BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1197
DOCKET NO. E-7, SUB 1195

In the Matter of: Application by Duke Energy Carolinas, LLC and Duke Energy Progress, LLC for Approval of Proposed Electric Transportation Pilot	))))))	**REPLY COMMENTS OF SIERRA CLUB**

With each passing week, the climate crisis intensifies and the need for decisive action grows. Last month was the hottest ever recorded on Earth—temperatures soared to over 100 degrees Fahrenheit across Europe and the United States, and unprecedented wildfires ravaged the Arctic.[1] Here in North Carolina, extreme flooding following hurricanes has been linked to the warming climate.[2] Executive Order No. 80 points to the economic harm caused by "more frequent and intense hurricanes, flooding, extreme temperatures, droughts, saltwater intrusion, and beach erosion," as well as the "significant health risks to North Carolinians" posed by climate change, as justifications for reducing statewide greenhouse gas emissions.

In order to reverse the momentum of destructive climate change, an all-hands-on-deck approach to cutting greenhouse gas emissions is needed—that includes the rapid electrification of the transportation sector. The electric transportation pilot ("ET Pilot" or the "Pilot") proposed by Duke Energy Carolinas and Duke Energy Progress (the "Companies") is an important and much needed step toward transportation electrification

[1] Brady Dennis and Andrew Freedman, *Here's how the hottest month in recorded history unfolded around the globe*, The Washington Post, Aug. 5, 2019, https://www.washingtonpost.com/climate-environment/2019/08/05/heres-how-hottest-month-recorded-history-unfolded-around-globe/?utm_term=.478e4f20431f.

[2] Hans W. Paerl, et al., *Recent increase in catastrophic tropical cyclone flooding in coastal North Carolina, USA: Long-term observations suggest a regime shift*, SCIENTIFIC REPORTS (July 23, 2019), *available at* https://www.nature.com/articles/s41598-019-46928-9.

and, as discussed in Sierra Club's initial comments and below, a proper place for ratepayer investment.

Despite the diverse group of interested parties—environmental groups, anti-poverty advocates, clean energy supporters, automakers, public transit agencies, municipal and county governments, and members of the electric vehicle ("EV") business community—calling for the approval of the ET Pilot, the Public Staff complains that the Companies' proposal does not fit the dictionary definition of "pilot program" and recommends denial.

At its essence, the Public Staff's position is that the Companies' ET Pilot does not qualify as a pilot because other electric transportation pilots exist elsewhere. Aside from its logical weakness, this position ignores the regional and state-level variations in the electric vehicle market, housing stock, customer demand, utility operations and administration, metering arrangements as well as the quickly changing ET-technology landscape. State-specific pilots allow program sponsors to understand what each of these factors mean for the successful design of an ET program within a particular service territory. Indeed, regulators across the country have recognized the value of state-specific pilots, even when the proposed pilots bore similarities to pilots underway in other places. In fact, the Public Staff itself lists a number of such state studies and pilot programs in Exhibit 1 to its initial comments.[3] But rather than supporting its position that the Companies' ET Pilot is unnecessary, this list demonstrates, instead, the recognized need for state- and service-territory-specific evaluation of utility-driven transportation electrification programs.

[3] Public Staff Initial Comments, Ex. 1.

For example, the Public Staff cites to the joint approval of electric transportation investments for each of Maryland's five electric utilities.[4] In that decision, the Maryland Public Service Commission explained that the pilots would collectively provide "valuable insight into Maryland's trajectory toward achieving its [zero emission vehicle ("ZEV")] climate goals as well as 'lessons learned' to help . . . the Commission and stakeholders evaluate grid impacts, technology capabilities, and load management strategies to determine the appropriate next steps for implementing an efficient and reliable charging network in Maryland."[5]

The Public Staff also cites to the Michigan Public Service Commission's approval of programs for both of its major investor-owned utilities: DTE Energy and Consumers Energy.[6] Michigan's regulators recognized the value in both programs, explaining that it is important now for utilities "to think proactively and innovatively on this issue" in order to "avoid reactive and expensive capital infrastructure investments in the future" and to support "more efficient use of excess generation and distribution capacity during off-peak hours to the benefit of all customers, as well as provide new modes of storage."[7] The Michigan PSC found that "none of this will materialize until EV chargers become more prevalent and accessible."[8]

There are additional examples not cited by the Public Staff. In its decision approving a $10-million electric transportation infrastructure investment for AEP Ohio

[4] *Id.* at 4, citing to Order No. 88997, Case No. 9478, Maryland Pub. Serv. Comm'n (filed Jan. 14, 2019).

