

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 Carolinas, LLC )  
and Duke Energy Progress, LLC for Approval )  
of Proposed Electric Transportation Pilot )  
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PROPOSED ORDER OF THE  
NORTH CAROLINA  
SUSTAINABLE ENERGY  
ASSOCIATION

HEARD: Commission Hearing Room, Dobbs Building, 430 North Salisbury Street,  
Raleigh, North Carolina, on November 21, 2019, at 10:30 am.

BEFORE: Chairwoman Charlotte Mitchell, Presiding  
Commissioner ToNola D. Brown-Bland  
Commissioner Lyons Gray  
Commissioner Daniel G. Clodfelter  
Commissioner Kimberly W. Duffley  
Commissioner Jeffrey A. Hughes

APPEARANCES:

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BY THE COMMISSION: On March 20th, 2019, Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (DEC and DEP, collectively, “Duke”) filed their *Application for Approval of Proposed Electric Transportation Pilot* (“Application”) in these two dockets pursuant to North Carolina General Statute § 62-140 requesting the approval a proposed Electric Transportation Pilot Program (“ET Pilot”).

On April 4th, 2019, the Commission issued an *Order Requesting Comments on Proposed Electric Transportation Pilot Program*. The Commission received Petitions to Intervene by the following parties and granted those petitions. Those parties include the North Carolina Sustainable Energy Association (“NCSEA”), the Sierra Club, ChargePoint, Inc., Environmental Defense Fund (“EDF”), North Carolina Clean Energy Business Alliance (“NCCEBA”), Zeeco Systems d/b/a as Greenlots (“Greenlots”), and jointly the North Carolina Justice Center and the Southern Alliance for Clean Energy (“NCJC/SACE”).

The Commission has received numerous Statements of Position from interested persons and comments and reply comments from the parties. On October 25th, 2019, the Commission issued an Order in which the Commission set these two dockets for hearing in order to obtain additional information on the public interest and ratemaking implications of Duke's proposed pilot program. On November 1st, 2019, the Commission issued an Order providing notice to the parties containing a list of some of the topics about which the Commission expected to ask questions at the November 21 hearing. In addition to the foregoing, there were other motions and filings not specifically mentioned which are matters of record.

Based on the entire record in this proceeding, the Commission now makes the following:

#### **FINDINGS OF FACT**

1. It is the policy of the State of North Carolina to encourage the adoption of EVs.
2. Session Law 2019-132 was designed to encourage competition in the

market for EV charging.

3. Chapter 62 of the General Statutes neither requires nor prohibits Duke's participation in the EV charging market.

4. The Application does not include sufficient metrics to measure the success of the deployment of public EV charging stations owned by Duke.

5. Duke's proposal is not appropriately tailored for a pilot program.

6. The Fast Charge Fee, as proposed, constitutes impermissible single-issue ratemaking, and thus must be rejected.

7. Because of these deficiencies, the ET Pilot programs related to public charging should be re-filed as a make-ready program.

8. DEC and DEP should be required to file proposed EV-specific rate tariffs in their ongoing general rate cases.

9. DEC and DEP should be required to propose demand-side management programs for EV charging.

10. The rebates proposed in the ET Pilot for residential EV charging, fleet EV charging, and EV transit bus charging are appropriate and should be approved with modifications.

11. The EV school bus charging program is appropriate and should be approved with modifications.

## EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NOS. 1-3

The evidence for this finding is found in Chapter 62 of the General Statutes, Session Law 2019-132<sup>1</sup> (“HB329”), Executive Order 80<sup>2</sup>, the ZEV Plan<sup>3</sup>, and the filings in these dockets.

### DISCUSSION AND CONCLUSIONS

The parties to this proceeding all agree that it is the policy of the State of North Carolina to encourage the adoption of electric vehicles (“EVs”). There is no dispute among the parties that policies to encourage the adoption of EVs are supported by Executive Order 80<sup>4</sup> and the associated North Carolina ZEV Plan (“ZEV Plan”).<sup>5</sup>

It is also clear that HB329 was designed to encourage competition in the market for EV charging. Prior to the adoption of HB329, it would have been illegal for an EV charging company to sell electricity at retail for EV charging. The adoption of HB329 created new business opportunities for EV charging businesses by allowing them to resell electricity on a per-kWh basis. By creating new markets for innovative business models, the General Assembly signaled its intent to increase competition in the EV charging market.

Finally, Chapter 62 of the General Statutes neither requires nor prohibits Duke’s participation in the EV charging market. HB329, in adopting N.C. Gen. Stat. § 62-3(23)n, stated that “Nothing in this sub-subdivision shall be construed to limit the ability of an electric power supplier to use electric vehicle charging stations to furnish electricity for

<sup>1</sup> Renewable Energy Amendments, N.C. House Bill 329, Session Law 2019-132 (2019-2020 Session).

