

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

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

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of

Application by Duke Energy Carolinas, LLC and Duke Energy Progress, LLC for Approval of Proposed Electric Transportation Pilots)	ORDER ACCEPTING FILING OF THIRD REPORT ON DEVELOPMENT OF PHASE II PILOT PROGRAMS AND REQUIRING FILING OF REVISED PHASE II PILOT PROGRAMS AND ADDITIONAL INFORMATION
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BY THE COMMISSION: On March 29, 2019, Duke Energy Carolinas, LLC (DEC), and Duke Energy Progress, LLC (DEP, collectively Duke), filed an application in the above-captioned dockets pursuant to N.C. Gen. Stat. § 62-140 and various Commission rules requesting approval of seven proposed electric transportation pilot programs to support the adoption of electric vehicles (EVs) in North Carolina and to obtain additional information about electric transportation (ET) and EVs.

After receiving comments and reply comments, and holding a hearing, on November 24, 2020, the Commission issued an Order Approving Electric Transportation Pilot Programs, In Part (ET Pilot Order). In summary, the ET Pilot Order approved in full Duke's proposed Public Level 2 (L2) Fast Charging pilot and approved on a modified scale Duke's proposed Multi-Family Dwelling Charging (MFD), Direct Current Fast Charging (DCFC), and Electric Vehicle School Bus (EVS) pilots (collectively, Phase I Pilots). As requested by Duke, the Phase I Pilots were approved for a three-year duration. Finally, the Commission's ET Pilot Order set forth several guidelines for the structure and goals of ET pilot programs and directed Duke to file within six months Duke's proposed Phase II ET Pilot Programs.

On October 18, 2022, Duke filed a motion requesting that the end date of the Phase I EVS Pilot be extended from November 2023 until June 2025. In summary, Duke stated that several factors had hindered program participation and limited Duke's ability to conduct the vehicle to grid study required by the Commission's ET Pilot Order. On January 27, 2023, the Commission issued an Order extending the EVS pilot to June 30, 2025.

On October 11, 2023, Duke filed a motion requesting that the Commission extend the life of the remaining three Phase I Pilots – Public L2, DCFC, and MFD - for one year to November 24, 2024. On November 2, 2023, the Commission issued an Order granting Duke's motion.

Phase II Pilots

On May 24, 2021, Duke filed a Request for Approval of Phase II Electric Transportation Pilot Programs (Phase II Pilots). Duke proposed five Phase II Pilots. Four of the proposed Phase II Pilots are essentially deployments of additional charging stations under the same format as the Public L2, MFD, DCFC, and EVSB Phase I Pilots. The fifth was an Electric Vehicle Supply Equipment (EVSE) pilot that was subsequently withdrawn by Duke and filed as a standalone tariff. The four remaining Phase II Pilot proposals are:

- (1) Utility-Operated Public Charging — Duke would own and operate at least 240 Public L2 charging stations that would be installed at key publicly accessible locations in DEC's and DEP's North Carolina service territories. For the Phase I Pilots, the Commission approved a total of 160 Public L2 chargers, with 100 for DEC and 60 for DEP.
- (2) Multi-Family Dwelling L2 Charging — Duke would own and operate up to 240 Multi-Family Dwelling L2 stations, with half of the chargers deployed in Tier I and II counties and the other half installed in low- to moderate-income communities. For the Phase I Pilots, the Commission approved a total of 80 MFD chargers, with 50 for DEC and 30 for DEP.
- (3) Highway Corridor Direct Current Fast Charging — Duke would own and operate a network of up to 90 DCFC stations in approximately 45 locations. By agreement with Duke, the operation and maintenance of the stations might be performed by third-party qualified service providers. The charging stations would be dispersed in Tier I and Tier II counties at key highway corridor locations throughout DEC's and DEP's North Carolina service territories. For the Phase I Pilots, the Commission approved a total of 40 DCFC chargers, with 24 for DEC and 16 for DEP.
- (4) EV School Bus Program — Duke proposed a concentrated deployment of approximately 4-6 buses at 10-15 sites for a total of 60 buses. Duke stated that the customer would own the EVSB and would operate and maintain all EVSB components for the duration of the pilot, while Duke would retain ownership rights to the EVSB battery and be allowed to repurpose or remove the EVSB battery at the end of its useful life. For the Phase I Pilots, the Commission approved a total of 30 electric buses, 15 each for DEC and DEP.

On February 21, 2022, the Commission issued an Order Requiring Further Collaboration and Report on Proposed Phase II Pilots (Phase II Abeyance Order). Based on changed circumstances discussed in the Order, the Commission directed Duke to continue working with the Electric Transportation Stakeholder Group (ETSG), and to refine and modify its Phase II Pilots to take into consideration the possibility of receiving direct funding under the Infrastructure Investment and Jobs Act (IIJA), H.R. 3684, 117th Cong. (2021), enacted on November 15, 2021, and/or other recently available sources of

federal funds. In addition, the Commission directed Duke to file a report (Phase II Report), within 90 days updating the Commission on its progress on these directives.

