July 5, 2019

Ms. Lynn Jarvis
Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Raleigh, NC 27603

Re: Electrify America Comments on Duke Energy's Proposed Electric Transportation Pilot Docket Nos. E-2, Sub 1197 and E-7, Sub 1195

Electrify America, LLC ("Electrify America") appreciates this opportunity to comment regarding Duke Energy's Proposed Electric Transportation Pilot Programs. Electrify America commends the efforts of Duke Energy and the North Carolina Utilities Commission to address the opportunities and challenges presented by transportation electrification in North Carolina.

Electrify America Background

Electrify America, a wholly-owned subsidiary of Volkswagen Group of America headquartered in Reston, Virginia, is investing $2 billion over 10 years on zero-emissions vehicle ("ZEV") infrastructure, education and awareness, and access efforts to support the increased adoption of ZEV technology in the United States. This investment will be spent over four $500 million 30-month "Cycles" through 2026, with the second Cycle having begun on July 1st, 2019. As a part of its first Cycle of investment, Electrify America is building a nationwide network of ultra-fast direct current fast charging (DCFC) stations across nearly 500 locations and with over 2,000 individual DC fast chargers in total. On April 3rd, 2019 Electrify America opened its fifth DCFC location in North Carolina.[1] Today, Electrify America has eight ultra-fast DCFC station locations open in North Carolina, with three additional locations in the final stages of construction as of

[1] https://media.electrifyamerica.com/en-us/releases/54

this submission. In total, Electrify America's presence in North Carolina at the end of 2019 is planned at eleven locations with 54 chargers. These locations will enable travel across the state, including throughout the Raleigh metropolitan area, on important highway corridors connecting Raleigh, Greensboro, Charlotte, and Asheville, and to neighboring states as well.

Technology

Electrify America is creating future-ready stations to charge the next generation of higher charging power electric vehicles (EVs). Highway locations include multiple 150 kW-capable chargers and two state-of-the-art 350 kW-capable chargers. These chargers can enable recharging speeds close to gasoline fueling for EVs expected to enter the market in the near future, with the 350 kW stations able to charge capable EVs at 20 miles of range per minute. Through extensive research and stakeholder outreach as outlined in Electrify America's ZEV investment plans[2], Electrify America believes this fast-charging customer experience is crucial to enabling mass-market consumers to adopt EVs, especially for long distance travel and in metropolitan areas where a large segment of the population may not have access to workplace or home charging. In addition, all Electrify America stations are designed for universal customer access through the inclusion of credit card readers, and both non-proprietary fast charging connector standards: SAE Combo and CHAdeMO.

Duke Energy's Proposed Electric Transportation Pilot

Electrify America commends Duke Energy for proposing pilot programs to support EV adoption across the state and to address the challenges and opportunities presented by charging EVs. Electrify America supports the goal of deploying a foundational level of fast charging infrastructure across North Carolina, and as previously described, Electrify America has deployed a significant number of ultra-fast DCFC across the state to meet the needs of current

[2] https://media.electrifyamerica.com/en-us/releases/44
https://media.electrifyamerica.com/en-us/releases/49

and future EV drivers. Electrify America believes utility DCFC programs are an important component of any utility's transportation electrification efforts. As described in Duke Energy's filing, managed EV charging can provide net benefits to all ratepayers.[3] EVs have the benefit of being able to refuel while parked for extended periods of time, for example at work or at home, however, a network of fast charging locations is necessary for EV drivers to take long distance trips and feel comfortable that they can charge their vehicle quickly if necessary. Though the majority of EV charging is expected to take place when EVs are parked for extended periods of time, DCFC is necessary for customers to adopt EVs as a replacement to their gasoline vehicles. Utility DCFC programs can play an important role in accelerating the deployment of DCFC, especially in underserved areas where expected usage may not justify private market investment in the short to medium term. Utility DCFC programs can take many forms and Electrify America would like to note that as proposed, Duke's Fast Charging program would employ only one method for utilities to support DC fast charging: for Duke Energy to own and operate the charging stations and charge customers a 'Fast Charge Fee'.[4]

