

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

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

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of  
Application by Duke Energy Progress, LLC, ) PUBLIC STAFF'S  
and Duke Energy Carolinas, LLC, for Approval ) COMMENTS  
of Proposed Electric Transportation Pilot )

NOW COMES THE PUBLIC STAFF – North Carolina Utilities Commission (Public Staff), by and through its Executive Director, Christopher J. Ayers, pursuant to the Commission’s June 14, 2021 *Order Requesting Comments on Proposed Revised Pilot Programs* and the Commission’s July 21, 2021 *Order Granting Extension of Time* and provides the following comments on the Joint Request by Duke Energy Carolinas, LLC (DEC) and Duke Energy Progress, LLC (DEP) (collectively “Duke” or the “Companies”), for Approval of Phase II Electric Transportation Pilot Programs (Phase II Request).

**I. Procedural History**

On March 29, 2019, Duke filed an Application for Approval of Proposed Electric Transportation Pilot (Original Application), requesting that the Commission approve several pilot programs. These programs were 1) an Electric Vehicle (EV) Management pilot which included residential and fleet EV Charging Programs; 2) a Transit Electrification pilot, including EV School Bus and Transit Bus Charging Station Programs; and 3) a Public Charging Expansion comprised of Multi-Family

Dwelling, Public Level 2 Charging, and Direct Current Fast Charging (DCFC) programs.

On July 5, 2019, The Public Staff filed comments on the Original Application, stating that after an extensive investigation the Public Staff did not believe that the Duke's proposal met the parameters of a pilot in which the Companies would undertake a proof-of-concept through a scalable project. The Public Staff also stated that the Companies failed to establish that North Carolina customers are sufficiently unique enough to justify another pilot program or that the results of previous or ongoing pilot projects in other jurisdictions were insufficient to meet the Companies' needs. Further, the Public Staff argued that Duke did not demonstrate why spending an estimated \$76 million was necessary to learn more about serving current and future EV load. While not opposed to transportation electrification, the Public Staff believed that the Companies' request was not for a pilot but for pre-approval of EV infrastructure investments that would be funded by customers.

On November 24, 2020, The Commission issued its *Order Approving Electric Transportation Pilot, In Part* (ET Pilot Order), approving the proposed Public Level 2 Charging Program and limited versions of the Multi-Family Dwelling Charging Program, the DCFC Program, and the EV School Bus Charging Program but declined to approve Duke's proposed residential and fleet charging programs and the transit bus program. The Commission further directed Duke and the Public Staff to convene a stakeholder collaborative and for Duke to "explore and create a second pilot" of the three approved programs within the stakeholder process. In

approving these three charging programs, the Commission stated that “[f]ocused pilot programs can serve the purpose of expanding this charging infrastructure while allowing the utility to collect data on the impact of this new electric usage on it system.” The Commission then set out a detailed list of required characteristics that pilot programs must “include consideration of or as an aspect of the pilot, at a minimum” in order to be approved. The list included: 1) proper scope and scale; 2) rate design; 3) cost-benefit analysis; 4) leveraging other funding; 5) a make-ready approach; 6) objectives, metrics, and verification; and 7) reporting and stakeholder engagement.

On December 16, 2020, Duke and the Public Staff held the first of six stakeholder meetings. Over the next six months, Duke presented on its plans to develop its Phase II Pilot programs, the new Customer Owned EV Supply Equipment Tariff Pilot (EVSE Pilot), and the Make-Ready Credit Tariff (MRC) Program to the stakeholders. Throughout the stakeholder process, the Public Staff raised concerns, both in stakeholder meetings and in individual meetings with Duke, that the proposals Duke planned to file at the Commission did not meet the requirements of the ET Pilot Order.

On April 30, 2021, the Companies filed their Joint Request for Approval of their Make-Ready Credit Tariff Program (MRC Request), which is not a pilot program but a fully commercial tariff of which the Public Staff largely supported. On May 24, 2021, Duke filed its Phase II Request. The Commission issued its *Order Requesting Comments* on Duke’s MRC Request on May 28, 2021, and issued its *Order Requesting Comments on Proposed Revised Pilot Programs* on

June 14, 2021. On July 7, 2021, the North Carolina Sustainable Energy Association filed a Motion for Extension of Time to file comments on the Phase II Request, which the Commission granted on July 8, 2021. On July 15, 2021, the intervenors filed comments on Duke's MRC Request, generally supporting the MRC Program.