[5] Order No. 88997 at 80-81, Case No. 9478, Maryland Pub. Serv. Comm'n (filed Jan. 14, 2019).

[6] Public Staff Initial Comments, Exhibit 1 at 4, citing to Order Approving Settlement Agreement, Case No. U-20134, Michigan Pub. Serv. Comm'n (filed Jan. 9, 2019); Order, Case No. U-20162, Michigan Pub. Serv. Comm'n (filed May 2, 2019).

[7] Order at 8, Case No. U-20134, Michigan Public Service Commission (filed January 10, 2019).

[8] *Id.*

last spring, the Public Utilities Commission of Ohio observed that "[n]ow is the time to be aware of and prepare for the potential impact on the electric market; the impact on the electric grid, electric distribution, and distribution infrastructure; and the effect, if any, on other AEP Ohio customers."[9] In Minnesota, the Commission requested that all three investor-owned utilities develop EV programs[10] and, in its recent approval of an investment by Xcel, explained that "[its] two pilots will be the first window into evaluating the utility's growing role in transportation electrification—through infrastructure investments in public charging and Fleet EVs and the potential ratepayer benefits derived from that role—the results of which will ultimately guide the Commission's future decisions on other EV programs."[11] And regulators in Massachusetts, Oregon, and California have approved programs for more than one utility in each state, recognizing the value of territory-specific pilot programs.[12]

As the Public Staff recognizes, transportation electrification is a developing market for which regulatory schemes continue to evolve. By proposing a three-year pilot instead of simply building out charging infrastructure across the state, the Companies will have the ability to modify programs as data is gathered, stakeholders provide feedback, and lessons are learned. Accordingly, the eventual full-scale programs will be more cost-

[9] Opinion and Order, In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan, Case No. 16-1852-EL-SSO, Public Utilities Commission of Ohio (filed April 25, 2018), at 78.

[10] Order Making Findings and Requiring Filings at 11, Docket 17-879, Minnesota Pub. Util. Comm'n (filed Feb. 1, 2019).

[11] Order Approving Pilots with Modifications, Authorizing Deferred Accounting, and Setting Reporting Requirements, Docket No. E-002/M-18-643, Minnesota Pub. Util. Comm'n (filed July 17, 2019).

[12] *See* Order, D.P.U. 17-05, Massachusetts Dep't of Pub. Utils. (approving $45M Eversource program); Order, D.P.U. 17-13, Massachusetts Dep't of Pub. Utils. (approving $25M National Grid program); Order Adopting Stipulation in Part, UM 1810, Oregon Pub. Utils. Comm'n (approving PacifiCorp program); Order Adopting Stipulation in Part, UM 1811, Oregon Pub. Utils. Comm'n (approving Portland General Electric program); Final Orders in Docket Nos. A.14-10-014, A.14-04-014, A.15-02-009, and A.17-01-020 et al., California Pub. Utils. Comm'n (approving various programs for San Diego Gas & Electric, Pacific Gas & Electric, Southern California Edison).

effective and responsive to customer needs. The Public Staff's apparent suggestion that the Companies make capital investments in charging infrastructure *first*, without engaging key stakeholders or the Commission, and only seek cost recovery *after the fact* in a complex, multi-issue rate case would hamstring possible cooperation on program and rate design and could result in less effective and less efficient programs. Given the novelty of utility investment in transportation electrification, a modest pilot program—such as the one the Companies have proposed—with robust stakeholder engagement and regular reporting to the Commission is appropriate.

Utility regulators in other jurisdictions have recognized the value of this approach. For example, utility transportation electrification investments have recently been reviewed and approved in EV-specific proceedings in Minnesota, Missouri, Michigan, and California with cost recovery to be addressed in later proceedings.[13] In at least two cases, regulators have removed the issue from general rate cases to facilitate stakeholder engagement on the issue.[14]

On top of the North Carolina-specific factors that make administration of electric transportation programs different than in other parts of the country, the Companies' ET Pilot includes elements that have not been tested elsewhere. These include:

- *The battery investment and bi-directional V2G components of the EV School Bus Charging Station Program*. The Companies' innovative approach to

[13] *See, e.g.*, Order Approving Pilots with Modifications, Authorizing Deferred Accounting, and Setting Reporting Requirements, Docket No. E-002/M-18-643, Minnesota Pub. Utils. Comm'n (filed July 17, 2019); Report and Order, ET-2018-0132, Missouri Pub. Serv. Comm'n (filed Feb. 6, 2019); Order Approving Settlement Agreement, Case No. U-20134, Michigan Pub. Serv. Comm'n (filed Jan. 9, 2019); Order Approving Programs with Modifications, A.18-07-020 *et al.,* California Pub. Utils. Comm'n (filed May 25, 2018).