<sup>2</sup> N.C. Exec. Order No. 80 (October 29, 2018), <https://files.nc.gov/governor/documents/files/EO80-%20NC%27s%20Commitment%20to%20Address%20Climate%20Change%20%26%20Transition%20to%20a%20Clean%20Energy%20Economy.pdf>.

<sup>3</sup> Department of Transportation. *North Carolina ZEV Plan: A Strategic Plan for Accelerating Electric Vehicle Adoption in North Carolina*, (October 1, 2019), <https://www.ncdot.gov/initiatives-policies/environmental/climate-change/Documents/nc-zev-plan.pdf>

<sup>4</sup> Application, Exhibit A.

<sup>5</sup> Amended Reply Comments of the Sierra Club, Exhibit A.

charging electric vehicles.” However, nothing in Chapter 62 requires DEC and DEP to offer EV charging to their ratepayers.

#### **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 4**

The evidence for this finding is found in the Application, the initial comments of EDF, NCJC/SACE, NCSEA, the Public Staff, and the Sierra Club, the reply comments of Duke and NCJC/SACE, and the Transcript.

#### DISCUSSION AND CONCLUSIONS

Many of the parties to these dockets noted the need for Duke’s ET Pilot Program to include specific metrics for success to allow the Commission, Duke, and stakeholders transparent guidelines to determine whether the pilot program accomplished its goal. The Commission agrees with the Public Staff’s assertion that “value of a pilot project is to allow a utility to test a concept at a smaller scale without incurring significant costs that ultimately would be borne by customers.”<sup>6</sup> Importantly, the Public Staff also specified that a “pilot must have clearly defined objectives and goals that would define success and justify a broader, permanent program.”<sup>7</sup>

In fact, as noted by the Public Staff, NCSEA, Sierra Club, EDF, and NCJC/SACE in their respective comments, Duke has failed to properly include objectives, metrics, goals, or other means of evaluating whether the ET Pilot program is successful. NCJC/SACE requested that the Commission require reports on the pilot program, including sufficient detail and measurable metrics so “that the Commission and the public may meaningfully assess the program’s progress towards its goals and identify any issues

<sup>6</sup> *Public Staff Initial Comments*, p. 13.

<sup>7</sup> *Id.*

that need resolution.”<sup>8</sup> The Commission agrees that it would be appropriate for Duke to file reports on any pilot program, with sufficiently detailed metrics for success, so as to allow for review and scrutiny as needed.

NCJC/SACE further stated that the final report should also include additional more holistic information to help the Commission evaluate the success of the ET Pilot and decide on what changes to make for future EV programs. Additional components might include: 1) comparison of energy use at homes with EVs not participating in the program and participants; 2) comprehensive report of the cost, emissions, and other impacts of demand management; and 3) a report on the program’s impact on air quality in previously identified disproportionately burdened areas.<sup>9</sup> NCJC/SACE, in particular, note the need to consider both low and moderate income areas as well as environmental equity and justice when considering metrics for success for a program of this nature, but Duke has not offered those tenets for success. Sierra Club also proposes “any future filing, whether a full-scale filing or a separate pilot, includes additional solutions directed at improving access to clean transportation options for low and moderate-income communities.”<sup>10</sup> It has been well-established in these dockets the need to consider low and moderate-income communities when utilizing pilot programs to reflect complete North Carolina community trends. Duke has not included such metrics or evaluations sufficiently in their Application and supporting testimony and filings. The Commission agrees that there is a better approach to an ET Pilot Program than what Duke has proposed. The Commission, therefore, finds that any established metrics defining success must consider the effects of the ET Pilot Program

<sup>8</sup> *NCJC and SACE Initial Comments*, p. 14.

<sup>9</sup> *Id.*

<sup>10</sup> *Sierra Club Initial Comments*, p. 17.

on low and moderate-income communities as well as consider tenets of environmental justice that go hand-in-hand with those communities.

Sierra Club notes that Duke has proposed annual reporting for the three-year proposed Pilot and argues this is not sufficiently often enough to evaluate and review the ongoing ET Pilot.<sup>11</sup> The Commission agrees. A pilot program of this length, to be successful, should include quarterly reporting with all reports and underlying data made publicly available. Also, as EDF notes, pre-pilot and post-pilot surveys are an important for gathering information from consumers in the program to determine whether the metrics for success established were established and accomplished and whether those metrics established are appropriate.<sup>12</sup>

The Commission also agrees with the Sierra Club and EDF that a stakeholder process is necessary to determine metrics of success, as well. In particular, EDF notes that a stakeholder process should be utilized for comprehensive planning, including state officials, stakeholders, utilities to determine how to remove barriers to a robust deployment of EV charging services.<sup>13</sup> The Commission agrees with this recommendation and that such stakeholder processes could also determine markets for ancillary services markets for EV owners, rate designs (as set forth more fully herein), and a discussion broadly about the effects of EV charging loads over the course of EV adoption.<sup>14</sup> Such a stakeholder process would allow for the setup of appropriate metrics for success.