## **II. Description of the Programs in the Phase II Request**

Duke states in its Phase II Request that the Phase II Pilot Programs are designed to comport with the Commission's ET Pilot Order and to provide feedback on how to best help North Carolina reach Governor Cooper's Executive Order 80's (EO 80) goal of 80,000 zero emission vehicles in the state by 2025. Duke provides two anticipated funding levels of the Phase II programs for the Commission's consideration. The first, \$56 million, Duke contends is the amount required to permit the Companies to develop enough EV charging infrastructure to fill 25% of the gap (25% Scenario) needed to meet the EO 80 goal and in the alternative, \$33.2 million to fill 10% (10% Scenario) of the EO 80 goal. The Phase II Request includes four separate pilot programs. The programs are as follows:

### Customer-Operated EVSE Tariff Pilot

Under the proposed EVSE Pilot, Duke will install EV chargers and charging infrastructure, for both Level 2 and DCFC, at locations on DEP's and DEC's distribution system. The chargers and infrastructure will be owned and maintained by Duke but operated by the customer participating in the EVSE Pilot. This pilot program is structured similarly to the Companies' respective outdoor lighting

programs, which receive separate class treatment and have unique costs to serve. According to the Phase II Request, by using the Companies' outdoor lighting programs as a model, the EVSE Pilot provides a low up-front cost and an all-in rate, making installation simple and affordable for customers. The Phase II Request will align with the Companies' MRC Program, if approved, and does not have a cap on the utility owned/customer operated EVSE that can be installed before the program ends. The anticipated cost of the EVSE Pilot is not stated in the application and would be in addition to the costs Duke is asking the Commission to approve for the Phase II programs.

#### Phase II Public Level 2 and Multi-Family Dwelling Charging Pilots

For the Phase II Public Level 2 Charging and Multi-Family Dwelling Charging Pilots, Duke is asking for a total of \$13 million in the 25% Scenario (\$6.5 million for each pilot), which would be used to install 480 charging ports for each of the Public Level 2 and Multi-Family Dwelling Programs. The Companies state that half of the chargers in each program will be deployed in Tier I and II counties and the other half will be installed in low- to moderate-income (LMI) communities.

#### Phase II DCFC Charging Pilot

Duke asks for approval of \$28.5 million in the 25% Scenario for the DCFC Charging Pilot, which will allow the Companies to install 180 fast chargers along highway corridors. The Companies will install, own, operate, and maintain each fast charger throughout the term of the pilot program. All of the DCFC chargers will be installed in Tier I and II counties and the Companies will continue to explore

partnership opportunities in site selection to bring costs of the installations down. Duke will assess a fee to drivers consisting of the approximate average statewide Fast Charge price per kWh (Fast Charge Fee) and after 12 months of the charger being in service, the site hosts will have the option of creating alternative pricing mechanisms for drivers, which may not exceed the Fast Charge Fee by more than 20%. If the site host chooses to set the price below the Fast Charge Fee, the site host will be responsible for remitting payment to the Companies to cover the difference with the approved Fast Charge Fee.

#### Phase II EV School Bus Pilot

Duke asks for a total of 60 buses at a cost of \$14.5 million in both the 25% and the 10% Scenarios. Under the EV School Bus pilot, the North Carolina Department of Public Instruction (DPI) or the local school district would provide the price of a diesel-equivalent bus and the Companies would provide the remaining incremental cost gap for the purchase of an EV school bus. The participating school districts would then be able to take advantage of the MRC Program and the EVSE Pilot in order to receive the required charging infrastructure, if the school district elects to do so. The school bus batteries would be available for vehicle-to-grid dispatch when not in transportation service.

