Comments are being provided to parties copied on this letter and hard copies will be provided upon request to our office.

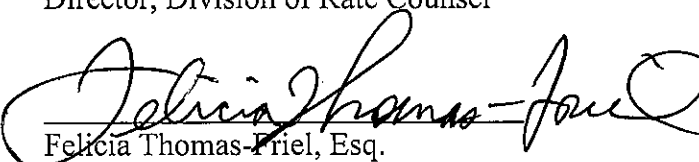
We are enclosing one additional copy of the comments. Please stamp and date the extra copy as "filed" and return it in our self-addressed stamped envelope.

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October 31, 2017
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Thank you for your consideration and assistance.

Respectfully submitted,

STEFANIE A. BRAND
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FTF
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New Jersey Board of Public Utilities
Electric Vehicle Stakeholder Group

TASK 1 Questions

Reply Comments of the New Jersey Division of Rate Counsel

October 31, 2017

The Division of Rate Counsel (“Rate Counsel”) would like to thank the Board of Public Utilities (“BPU” or “Board”) for the opportunity to present a reply to the comments submitted by stakeholders in response to the TASK 1 questions circulated at the September 15, 2017 stakeholder meeting.¹ Reply comments specific to the TASK 1 questions are presented first, followed by general reply comments. In the spirit of a stakeholder group viewed as a forum for the exchange of ideas, the within comments emphasize and raise certain concerns relevant to the comments submitted by other stakeholders, rather than engage in a point-by-point rebuttal.

Reply - Question 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.?

The comments submitted by stakeholders show that there is no overall consensus regarding whether Electric Vehicles (“EVs”) fall within the definitions of Demand Side Management (“DSM”) and Energy Efficiency (“EE”) found in N.J.S.A. 48:3-51 and/or N.J.S.A. 48:3-98.1(d).

¹ In addition to Rate Counsel, TASK 1 comments were submitted by: A.F. Mensah, Inc. (“AFMensah”); Atlantic City Electric (“ACE”); Chargepoint, Inc. (“Chargepoint”); ChargeVC; Greenlots; Jersey Central Power & Light (“JCP&L”); National Resources Defense Council (“NRDC”); New Jersey Clean Cities Coalition (“NJCCC”); Sierra Club; and Tesla, Inc. (“Tesla”).

Energy Efficiency

A number of commenters argue that EVs should be considered as EE measures pursuant to EDECA and the RGGI Act.² Rate Counsel submits that including EVs in the mix of EE measures provided for in EDECA and the RGGI Act is clearly not what was intended by the Legislature and would render the Acts' provisions almost meaningless. While EVs might be more "energy" efficient than gasoline-fueled and diesel-fueled vehicles, stretching the Acts to encompass what amounts to additional electric load goes beyond conventional definitions of energy efficiency in New Jersey as it applies to regulated electric service. By expanding the definition of "energy" to encompass energy sources beyond the electric and natural gas energy service regulated by the Board opens EDECA and the RGGI Act to an almost endless stream of possible EE measures, all funded by captive ratepayers, many of whom are already stressed financially by their present utility bills. As acknowledged by Atlantic City Electric, "it appears unlikely that EV [itself] was intended to be included in the definition of DSM or energy efficiency." ACE, pp. 3-4. Consider if the definition of "energy" is expanded to include "energy" other than that provided in the form of electricity or natural gas, one could argue that switching to a high-mpg gasoline-powered automobile or switching to public transportation would count as an eligible EE measure. Clearly, that was not the intent of the Acts.

The proliferation of EVs would result in increased electric use. This was not contemplated as an EE measure by the RGGI Act. The RGGI Act specifically provides that the purpose of "[e]nergy efficiency and conservation programs" eligible for rate recovery is "conserving energy or making the use of electricity and gas more efficient." See N.J.S.A. 48:3-

² See "The Electric Discount and Energy Competition Act" ("EDECA") codified at N.J.S.A. 48:3-49 et seq., and the Act known as the "RGGI Act" codified in relevant part at N.J.S.A. 26:2C-45, -46, and 48:3-98.1 (collectively, "the Acts").

98.1(d). Further, as Rate Counsel noted on its initial comments, by acknowledging “forgone contributions” as program costs eligible for rate recovery, the RGGI Act contemplated that EE measures implemented pursuant to its provisions would reduce electric use. See N.J.S.A. 48:3-98.1(d). In the context of the RGGI Act’s provisions, “conserving energy” was not an all-encompassing measure, but limited to energy in the form of electricity and natural gas service supplied by regulated public utilities. Similarly, EDECA was focused on energy efficiency in the context of electricity and natural gas service, rather than an expansive view of “energy” encompassing gasoline and other energy sources. See N.J.S.A. 48:3-51, -60.

