



July 29, 2021

Ms. Shonta Dunston, Acting 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  
Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's Request for Approval of Phase II  
ET (Electric Transportation) Pilot Programs**

Dear Ms. Dunston:

The Alliance for Transportation Electrification (“ATE” or the “Alliance”) wishes to express our strong support of the filing made in this Docket by the two operating utilities of Duke Energy in North Carolina, namely DEC and DEP (hereinafter “Duke Energy”) and ask that these comments be entered into these Dockets. The filing for which we provide comments today are in response to the companies’ filing of May 24, 2021 seeking Approval of Phase II Electric Transportation Pilot Programs. This filing proposes a portfolio of several ET programs including a Customer-Operated EV Supply Equipment (EVSE) Tariff Pilot, expansion of the company owned and operated public DCFC (fast chargers), Public Level 2 and Multi-Family Charging, Highway Corridor Fast Charging, and a school bus program.

The Alliance, a 501(c)(6) non-profit corporation, is led by electric vehicle (EV) infrastructure firms and service providers, automobile manufacturers, utilities, and EV charging industry stakeholders and affiliated trade associations. We started with 20 organizations at the launch just over three years ago and now we have nearly 55 members nationally. We take a “big tent” approach to advance the industry and focus not just on accelerating EV charging deployments—which necessarily requires a strong utility role—but also promoting public accessibility and open standards. We are presently involved in about 25 proceedings in the States before the PSCs, state energy offices, Legislatures, Governors, state DOTs and DEPs, and other agencies.

### **Overall Comments**

We strongly support all of the proposed programs in Duke Energy’s May 24, 2021, Phase II Electric Transportation Pilots, as comprising a well-designed and balanced portfolio that logically follows the Commission’s November 24, 2020 Order on Phase I Pilot Programs. Duke has done a

commendable job in re-evaluating various program and rate design options and has engaged in a constructive stakeholder process with Public Staff and other selected stakeholders - especially focused on Equity and LMI community issues. It has also examined other States, including both utility program designs and Commission Orders both in neighboring states like Virginia (Dominion Energy) and by other forward-leaning utilities on ET in the country. Duke has clearly attempted to develop programs to answer the questions and issues raised by the Commission and stakeholders, and the results should be commended. A portfolio approach such as that proposed by Duke Energy is essential to both spreading the benefits of electric transportation to all ratepayers, including varying geographies and income levels in North Carolina, as well as developing broader metrics and reporting requirements for the Commission and stakeholders. We are involved in over 20 State proceedings and utility filings in the country and can attest that these programs are best practices that have been tested and deployed in other jurisdictions.

In the following paragraphs, we address some of the major issues that need to be taken into consideration by the Commission in reviewing Duke energy's Phase II Pilot Proposals.

**Infrastructure gap:** While the Alliance believes that the vehicle adoption goal in the Governor's Executive Order 80 is modest compared to other State goals by 2025, it will still be a "stretch goal" to achieve with about four years remaining. Currently (end of February 2021), North Carolina only has about 25,000 registered electric vehicles in the state, both full battery electric (BEVs) and plug-in hybrid electric (PHEV). "Range anxiety" remains perhaps the biggest obstacle to a consumer purchasing an EV, which can only be resolved through designing and building more charging stations in the right locations. In order to reach this goal, an all-hands-on-deck approach is needed for this 2025 goal and beyond to 2030 and 2035 (when General Motors has announced the phasing out of sales of internal combustion vehicles). Duke demonstrates adequately in this filing that there is insufficient infrastructure deployed in the state now, and even with the modest additions proposed in this Phase II filing, the state will have to work with multiple organizations such as third-party providers, municipalities, host sites, transit agencies and school districts to achieve the State's goals by 2025, not to mention the more ambitious goals for 2030 and 2035.

**Commission directives in its Phase I Order:** As stated above, the Commission approved in part but denied in part Duke's filings of Phase 1 Pilot Programs. It directed the utility and the Public Staff to carry out a stakeholder process to vet and further discuss program designs. The Alliance has participated in the stakeholder process, and while improvements can always be made to the process, in this nascent market development stage with many new players and organizations interested, we believe that Duke has engaged constructively and actively. Furthermore, it has proposed an ongoing ET stakeholder process to continue in the future, with meetings to be held on a quarterly basis. This is also a "best practice" that either utilities or Commissions are carrying out in most of the active ET states.