As referenced in Duke Energy's proposal, utilities across the United States are beginning to implement pilot programs to address the expansion of electric transportation.[5] These pilot programs have been structured in several different ways in addition to utility-owned and operated DCFC, and may result in lower ratepayer costs while maintaining a competitive marketplace for private market owners and operators of DCFC. These include 'make-ready' programs where the utility reduces the overall investment requirements of private DC fast charging owners by covering the costs for the infrastructure necessary to connect the DC fast charging location to the utility grid (e.g., system upgrades, service transformers, conduit and

[3] *In the Matter of Application by Duke Energy Carolinas, LLC and Duke Energy progress, LLC for Approval of Proposed Electric Transportation Pilot ,* Docket Nos. E-2, Sub 1197 and E-7, Sub 1195, (March 29th, 2019)
[4] Id. at p. 16.
[5] Id. at p. 5.

wire, associated trenching); rebate programs where the utility pays a specified amount per DCFC to offset the upfront and operating costs of DC fast charging (e.g., Consumers Energy PowerMiDrive[6]); and new rates which more accurately reflect the cost to serve DCFC considering the low-utilization experienced at these stations while EV adoption remains low (e.g., El Paso Electric Company Electric Vehicle Charging Rate,[7] Pacific Power Public DC Fast Charger Optional Transitional Rate,[8] Madison Gas and Electric Low Load Factor Provision[9]). In addition, it is inherently in the best interest of a private owner-operator of DCFC to ensure that chargers are well-maintained and useful, as customer utilization and associated revenue is essential for the economic viability of the station.

If utility-owned and operated stations are implemented, further consideration will be necessary to ensure that the fees charged at utility stations do not hinder the market for stations owned and operated by the private market. Privately owned and operated DCFC, such as the stations currently operating and being installed by Electrify America, rely on the revenue collected by fees charged to customers to cover operating costs and receive any return on investment. As identified in Duke's proposal, if Duke were to charge customers a lower price at Duke's stations than the private market, then the competitive market would be undercut.[10] Likewise, if Duke were to charge customers more than the private market, customers would be disincentivized to utilize Duke's stations. Duke proposes to address this challenge by setting a 'Fast Charge Fee' on a quarterly basis to be consistent with the statewide average for DCFC charging offered by stations that charge a fee and are publically accessible 24-hours per day.[11] While this attempts

[6] *https://www.consumersenergy.com/residential/programs-and-services/electric-vehicles/powermidrive*
[7] https://www.epelectric.com/files/html/Rates_and_Regulatory/Docket_46831_Stamped_Tariffs/36_-_Rate_EVC_Electric_Vehicle_Charging_Rate.pdf
[8] https://www.pacificpower.net/content/dam/pacific_power/doc/About_Us/Rates_Regulation/Oregon/Approved_Tariffs/Rate_Schedules/Public_DC_Fast_Charger_Optional_Transitional_Rate_Delivery_Service.pdf
[9] https://www.mge.com/customer-service/for-businesses/electric-rates/low-load-factor-provision
[10] Id. at p. 16.
[11] Id.

to address the potential conflict between utility owned and privately owned DC fast charging stations, it does not address other complexities in the prices set for use of charging stations.

For example, the cost to serve a vehicle 350 kW of power is inherently different from the cost to serve a vehicle 50 kW. To address this, DCFC owner-operators like Electrify America offer pricing that varies based on the power level capability of different EVs. Electrify America currently offers three power levels for pricing, each with different prices per minute while charging.[12] Electrify America selected its levels based on internal analysis of charging curves and the EV market, however, other charging operators are free to set alternative pricing structures based on their business preferences. The actual cost paid by an individual driver at a DCFC station varies based on the power level, the charging capabilities of the vehicle, the battery's state of charge, and the temperature among other factors. Considering these complexities, Duke's proposed methodology for setting its 'Fast Charge Fee' does not ensure that Duke's pricing will not undercut the private market, and could result in discouraging further private investment in DCFC. To address this, Electrify America requests that the 'Fast Charge Fee' methodology be revised to consider the variability in price by power level.

Electrify America thanks the North Carolina Utilities Commission and its staff for this opportunity to provide comments. We look forward to continued collaboration and investment in the electric vehicle market in the state.

Respectfully submitted,

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[12] https://media.electrifyamerica.com/en-us/releases/61