On July 13, 2022, in response to a motion by Duke and other parties, the Commission extended the time for Duke to file the Phase II Report to October 3, 2022.

On October 3, 2022, Duke filed the Phase II Report. In summary, Duke described several actions that it had taken to refine and continue its development of the Phase II Pilots, including:

1. Continued to work with the ETSG;
2. Continued to track the implementation of IIJA;
3. Supported development of North Carolina's Clean Transportation Plan (CTP), and National Electric Vehicle Infrastructure (NEVI) plan; and
4. Reviewed the potential impact of electric vehicle tax credits under the Inflation Reduction Act of 2022 (IRA), H.R. 5376, 117th Congress (August 16, 2022).

Duke requested that it be granted additional time to review the impacts of the IIJA and the IRA on the Phase II Pilots and requested to file a second Phase II Report on or before January 6, 2023. That request was granted by the Commission in an Order issued on December 2, 2022.

On January 6, 2023, Duke filed its Second Phase II Report. In summary, Duke stated that it had:

1. Continued to work with the ETSG, with an ongoing focus on meeting the needs of underserved communities;
2. Continued to support and track the progress of North Carolina's IIJA programs;
3. Used its experiences and lessons learned to provide input on challenges such as supply chain, securing contracts with site hosts and how the details of EV charger components can impact the need for driver education;
4. Continued to engage with the North Carolina Department of Transportation (DOT), about designing efficient processes for NEVI funding inquiries; and

5. Regularly participated in the working group on development of the CTP and continued its support of such development.

Duke stated that because these various planning efforts still awaited critical milestones, it remained unable to fulfill the Commission's order to reconsider the Phase II Pilots in the context of how they may be complemented by and supportive of current state and federal ET activities. Duke requested that it be granted an additional eight months, until September 5, 2023, to refine and modify the Phase II Pilots. It stated that this extension of time should provide Duke and the Commission more clarity on the CTP, which was due to be completed in April 2023, the development of community charger plans under NEVI, and the potential for receiving direct funding under the IIJA and/or other recently created sources of federal and state funds. Moreover, Duke stated that it would continue to work with the ETSG to review Phase I Pilot learnings and the development of other potential programs.

On March 22, 2023, the Commission issued an Order granting Duke's request and requiring Duke to file its Third Phase II Report on or before September 5, 2023.

On September 5, 2023, Duke filed its Third Phase II Report. In summary, Duke explained that it has continued its efforts with the ETSG, its monitoring of the relevant IIJA and IRA programs, and continued to support and track progress of the NEVI funding. Regarding NEVI, Duke stated that at the request of the NC DOT it made a presentation on best practices and engagement for prospective market recipients of IIJA funding on October 18, 2022. Moreover, Duke stated that by using its experiences and lessons learned from the Phase I Pilots it has provided input on challenges such as supply chain, securing contracts with site hosts and on how the details of EV charger components can impact the need for driver education, and has engaged with NC DOT on critical items such as designing efficient processes for NEVI site capacity inquiries. Duke stated that although NC DOT continues to work toward the release of solicitations for the first phase of NEVI sites, the first such solicitation has not been issued by NC DOT, and that stakeholder engagements for deployment of any excess NEVI funds to install EV charging for underserved communities also remain pending. Duke explained that because NC DOT continues to develop its approach to NEVI charger deployment, the Companies remain unable to fulfill the Commission's order to reconsider the Phase II pilot programs meaningfully in the context of how they may be complementary to current state and federal activity. Finally, Duke requested an additional six months, to March 5, 2024, to refine and modify its Phase II Pilots to take into consideration how a reimagined set of pilot programs could be complementary to activities stemming from IIJA and other sources of funding.

Discussion

The potential for funding EV infrastructure under the IIJA and other sources of federal funds, and revising the Phase II Pilots to fully leverage such funding, was the primary impetus for issuance of the Phase II Abeyance Order, as well as the subsequent Commission Orders extending the time for Duke to refine and modify its Phase II Pilots.

Duke's Phase II Reports have been helpful in keeping the Commission informed of Duke's work on making such revisions. However, the Commission requires information from Duke about its applications for, receipt of, and/or potential receipt of such federal funds. Specifically, the Commission requests the following information:

1. Has Duke received or applied to directly receive any federal funding that would fund, in whole or in part, the Phase I or Phase II Pilots? If so, provide the details of such funding, including:
 - (a) date of the application;
 - (b) source of the funding;
 - (c) amount applied for;
 - (d) intended use of the funds;
 - (e) any response to the application; and
 - (f) if no response yet, expected date of response.