**The utility role in market development:** While Duke proposes a robust utility role in this early stage of market development, including owning and operating a limited number of both make-ready infrastructure and EVSEs in certain end uses, it also recognizes the critical role that non-

utility third party providers and host sites will play in the development of the market. Both types of market development can co-exist, and in fact, the provision by the utility of make-ready infrastructure will help provide foundational capital assets that will enable many market participants to succeed with proper program design. The Alliance believes that this is not a black-and-white situation, and that a strong utility role is essential along with the EV service providers (EVSPs) and many other market participants.

Utilities have special characteristics that place them in an ideal position to advance the ET market, especially to fill market gaps and ensure that all customers can take advantage of ET opportunities. Utilities, for example, have longer planning horizons and may be willing to make investments that the private sector will not. One prime example is the placement of chargers in low income or rural areas, or along highways, where private EVSE companies may not see an immediate economic opportunity. Multi-family dwellings for which Duke proposes a Pilot Program and where EV charging is particularly difficult to deploy is an example of an EV use case that might not be served by non-utility third parties in this nascent stage of market development. And public DC fast charging on highway corridors in North Carolina, another component of Duke's proposal, may be a difficult investment for non-utility EVSEs because of the high costs and low utilization in the early years. But all consumer surveys and experience of public EV charging demonstrate that these investments are absolutely critical to help transform the market and provide EV owners and electric consumers with confidence that they can obtain electric fuel at convenient locations.

There will be one or more parties providing comments on Duke's proposed Pilot Programs who will downplay the potential utility role or suggest that utilities be excluded from unfairly "competing" with third parties in owning and operating (perhaps on a turnkey basis with a vendor) charging infrastructure. The primary argument of these opponents of full utility participation is that competition and the development of a third-party charging market will be stifled by a dominant utility presence. We have several reactions to this line of thinking and believe it is not only wrong, but counter-productive to moving the EV market forward. Utilities can and will have a major role to play in developing EV markets and infrastructure, as has been evidenced by developments and best practices across the nation. At this stage of market development, even the statement of a regulated utility having the ability to unfairly compete or "crowd out" other players reflects a disregard for market-based realities, or a tendency by vendors and certain advocates to want to "lock in" certain business models, including proprietary systems. The Alliance believes that many market gaps exist today, and a utility presence is necessary and constructive to catalyze further development.

The market for public charging stations, particularly Level 2, for some use cases is somewhat competitive, but not nearly to the point where the competitive market acting alone will install enough chargers to meet expected future demand. For example, highway DCFC charging is not yet a competitive market in North Carolina or elsewhere. And, as stated above, installing charging stations for MFDs is particularly difficult and is unlikely to be satisfied solely by the competitive non-utility firms. And third parties are unlikely to sufficiently serve low- and moderate-income (LMI) communities. Hence a strong utility role is necessary at this nascent

stage of market development to provide foundational support for these multiple segments and use cases. And these are all areas where Duke has rightly proposed focusing its Phase II Pilot Programs.

In brief, the Alliance believes there are substantial gaps in the public EV charging market today that will not be filled solely by third-party EVSPs. Utility infrastructure investment, including ownership and operation, should not be dependent on the competitiveness of the market nor be limited to specific markets. Utilities can ably and effectively complement the private or non-utility market and ensure successful EVSP deployment throughout their service territories – both in the near- and long-terms. The modest investments proposed by Duke will not in any case upset the competitive balance in charging station markets and will provide needed investment in certain market segments.

**Equity and LMI issues:** Duke listened to the concerns expressed by organizations concerned with Equity and LMI issues and has attempted to address them in the program design in these portfolios. For the Public Level 2 programs and the multi-family dwelling (MFD) programs, Duke will seek to deploy 50 percent of the proposed chargers in rural Tier I and Tier II counties and 50 percent of the installations in LMI communities (as identified by Neighborhood Energy Saver energy efficiency program areas, where 50% of the households are at or below 200% of the federal poverty guideline). Tier I counties in North Carolina consist of the 40 most economically distressed counties in North Carolina, and Tier II counties are the next 40 economically distressed. Furthermore, 100 percent of investment for the Highway Corridor DCFC proposed program will be in Tier I and Tier II counties. This is the appropriate approach at this stage, and places disadvantaged areas at the very center of the Phase 2 Pilot Programs. And the metrics used in North Carolina for determining economically distressed counties appears to be consistent with other state programs and appropriate, as does the proposal for identifying LMI communities. The Alliance encourages utilities, EVSPs and all stakeholders to “engage early” with these communities and listen well to their concerns and unique needs. This will be an ongoing process, but we believe that with these program designs and goals, Duke is making good progress and by placing such a heavy emphasis on investment in underserved communities, Duke will ensure that its programs will meet the needs of the State.