### **III. Public Staff Comments**

The Public Staff believes the Commission should deny Duke's Phase II Request because it fails to meet the requirements set out in the Commission's ET Pilot Order. Duke has failed to properly size the Phase II Request to the scale and

scope envisioned for pilot programs and, much like with the Original Application, are more consistent with infrastructure programs. In addition, the Phase II Request programs also lack many of the required characteristics the Commission found necessary to approve future pilots in its ET Pilot Order. The Phase II Request appears premature as the first phase has yet to be implemented. The Public Staff also believes that the Phase II Request may ultimately prove be unnecessary considering current EV adoption trends, Tesla's announcement to open its fast chargers will be open to other types of vehicles in 2021,<sup>1</sup> and the amount of capital likely to be invested in the market from other sources. Lastly the Public Staff believes that the MRC Request currently pending before the Commission is a better option to grow a competitive marketplace.

#### The Phase II Pilots Do Not Meet the Proper Scale and Scope

As stated above, the Phase II Request fails to include several of the characteristics for future pilots enumerated in the Commission's ET Pilot Order, including failure to comply with the scale and scope requirement. The Commission's ET Pilot Order states:

In order to approve the involvement of Duke and other public utilities in any pilot program, the Commission will require that pilot programs also include consideration of or as an aspect of the pilot, at a minimum, the following attributes:

*Proper Scale and Scope:* The scale and scope of a pilot program should be set in a manner that allows the utility to *test a concept at a smaller scale without incurring substantial capital costs*, such that if the pilot

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<sup>1</sup> Elon Musk says Tesla Supercharger network will be open to other cars this year, CNBC, July 20, 2021, Available at <https://www.cnbc.com/2021/07/20/elon-musk-says-tesla-will-open-its-chargers-to-other-electric-vehicles.html>.

program is successful it can then be readily deployed system-wide with more assurance that it will be economically viable.

Commission ET Pilot Order at 20(emphasis added). The Phase II Request illustrates two options for the Commission to consider when determining the level of funding for the pilots. The first option, requiring an estimated investment of \$56 million, to develop enough charging infrastructure to enable the state to meet 25% of EO 80's goal in the next three and a half years and the second option, \$33.3 million, would allow Duke to build charging infrastructure to meet 10% of EO 80's goal. These requests are not sized in a manner that allows the Companies to "test a concept at a smaller scale without incurring substantial capital costs." Duke's Phase II Request does not test a concept as much as it allows Duke to implement a business plan to enter the EV charging market. Using energy efficiency (EE) program pilots as an example, the Public Staff has agreed to implement EE pilots intended to prove various concepts of program delivery, customer interactions, and making available so as to prevent cost escalation from impacting the EE riders. The only active pilot of this type at this time is DEP's Low Income Weatherization Pay for Performance Pilot (E-2, Sub 1187).

Further, the ET Pilot Order stated that "[t]he Commission supports the goal of gathering operational data that is needed to quantify the specific costs and benefits attributed to EV usage." Infrastructure development at either of the requested levels goes far beyond those goals. The Public Staff raised the same concern in its initial comments on Duke's Original Application when Duke's request



for the pilots at issue was a total of approximately \$57 million<sup>2</sup> and the Commission only approved approximately \$21 million. Duke is now, at minimum, asking for significantly more money to scale up these pilots prior to any demonstration that Phase I was a success. The requested 25% Scenario is scaled to meet the needs of 25% of the gap between the number of zero emission vehicles (ZEVs)<sup>3</sup> registered in NC as of March 2021, and the 80,000 vehicles goal by 2025 set forth in EO 80. This corresponds to approximately 13,377 additional<sup>4</sup> EVs registered within NC. Because the deployment of this infrastructure will not necessarily be located where it would spur the most development, Duke would own and operate greater than 25% of the infrastructure, not taking in to account the Phase I infrastructure. Approval of the Phase II Request would allow Duke Energy's regulated utilities to control a substantial proportion of the marketplace at the same time as it grows its unregulated EV subsidiary, eTransEnergy.<sup>5</sup> Regardless of the Commission's position on Duke owning such a large proportion of the EV infrastructure in the state, this is clearly not the proper scale and scope of a pilot program that is consistent with the Commission's definition. Further, the scenarios presented do not take into account the proposed uncapped EVSE Pilot, which

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<sup>2</sup> Duke's Original Application had an estimated cost of \$76 million total. The estimated total costs requested in Duke's Original Application for the Public Level 2 Charging, Multi-Family Dwelling Charging, DCFC, and EV School Bus programs was \$57 Million. ET Pilot Order at 6.