In support of including EVs as an EE measure, some commenters stress the fuel cost savings for EV owners, as compared to operating gasoline powered vehicles. Yet, energy efficiency is typically measured on an “apples-to-apples” basis. For example, other products such as refrigerators and air conditioners are evaluated based on their relative energy efficiency when applying rebates as an EE measure. Gas water heaters are compared to other gas water heaters and so on. Cost effectiveness is also a consideration. Undoubtedly, various models of EVs would show varying degrees of energy efficiency in terms of the amount of electricity required to propel the vehicle. Assuming *arguendo* that EVs were to fall within the Acts’ provisions, it would require the Board to undertake the task of not only considering the relative efficiency of individual EVs, as measured against other EVs, but also the relative cost-effectiveness of EV-related measures versus an ever-widening range of other “energy” saving measures.

Using EE funds to build charging stations or other measures to promote EV use would also face cost-effectiveness challenges, considering that such measures would facilitate the increased use of electric energy. While an increase in electricity use might result in additional

revenue for electric utilities and generators, additional costs would also be incurred to the extent that additional grid and generating resources are needed to serve EV load.

Finally, as noted by the NRDC, adding EVs to the list of eligible EE measures might diminish funds otherwise available for traditional EE programs that provide numerous benefits for ratepayers. NRDC, p. 2. Traditional EE measures are typically geared towards customers who are “tied” to the grid since they have no viable alternative source of electricity, and are generally designed to provide benefits to a wide range of utility customers. Hence, EE programs under EDECA are funded through a non-bypassable charge applicable to all ratepayers, and RGGI programs are funded through utility rates. EVs, by contrast, primarily provide benefits to EV owners.

Demand Side Management

A number of commenters believe that EVs fall under the definition of DSM found in EDECA. EVs have the potential to store electric energy and inject power onto the electric grid. Thus, EVs may have some DSM attributes depending on metering infrastructure, rate structure, and possible future technology. However, all else equal, EV load is new incremental load. While EV load might be able to use “spare” system capacity and increase system capacity factors in the near term under the right circumstances, adding EV load could accelerate the need for additional grid and generation capacity, all else equal. Worse, without any measures to control the timing of EV charging, it might exacerbate system peaks. Sierra Club, p. 4.³

In the near term, the DSM capabilities of EVs might simply entail shifting the collective incremental load of EVs to another time period, potentially serving only to mitigate the

³ Sierra cites: Schey, et al., *A First Look at the Impact of Vehicle Charging on the Electric Grid*, The EV Project at EVS26 (May 2012) and The EV Project, *How do PEV Owners Respond to Time-of-Use Rates While Charging Project Vehicles?* (July 2013).

collective impact of EVs themselves on the grid and supply resources. In sum, “but for” the incremental load of EVs, such EV-based DSM measures might not be necessary for the efficient operation of the grid and supply resources. Here, examples of EV-based DSM measures appear to be directed towards mitigating the impact of EV charging on electric grid and generation supply resources and the associated incremental costs that would otherwise be attributable to - and collected from - EV users.

While N.J.S.A. 48:3-51 defines DSM to include “load management,” the cost recovery mechanism for such measures implicitly assumes some general system benefit for all ratepayers. Hence, DSM measures implemented pursuant to EDECA are funded through a non-bypassable charge applicable to all ratepayers. N.J.S.A. 48:3-60. The EV-based DSM measures envisioned by some commenters appear to simply ameliorate the impact of EVs for the benefit of EV users who otherwise would absorb the prospect of additional system costs through EV-only rates, if implemented. Thus, insofar as the measures appear to primarily benefit EV users, the DSM measures envisioned by the commenters do not appear to be of the type of measures which have more general system benefits for which cost recovery through a non-bypassable charge is appropriate.

EE and DSM – Competition Concerns

As noted in Rate Counsel’s initial comments, the types of activities envisioned to facilitate or promote EV use as a DSM measure or EE measure appear to be activities already being undertaken by competitive non-utility suppliers. See Rate Counsel, pp. 4-6. For example, Chargepoint offers EV charging and network equipment. See Chargepoint, pp. 2-3. Here,

assuming *arguendo* that EVs fall under eligible EE and DSM measures, the competitive market should be permitted to naturally develop before considering EE and DSM measures funded by other captive ratepayers to support EV growth. Where competitive non-utility providers are available to provide a service, EDECA discourages utility involvement, except in specifically defined circumstances. See N.J.S.A. 48:3-55. Both EDECA and the RGGI Act require the Board to consider the impact of utility involvement in these areas on competition. See N.J.S.A. 48:3-60; 48:98.1(b). Here, utility involvement would be detrimental to the development of the EV services, particularly in a nascent market with the presence of a number of potential competitors.

Reply - Question 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?

