



April 22, 2019

Ms. Martha Lynn Jarvis, Chief Clerk  
North Carolina Utilities Commission (NCUC)  
4325 Mail Service Center  
Raleigh, NC 27699-4300

**Re: Dockets E-2, Sub. 1197, and E-7, Sub. 1195**

Dear Ms. Jarvis:

We wish to express our strong support of the filings made by the two operating utilities of Duke Energy in North Carolina, namely DEC and DEP, and ask that these comments be entered into these Dockets. The Alliance for Transportation Electrification is a business non-profit corporation, established pursuant to IRS Code 501.c.6, with a goal of accelerating the deployment of EVSE (electric vehicle supply equipment) for the benefit of consumers and EV drivers in key states across the country. Established at a NARUC meeting in Baltimore in November 2017, the Alliance has grown from about 20 members to about 45 members today and is active in over 20 State Commission proceedings. We favor a strong and robust utility role in the deployment of EV infrastructure, recognizing the critical role that managed charging and flexible load management (including demand response capabilities) will play in the evolving grid with two-way flows of electricity. Finally, we support strong protocols or standards for interoperability as a means of enabling a much better consumer experience and allowing network management systems to communicate more seamlessly among themselves in order to lower costs and enable more choice of either the utility or the host site among EVSE providers.

The Alliance believes that there is an urgent need to take action given the magnitude of the changes already taking place in the auto, bus, and truck manufacturing sectors, the need for the United States to remain competitive and promote economic development, and to enable cleaner air with less tailpipe emissions and lower carbon dioxide emissions over time. As the M.J. Bradley study for North Carolina demonstrates, the state sorely lacks the necessary amount of infrastructure to allow consumers to purchase new EVs (electric vehicles) without the worry of range anxiety. While utilities like Duke Energy certainly don't intend to own and operate all of this infrastructure, we believe it can play a key role in kick-starting or transforming this market for the benefit of all, including non-utility service providers. Finally, we believe that the intent of these filings are entirely consistent with the policy preferences of the state of North Carolina for clean air, economic development, and leveraging other sources of funding (such as VW settlement funding), as demonstrated by Executive Order No. 80 promulgated by Governor Cooper in October 2018.

The filings are balanced in their approach by addressing all segments of the EVSE market, in what is called the portfolio approach that takes the costs and benefits of the seven separate programs and combines them into a comprehensive analytical approach. The advantages of utility participation include their ability to take a longer-term view regarding the returns of such investments, compared to non-utility service providers, given the balance sheet and overall outlook of a regulated public utility.

The magnitude of the investments in the program -- \$76 million over three years -- may seem large at first. But if one examines each of the pilot programs carefully, and distributes the expenditures over a three-year period, the actual size of the program is reasonable. Finally, the objectives outlined in the filing for the ET pilots are well described in each of the seven categories and build upon both the experience that Duke's transportation electrification team has already gained as well as learning from the pilot programs in other jurisdictions that have made an earlier start in this area. We address the specifics of several (not all seven) pilot program areas in the following.

**Direct Current fast charging (DCFC):** The proposal for Duke, both DEC and DEP, to site, develop, and own and operate 120 DC fast charging ports, at 60 locations, around the state appears reasonable. Today, as cited both in the MJ Bradley study (previously cited) and Duke's filing, there are only about 86 publicly-accessible ports that can accommodate the charging of a variety of EVs (not including proprietary Tesla stations). Using the most widely accepted model for projecting charging station needs developed by NREL (the EVI-Pro lite tool), Duke estimates that about 300 DCFC ports will be needed by 2025 to support the state goal of 80,000 registered EVs on the road. And we believe that even more will be needed in the decade from 2025 to 2035, but this is good start to building out this longer-term EV infrastructure.