<sup>3</sup> EO 80 does not define ZEV but the North Carolina Department of Transportation's ZEV Plan states that ZEV "[i]ncludes both fully electric plug-in as well as plug-in hybrid electric vehicles." ZEV Plan at page 3. <https://www.ncdot.gov/initiatives-policies/environmental/climate-change/Documents/nc-zev-plan.pdf>

<sup>4</sup> 13,377 is calculated using the difference between 80,000 ZEVs registered as of March 2021, multiplied by the 25% that Duke proposes to meet. The NCDOT reported 26,491 registered ZEVs as of March 2021. NCDOT ZEV Registration Data can be found at: <https://www.ncdot.gov/initiatives-policies/environmental/climate-change/Pages/zev-registration-data.aspx>

<sup>5</sup> <https://news.duke-energy.com/releases/new-duke-energy-subsiary-etranseenergy-to-help-companies-and-cities-transition-commercial-fleets-to-electric-vehicles>

would allow Duke to own and maintain countless other charging stations, adding to their market share.

All of the Pilots in the Phase II Request Fail to Meet the ET Pilot Order's Prescribed Criteria for Pilot Programs

As stated above, the Commission's ET Pilot Order set out a minimum list of characteristics that each pilot program must at least consider in order to gain the Commission's approval. Even if the Commission were to consider the entirety of the Phase II Request as one pilot program, the Companies fail to establish how the programs incorporate all of the required characteristics or describe why certain features were not accounted for in the request.

The Phase II Request does not articulate the objectives, metrics, and verification components for either the EVSE pilot or Phase II Programs, which would allow the Commission and all parties involved to determine what the goals of the pilots are, whether the pilots are meeting those goals, and if the pilots are ready for wide-scale deployment. Duke, in response to a Public Staff data request, stated that it has not developed an Evaluation, Measurement, and Verification (EM&V) plan at this time and plans to develop one through the stakeholder process with lessons learned from the Phase I EM&V process. Because there is no EM&V plan, Duke has also failed to show how it will track the pilot programs in order to develop a "future cost-benefit analysis" that must be conducted on each pilot before it can be scaled beyond its pilot program size. The Public Staff believes that the ET Pilot Order requires Duke to develop an EM&V process and describe how the Companies will develop the cost-benefit analysis prior to requesting approval

and, therefore, all of the pilot programs fail to meet the Commission's requirements.

The Commission's ET Pilot Order also requires that each pilot program contain or consider a make-ready approach. While the Companies have filed their MRC Request, they clearly stated that the MRC Program was not a pilot and, therefore, the Public Staff contends that it should not be considered when determining whether each of the pilots contained in the Phase II Request meet the make-ready requirement.

The Public Level 2 and Multi-Family Dwelling Charging Pilots also fail to show how the Companies will leverage outside funding. Duke does not state in the Phase II Request if the Companies have attempted to obtain partnerships that could help cover the cost of the infrastructure, if they plan to do so in the future, or explain why doing so would not be beneficial to customers of these pilot programs.