Regulation as a Public Utility Question

Along with Rate Counsel, there is agreement among many commenters that providing electric vehicle charging services should not be regulated as a public utility. See Rate Counsel, pp. 7-9; AFMensah, p. 1; ACE, p. 4; Chargepoint, p. 6; ChargeVC, p. 3; Greenlots, p. 2; NJCCC, (adopting ChargeVC at 3); NRDC, p. 3; Sierra Club, p. 7; and Tesla, p. 8. Involvement in EV charging services by electric distribution companies (“EDC”), if any, should be subject to the relevant laws and Board regulations governing competitive services. See Rate Counsel, p. 9; NRDC, p. 4. EDECA imposes certain conditions on regulated electric public utility involvement in competitive businesses, such as EV charging. See N.J.S.A. 48:3-55. These conditions include prior express Board approval, protection for current ratepayers (such as requirements to prevent the deterioration of service quality and cross-subsidies by current ratepayers), and sharing of revenues. Id.

Rate Counsel submits that JCP&L's support for EDC involvement in EV infrastructure development and ownership does not comport with EDECA's call for greater reliance on competitive markets, nor with the RGGI Act's consideration of "the effect on competition for such [EDC] programs... and the availability of such programs in the marketplace." See JCP&L, p. 3; N.J.S.A. 48:3-98.1(b). Even if EVs were considered to be within the RGGI Act's provisions as EE or DSM measures, there is little evidence that competitive suppliers are not able to provided EV-related services and ample evidence that they are. See Greenlots, pp. 1-2; Tesla, pp. 3-4, ChargeVC, pp. 3.

Service or Re-sale Question

While many commenters submit that EV charging should be viewed as a service rather than a re-sale of electricity, Rate Counsel reiterates that at the end of the day - from a regulatory and electric system perspective - the electricity needed to serve EV charging must be accounted for. See Rate Counsel, pp. 9-10. The kWhs used for charging must be accounted for in rates, as well as in the design and operation of the grid. The question of whether EV charging operators are a public utility should not turn on whether they are providing a service or re-selling electricity. Applying the statutory criteria defining what constitutes a "public utility," in terms of public use and exclusive municipal franchises, as a competitive service provider EVSE operators should not be considered public utilities. See N.J.S.A. 48:2-13(a), 48:3-87; Rate Counsel, pp. 7-8. However, whether viewed as a service or a re-sale of electricity, the electricity used for charging should be metered for regulatory, grid reliability, and rate design purposes. Finally, the provision of EV charging services to a subset of customers should not place additional financial burdens on ratepayers generally.

General Reply Comments

There appears to be a general awareness that off-peak charging of EVs might help to reduce the impact of EV charging on the electric grid and generation supply resources. Rate Counsel supports separate metering for electricity used for EV charging, whether the charging unit is an in-house residential charger or a commercial charging station with multiple chargers. Furthermore, such metering should incorporate a time of use (“TOU”) component. Insofar as EVs and the electric grid and supply resources are concerned, separate metering and TOU rates are critical to the success of any EV-only tariffs and rates, as well as the prospect of EV battery storage and vehicle-to-grid technology.⁴

Arguments against TOU metering for traditional captive residential customers have little application with respect to EV charging. First, by its very nature, electricity is but one of numerous vehicle fuel choices (i.e. gasoline, diesel, natural gas, etc.) available to a vehicle owner. In contrast, traditional captive electric utility customers have no real alternative to essential electric services. Furthermore, while the existing electric system was developed over time to supply traditional electric load with a history of average cost pricing, EV recharging is an incremental load with novel characteristics, and the potential to either exacerbate or ameliorate peak electric usage. TOU rates for EVs are a critical step to minimizing stress on the electric system and maximizing any benefits derived from the proliferation of EVs in New Jersey.

Separate TOU metering for EV charging offers tremendous benefits with respect to supporting the development of a viable, sustainable EV recharging infrastructure. At the outset,

⁴ Separate metering for EVs would not necessarily present a roadblock to the imposition of net metering or demand charges if such measures are ordered. The question of whether net metering should encompass EVs is not specifically addressed herein, nor are other specific tariff issues addressed herein, such as appropriate demand charges. Actual EV usage data obtained through separate metering would provide information for adjusting EV rates and charges, as well as for any future policy forums.

separate metering would provide actual usage data which would provide distribution system planners and other stakeholders with information about the impact of EV recharging on grid and supply resources. This information is critically important for infrastructure and supply planning, as well as ratemaking. The price signals developed with metering data would aid in the development of a sustainable, efficient, and affordable EV recharging framework.

Separate TOU metering for EV charging would also support efforts to minimize the impact of EV recharging on electric grid and supply resources. Early on, capacity factors might increase if EV recharging takes place during off-peak or shoulder periods. Utility tariffs for EV recharging could be developed to incent off-peak charging. Furthermore, separate EV metering would not only facilitate analysis of incremental load, but also could provide the underpinnings for the introduction in the future of emerging grid resource technologies, such as vehicle-to-grid interaction. Moreover, if metering data show that additional resources are required to serve EV load, the same data would be critical to ensuring that the resulting costs are assigned appropriately.