**EV School buses:** While this is a “hot topic” in states around the country, and may gain federal support from the Biden Administration, this is still a challenging use case given the differences in upfront capital costs (compared to diesel buses) and certain associated technical issues. But Duke has listened well to the stakeholders and has observed other utility-sponsored school bus programs in other jurisdictions, which has resulted in better program design and the ability to respond to possible additional funding sources.

## **Specific Comments**

### EVSE Tariff pilot program

This proposal builds upon the success and experience with the streetlight programs

offered by Duke over the years, and their rate design and architecture including a separate class treatment with costs adjusted during general rate cases. This tariff will support a customer-operated option where the customer will be responsible for the selection of the EVSE, and the ongoing maintenance and operation of such equipment and software networking costs. The proposal lowers the upfront capital costs for the procurement of such equipment and will allow Duke to do what it has traditionally done well with the streetlight program – design and build the utility side of the infrastructure (make-ready) – and allow broader customer choice in equipment and operations.

#### Public Level 2 and MFD (Multi-Family Dwelling) Charging

As the Alliance has observed in many other jurisdictions, this is one of the most challenging use cases for deploying L2 chargers, and a stronger utility role is necessary to resolve multiple issues. We think that Duke has struck the appropriate balance in putting forward this program and rate design to try to catalyze this market segment. We especially appreciate the focus on the equity and LMI communities, as cited above. In addition, the Alliance believes strongly in interoperability and open standards, and appreciates that Duke will have the ability to set technical and functional requirements for this equipment, since it must operate the distribution grid efficiently and reliably. The requirement for OCPP (Open Charge Point Protocol), version 1.6 or its successor, is good, but we urge the Commission to consider requiring the EVSE to provide independent certification of such functionality to the utility. In terms of rate design, it appears reasonable to use the non-demand billing structure (energy only) for the 1<sup>st</sup> block of the SGS, plus 2 cents/kWH.

#### Highway Corridor Fast Charging (DC fast charging)

This is one of the key challenges in the “infrastructure gap” cited above. Consumers simply will not buy an EV if they believe there is not adequate fast-charging available on major highway corridors (of which there are many in North Carolina); in short, this is “range anxiety”. Duke makes a credible case for building, owning and operating 80 to 180 publicly available charging stations in the state. As Duke demonstrates in its filing, this will only fulfill a modest amount of the overall need of infrastructure to meet the overall goals in E.O. 80, as well as the recent market projections of reputable forecasts such as BNEF and others. In terms of power level, we think the requirement of a minimum of 150 KW is appropriate given that the auto OEMs are deploying larger battery capacities in the vehicles, and consumer surveys indicate that they prefer a much shorter dwelling time at a charger than today (consumer surveys indicate that 20 or 30 minutes for an 80 percent state-of-charge (SOC) is desired). Again, we believe that the RFP process in the proposed tariff is appropriate for the technical and functional requirements with the vendors and network providers, namely OCPP, version 1.6 or its successor, and other functions that Duke may require for effective and reliable grid integration. Finally, Duke will be able to use the data developed through these chargers, and its own and operate attributes, to understand much better how consumers and EV owners are using these stations and

develop appropriate load profiles for efficient grid management.

### EV School buses

Duke makes an appropriate proposal for the school bus use case, namely 4-6 buses at ten or fifteen sites at selected school districts in the state with a maximum budget of \$13.5 million. As stated above, this is still a challenging use case given the difference in upfront capital cost, although the TCO (total cost of operations) for the electric school bus compared to the diesel equivalent is undisputable. Therefore, the DPI (Dept. of Public Instruction) or a local school district will provide the best price for the diesel bus cost, and Duke will provide the incremental capital cost gap. In return, the school district will make all of the forthcoming data available to Duke, and will allow Duke to manage the battery of the bus for “V2G” purposes – providing for grid integration. While certain technical, battery warranty, and bi-directional flow technical requirements need to be resolved, these technologies are advancing rapidly. The Alliance believes there are substantial learning benefits to this use case, and direct benefits to Equity and LMI communities in the state, and therefore this program should be approved expeditiously. Additional funding leverage may be available through federal and other sources, as acknowledged by Duke in its filing, and the Commission should allow adequate program re-design capability during the term of this pilot.

In summary, the Alliance appreciates all of the hard work, innovation and program design and rate design, and learnings from other States that Duke has incorporated into these program designs. The Alliance urges expeditious review and approval of these programs.

Submitted this 29<sup>th</sup> day of July 2021.

Sincerely,

*Philip B. Jones*

Philip B. Jones  
Executive Director  
Alliance for Transportation Electrification  
1402 Third Avenue, Suite 1315  
Seattle, WA 98101