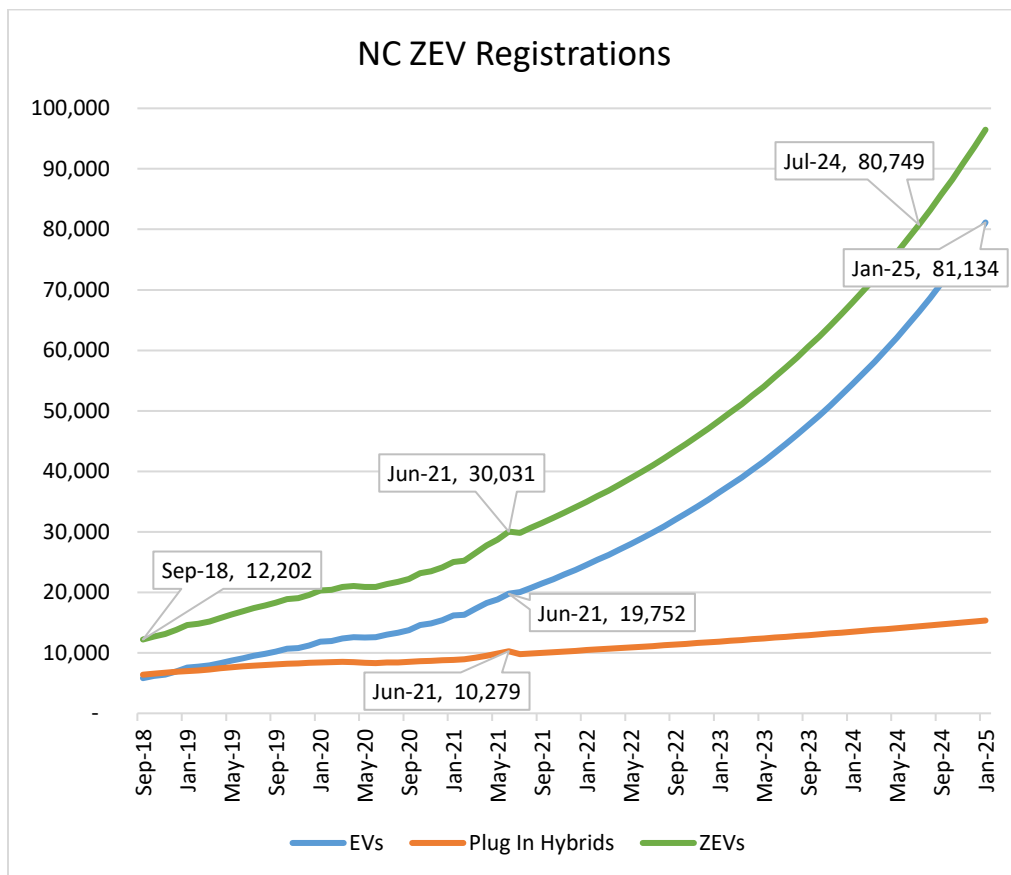
#### Timing Issues

The Public Staff also opposes the Phase II Request because the prevailing trends in the EV market appear to suggest that these programs are unnecessary at this time, especially at the levels Duke is requesting. Duke spends much of the Phase II Request stating that these pilots are needed to help reach the goals established in EO 80; thus, the Commission needs to approve and Duke needs to build a significant portion of the charging infrastructure in order for the state to reach 80,000 EVs by 2025. Current vehicle registration data,<sup>6</sup> however, suggests

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<sup>6</sup> *Id.* at FN 4.

that North Carolina drivers are currently on pace to meet the EO 80 goal by July of 2024. This is before the implementation of Phase I, funding from non-regulated sources, and the potential approval of the MRC Request.



The graph above shows the number of ZEVs registered in the State of North Carolina. The NC Department of Transportation began making this data publicly available beginning with September 2018. To project the future growth, the rate of growth of the 34 months from September 2018 to June 2021 were evaluated, and produced an exponential growth equation. The simpler method of using the average percent change of each month yields slightly different numbers, but with the July 2024 reaching over 80,000 ZEVs registered. The same analysis shows

that over 80,000 EVs will be registered in January of 2025. It is reasonable to expect that ZEV adoption will continue, at a minimum, at the rate seen since September 2018. The projections include evaluation of January 2020 through July 2020, where the adoption rates were decreased due to the COVID-19 pandemic. Additionally, a widespread shortage of new vehicles began early in 2021 due to a number of issues, including decreased production during the COVID-19 pandemic, and supply chain issues. Despite this shortage, March, April, May, and June of 2021 were the four months with the highest increase of ZEVs since September 2018. While it is not possible to predict the future, it is reasonable to expect that there will not be another global pandemic, that the supply chain issues will be resolved, and that the goals of EO80 will be met.

Outside sources of infrastructure and funding that appear to be imminent will only help to drive EV adoption to EO 80's goals and further. As noted above, Tesla has recently stated that it will be making all of its chargers available to the general EV public by the end of the year. The U.S. Department of Energy's website states that Telsa has 134 charging stations with 487 outlets, including 27 Tesla Supercharger stations with 242 outlets in North Carolina.<sup>7</sup> The opening of these chargers to all EVs should greatly increase the confidence of drivers considering the purchase of an EV who prefer a brand other than Tesla. On July 28, 2021, the United States Senate agreed to a bipartisan infrastructure bill that has \$7.5 billion earmarked for EV charger infrastructure, \$2.5 billion for zero emission school