[14] *See* Order, U-17990, Michigan Pub. Serv. Comm'n (opening new matter to address utility role in transportation electrification and assess pilot program options); Report and Order, ER-2014-0370, Missouri Pub. Serv. Comm'n (initiating EV-specific stakeholder process).

overcome the up-front purchase premium for electric buses by investing in and retaining ownership of the electric bus batteries for re-purposing in a "second-life" use is without parallel. This approach will allow school districts to unlock operation and maintenance savings that can be reinvested to improve service and further expand electric vehicle fleets. The program will promote additional operator savings because the Companies will evaluate the buses' potential to serve as grid assets with bi-directional charging. Sierra Club, which participates in electric transportation-related dockets across the country, is not aware of any approved pilot of this kind.

- *The managed charging component of the Residential EV Charging Pilot*. The Residential EV Charging program will test customer participation and response in a direct load control program that will leverage the "smarts" in both vehicles and charging stations. While time-of-use rates are commonly understood to be a foundational tool for the management of EV charging load, managed charging can overcome challenges related to needed customer response. Again, Sierra Club is aware of no comparable pilot that tests managed charging for residential customers on the scale and with the technology flexibility of the Companies' proposal.

The Public Staff fails to respond meaningfully to evidence of the billion dollars in benefits that would be enjoyed by electric ratepayers in North Carolina and, instead, focuses its critique of the cost-benefit study cited by the Companies on uncertainty about one electric vehicle penetration scenario. While the link between what can be fairly described as an unremarkable uncertainty and the Public Staff's position on the ET Pilot

is not altogether clear, it is worth noting that a three-year pilot provides an excellent opportunity for testing various scenarios and uncertainties. A pilot program that allows the administrating utility to gather data and then use that data to design appropriate rate structures will facilitate full-scale ET programs that save ratepayers money in the long run. A recent analysis of EV impacts on rates found that "from 2012 through 2018, in the two utility service territories with the most EVs in the United States, EVs have increased utility revenues more than they have increased utility costs, leading to downward pressure on electric rates for EV-owners and non-EV owners alike."[15]

The Public Staff criticizes the ET Pilot for a lack of metrics by which the success or failure of the component programs can be evaluated. Sierra Club's initial comments included recommendations for improvements to the Companies' proposed programs and plan for data collection and reporting. A number of those recommendations address the Public Staff's concern regarding metrics. For example, Sierra Club recommended quarterly (instead of annual) reporting of data and conclusions and that the proposed contents of the reports be clearly outlined now to ensure that information needed to evaluate the success of each program will be collected. The Companies have proposed to conduct a stakeholder working group to share results and solicit input on future program design, but ongoing stakeholder engagement (not just after the fact reporting of results)—like what the Companies have proposed in South Carolina[16]—could support program review and development throughout the three-year pilot period. More precisely defined

[15] Synapse Energy Economics, Electric Vehicles Are Driving Electric Rates Down (June 2019 Update), https://www.synapse-energy.com/sites/default/files/EV-Impacts-June-2019-18-122.pdf.

[16] Amended Application for Approval of Proposed Electric Transportation Pilot and an Accounting Order to Defer Capital and Operating Expenses 17, *Application of Duke Energy Carolinas, LLC for Approval of Proposed Electric Transportation Pilot and An Accounting Order to Defer Capital and Operating Expenses*, Docket No. 2018-321-E (S.C. P.S.C. Apr. 1, 2019). As of July 2, 2019, the South Carolina Commission has yet to rule on Duke Energy's amended application.

metrics for program success and mechanisms for measuring those metrics, including stakeholder engagement, are improvements to the ET Pilot that the Companies can make without much trouble.

In closing, the Companies rightly recognize that they must prepare for and be ready to handle the requirements that electric vehicle adoption places on the electric grid. Rather than simple reacting to this change in the transportation market, the Companies have proposed, through the Pilot, to be proactive, to test the market in order to design ET programs that meet customer needs and maximize benefits to the electric grid. If North Carolina is to meet the goals laid out in Executive Order 80, this type of forward-looking effort should be welcomed and, indeed, championed. For the reasons discussed in its initial comments and above, Sierra Club respectfully requests that the Commission approve the ET Pilot program.

Respectfully submitted, this 9th day of August, 2019.

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CERTIFICATE OF SERVICE

The undersigned certifies that on this day a copy of the foregoing **REPLY COMMENTS OF SIERRA CLUB** was served upon each of the parties of record in this proceeding or their attorneys of record by electronic mail, hard delivery or depositing a copy of the same in the United States mail, postage prepaid.

This 9th day of August, 2019.

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