2. Has Duke assisted another entity to make an application for federal funding that would further the objectives, in whole or in part, of the Phase I or Phase II Pilots? If so, provide the details of such assistance, including:
 - (a) entity assisted;
 - (b) date of the application;
 - (c) source of the funding;
 - (d) amount applied for;
 - (e) intended use of the funds;
 - (f) any response to the application; and
 - (g) if no response yet, expected date of response.

EV Load Management

The main thrust of the Phase I and Phase II Pilots is building EV charging infrastructure. Likewise, the focus of the Make Ready Credit (MRC) Pilot and EVSE tariff, approved by the Commission on February 18, 2022, and August 8, 2023, respectively, are to build more EV chargers. Providing access to charging infrastructure was a logical place to begin in support of ET development and continues to be an important aspect of EV adoption.

Looking forward, developing a plan for incorporating EV charging into Duke's load management efforts so that EVs complement the efficient use of existing generation resources and the electric system, rather than creating the need to build substantial new infrastructure, is paramount. Indeed, in the Commission's Order Adopting Initial Carbon Plan and Providing Direction for Future Planning (Carbon Plan Order), issued in Docket No. E-100, Sub 179 on December 31, 2022, the Commission highlighted the importance of properly incorporating EV load in furtherance of achieving prescribed carbon emission reductions.

At the expert witness hearing, Duke also recognized that it must design rates to encourage EV charging at times that minimize harm and maximize benefit to the electric system and facilitate charging at locations that avoid the need for grid upgrades and, perhaps, facilitate operation of the grid. *Id.*

The Commission is persuaded that it is appropriate and critical for Duke to consider the impact of EVs on its load forecasts based on the regulatory environment at the time of its modeling. In addition, the Commission directs Duke to continue the two-pronged approach described above. Ultimately, load growth associated with EVs has the potential to reduce system average cost and possibly lead to more optimal system operation at times. Duke must pursue this opportunity to the fullest extent.

Carbon Plan Order, at 108.

As time passes, EV load patterns from Duke's Phase I Pilots and MRC programs are becoming more defined. On June 24, 2022, the Commission issued an Order in Docket Nos. E-2, Sub 1291 and E-7, Sub 1266 approving DEP's and DEC's joint application for Electric Vehicle Managed Charging Pilot Programs (EVMC). These are referred to as "active" managed charging pilots because the utility has control of the hours in which EV charging takes place. The pilots operate using software systems to charge EVs during beneficial times. Additionally, Duke will be using these pilots to test the attractiveness and feasibility of a monthly subscription feature where customers pay a flat rate that covers large amounts of home EV charging.

On December 18, 2023 Duke filed a Joint Application for Approval of Off-Peak Charging Programs in new Docket Nos. E-2, Sub 1334 and E-7, Sub 1301. In summary, the pilot program will provide residential customers in North Carolina a financial incentive to charge their EV's during off peak hours. The Commission notes that Duke Energy Corporation's regulated utility in Florida, Duke Energy Florida, LLC (DEF), currently offers a similar passive Residential Off-Peak Charging Credit Program that has achieved high participation rates and reduced DEF's summer peak EV load by ~80%, according to a slide presentation by Cory Gordon, Director of Duke Energy Transportation Electrification, during a webinar facilitated by Advanced Energy and NC DOT in August 2023.

Comprehensive Managed Charging Strategy

The Commission encourages Duke to explore different types of managed charging approaches to mitigate the potential load and cost impacts of increasing EV adoption in North Carolina. However, the Commission would like to gain a better understanding of Duke's overarching managed charging strategy as it is now starting to develop. Therefore, in its next Phase II report to be filed on March 5, 2024, the Commission directs Duke to include an update on its managed charging strategy going forward, including a discussion of passive, active, and any other programs Duke intends to pursue to optimize EV charging in North Carolina.

Conclusion

Based on Duke's motion and the record, the Commission finds good cause to accept for filing Duke's Third Phase II Report and to extend to March 5, 2024, the date for Duke to file its proposed revisions to the Phase II Pilot Programs. In addition, Duke shall include in its filing on March 5, 2024, the information on federal funding applications and funding availability specified in the body of this Order. Further, Duke shall include in its March 5, 2024 filing its plan for managed charging going forward.

IT IS, THEREFORE, ORDERED as follows:

1. That Duke's Third Phase II Report is hereby accepted for filing;
2. That on or before March 5, 2024, Duke shall file its proposed revisions to the Phase II Pilot Programs, including information regarding federal funding applications and funding availability, as specified in the body of this Order; and
3. That Duke shall include in its March 5, 2024 filing details about Duke's managed charging work thus far and its plan for managed charging going forward.

ISSUED BY ORDER OF THE COMMISSION.

This the 30th day of January, 2024.

NORTH CAROLINA UTILITIES COMMISSION



Tamika D. Conyers, Deputy Clerk