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<sup>7</sup>[https://afdc.energy.gov/fuels/electricity\\_locations.html#/analyze?fuel=ELEC&country=US&region=US-NC&ev\\_connectors=TESLA&ev\\_networks=Tesla%20Destination&ev\\_networks=Tesla](https://afdc.energy.gov/fuels/electricity_locations.html#/analyze?fuel=ELEC&country=US&region=US-NC&ev_connectors=TESLA&ev_networks=Tesla%20Destination&ev_networks=Tesla)

buses and another \$2.5 billion in low emission buses.<sup>8</sup> DEQ will also be awarding the second allotment of the Volkswagen Settlement funds in the spring of 2022, where the charging infrastructure is only open to public entities.<sup>9</sup> Additionally, on July 13, 2021, Electrify America announced plans to more than double its charging infrastructure in the US and Canada over the next four years, with plans to install over 1,800 fast chargers, and 10,000 individual chargers.<sup>10</sup>

The Public Staff also believes that it would be premature to approve Phase II of the Public Level 2 Charging, Multi-Family Dwelling Charging, and EV School Bus Programs before the Companies can gain any knowledge from the first phase of these programs. The Commission stated that the entire Public Level 2 Charging Program and a limited version of the Multi-Family Dwelling Charging Pilot and the DCFC Pilot were in the public interest and the Public Staff contends that nothing has changed in the intervening time to suggest that approval of more chargers are warranted. Duke stated in response to a Public Staff data request that as of July 8, 2021, that none of the chargers for any of the approved Phase I Programs had been installed, but sites were currently being evaluated for technical suitability. The Public Staff believes that data from Phase I should be collected and analyzed prior to approval of any additional ET pilots.

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<sup>8</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/28/fact-sheet-historic-bipartisan-infrastructure-deal/>

<sup>9</sup> <https://files.nc.gov/ncdeq/Air%20Quality/motor/volkswagen/phase-2/NC-Draft-Phase-2-VW-Mitigation-Plan-2021.pdf>

<sup>10</sup> <https://www.reuters.com/business/sustainable-business/volkswagens-ev-unit-plans-double-charging-infrastructure-by-end-2025-2021-07-13/>

The EV School Bus Program vividly illustrates the Public Staff's concerns. The Commission approved a limited version of the School Bus Pilot stating that Phase I "may be useful as the first step in a multiphase program. In that first step the utility can gather operational data...[and] after this 'proof of concept' pilot Duke may further propose in a second 'proof of value' stage of this pilot program sufficiently scaled and concentrated clusters of electric school buses." The Public Staff believes that Duke cannot apply for the proof of value phase of this program without first gathering the operational data necessary to complete the proof of concept phase. While Duke missed the opportunity to take advantage of the first allotment of Volkswagen Settlement funds and states that a "timely approval" will help the Companies take advantage of the second allotment, the Public Staff believes that Duke should work with school districts that were awarded funds in the first allotment to implement Phase I or wait until the NC Department of Environmental Quality (DEQ) awards its second allotment to implement Phase I. Under these circumstances, the second phase of the EV School Bus Pilot should not be approved.

The Public Staff contends that the MRC Request currently pending before the Commission, is a better path forward in further developing the state's charging infrastructure while building a competitive marketplace that will invite new innovative companies that can uniquely tailor the chargers and fees to individual customer needs.

#### IV. Conclusion

Duke's Phase II Request is unnecessary to meet the goals of EO 80, and if approved as proposed would give Duke a substantial portion of the marketplace, which the Commission wanted to avoid when approving Phase I. Further, the pilot programs included in the Phase II Request do not meet several of the requirements of the Commission's ET Pilot Order. Accordingly, the Public Staff recommends that the Commission deny the Companies' Phase II Request in its entirety.

Respectfully submitted this the 29th day of July, 2021.

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## CERTIFICATE OF SERVICE

I certify that a copy of the Public Staff Comments has been served on all parties of record or their attorneys, or both, in accordance with Commission Rule R1-39, by United States Mail, first class or better; by hand delivery; or by means of facsimile or electronic delivery upon agreement of the receiving party.

This the 29th day July, 2021.

Electronically submitted  
/s/ Robert B. Josey