Consumer surveys consistently cite two major barriers to greater EV adoption nationally: first, the low level of general awareness of the EV models and types of plugs for charging among potential consumers, and secondly, the fear of "range anxiety," namely running out of "fuel" (in this case battery power) on the road. Siting and deploying a larger number of DC fast charging stations (as well as Level 2 chargers, mentioned below) is an effective way to counter such anxiety. The Alliance recognizes this component has the largest projected cost of the overall program (\$34 million) and that they are sometimes a challenge to site, permit, and develop. Yet, in our view, that is all the more reason for a strong utility involvement in the process and allowing Duke the ability to own and operate these with a long-term perspective in mind. Furthermore, the Alliance urges the Commission to keep some type of monitoring mechanism, through regular reporting or an ongoing policy dialogue, so that the Commission staff and Duke, and stakeholders, can consult during the term of the pilot program, since unexpected obstacles or opportunities may arise in this new area of deployment.

**Public Level 2 chargers:** Duke's proposal to develop 160 Level 2 public stations makes sense as well. While market analysts expect a significant increase in the deployment of pure battery electric vehicles (BEVs) over the next several years, they also expect that plug-in hybrid EVs (PHEVs) will also continue to play a vital role in the transformation of the market. These hybrid plug-in vehicles are capable of extended ranges (hence able to deal with "range anxiety" more directly) through the use of a smaller internal combustion engine as well. Moreover, there may be other PHEV vehicles coming into the market in other classes in the next several years which will utilize Level 2 chargers. Hence, we believe it is sensible to include both DCFC and Level 2 in the public facing charging infrastructure. We believe Duke's proposal to use the Small General Service (SGS) rate schedule, namely the 1<sup>st</sup> block, makes sense together with a small 2 cents per kWh fee to cover network platform and transaction fees. We also believe it makes sense for Duke to own and operate this infrastructure, but through an RFP process, to pre-qualify a list of qualified vendors using open standards from which the site host can choose.

**School bus program:** Duke has proposed a similar innovative school bus program in South Carolina, which is currently being vetted and reviewed by the South Carolina Public Service Commission and ORS.

Certainly, there are substantial benefits to be gained from the electrification of school buses, including both the public health benefits of less asthma and similar issues from the children who ride those buses, and the communities around schools and bus routes that have borne the brunt of diesel tailpipe emissions over decades. The Alliance believes that this also provides a good learning opportunity for students, teachers, and school districts as we electrify the transportation fleet. The Alliance recognizes the challenge for school districts in dealing with the difference in upfront capital cost between a diesel bus and an all-electric bus, but we believe that the \$215,000 rebate has been sized appropriately to account for this increase in the incremental cost of the battery. The Alliance also commends Duke for proposing a V2G (bi-directional flow of electricity from such batteries) use case for the up to 30 buses in this pilot, and perhaps deploying these used batteries in the grid at the end of their useful lives in vehicles. The Alliance believes the utility can play a constructive role over time precisely in this area of grid integration of these mobile storage resources at the grid edge.

**Fleet EV charging pilot:** finally, the fleet EV program proposed by Duke constitutes a good start in this growing market in North Carolina. In general, the medium and heavy-duty markets, including both private and public fleets, are growing rapidly and manufacturers and vendors are showing a significant interest in these markets nationally. We believe that Duke has sized the rebate program appropriately, up to 900 rebates at \$2,500 each, in order to test the market. Moreover, the requirement for the customer to install a separate meter and use an existing TOU rate makes sense to us, in order to optimize the potential benefits of this emerging use case. Again, the Alliance urges the Commission and its staff, together with stakeholders, to monitor the deployment of fleet EV infrastructure, since the marketplace is quite dynamic and moving quickly today.

In summary, the Alliance commends Duke for making this timely proposal before the Commission and believes that it is well designed with appropriate scope. We hope that it can build on the useful work and experience that Duke Energy has already achieved in neighboring states in the Southeast, such as South Carolina and Florida, so that we can start developing and designing more regional solutions for EV drivers who will inevitably cross both state and service territory boundaries.

Sincerely,

*Philip B. Jones*

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