NCSEA likewise had concerns regarding how the pilot program proposed by Duke would be measured in terms of success. Notably, NCSEA had concerns regarding whether

<sup>11</sup> *Sierra Club Initial Comments*, p. 5.

<sup>12</sup> *EDF Initial Comments*, p. 16.

<sup>13</sup> *Id.* at 17.

<sup>14</sup> *Id.*



Duke would utilize its grid knowledge to intelligently site charging infrastructure while also considering underserved communities to allow charger access.<sup>15</sup> NCSEA further notes that Duke should corroborate with its integrated distribution planning groups to have a fully-formed, optimally-determined charging infrastructure.<sup>16</sup> NCSEA cautions that the Application focuses too heavily on DC fast charging (“DCFC”) instead of Level 2 charging. NCSEA notes that DCFC does not allow easily for demand-side management and produces extremely high demand pockets, while Level 2 Charging is much more manageable in both those regards and could create less need for further peaker plants.<sup>17</sup> NCSEA notes that plug-in hybrid vehicles (“PHEV”) are not properly addressed by Duke in its Application as it fails to differentiate the PHEV needs with regard to gasoline versus electric.<sup>18</sup> The Duke Application overstates PHEV electric needs, and, accordingly, skews the outlines for the pilot program towards larger charger rollout. In a carefully considered pilot program, the number of chargers should be carefully tailored to the needs projected and the metrics established related may include whether the infrastructure buildout is sufficient compared to the model.

NCSEA also notes that in response to a data request for all metrics and scoring criteria that will be used for the siting of Duke-owned chargers, Duke responded that:

Key components of the scoring criteria will include (i) Multi-family 24/7 publicly accessible locations near multi-family dwellings (.25 mile radius), (ii) Public L2 24/7 publicly accessible locations at destinations where vehicle dwell-times are estimated to be 2 or more hours, (iii) Public Fast Charging 24/7 publicly accessible corridor locations where fast charging infrastructure gaps currently exist (50 mile radius) per DOE Alternative Fuel Database Center mapping.<sup>19</sup>

<sup>15</sup> *NCSEA Initial Comments*, pp. 6-7.

<sup>16</sup> *Id.* at 7.

<sup>17</sup> *Id.* at 8.

<sup>18</sup> *Id.*

<sup>19</sup> *NCSEA Initial Comments*, p. 10.

NCSEA does not believe these limited scoring metrics are sufficient for a pilot program of this scope and it does not serve to ensure that “all ratepayers, and specifically underserved communities, have access to any Duke-owned EV charging infrastructure.”<sup>20</sup> NCSEA notes, like other parties, that a stakeholder process should be utilized “to develop scoring criteria and file such scoring criteria with the Commission.”<sup>21</sup> NCSEA similarly notes that the EV School Bus Charging Program and the EV Transit Bus Charging Station Program proposals do not contain adequate metrics for success, including a lack of geographic diversity criterion to allow for a diverse set of North Carolinians to benefit, and that such metrics can be captured through stakeholder involvement.<sup>22</sup>

Both NCSEA and NCJC/SACE note that the “first-come, first-served” component of several of the rebate programs are problematic. Specifically, NCSEA notes that this method may result in wealthier communities taking more advantage of the program over less wealthy communities.<sup>23</sup> Similarly, NCJC/SACE note that distributing the ET Pilot Rebates on a first-come, first served basis is not appropriate for any of the underlying components, including the residential, fleet, and bus programs.<sup>24</sup> NCJC/SACE argues that Duke should be required by the Commission to show that it has “attempted to equitably allocate the benefits of the ET Pilot”, such as through a set-aside percentage allocation towards low and moderate income customers and communities.<sup>25</sup> Such a set-aside could be included in a parameter discussion to establish metrics for success. Furthermore, as noted by NCJC/SACE, air pollution disproportionately affects certain low and moderate

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.* at 14-15.

<sup>23</sup> *Id.* at 14.

<sup>24</sup> *NCJC/SACE Reply Comments*, p. 6.

<sup>25</sup> *NCJC/SACE Reply Comments*, p. 6.

income communities, and the pilot program could target such communities to be included in the plan.<sup>26</sup> Similarly, certain communities do not have sufficient bus or public transit, and this program could be utilized to target such areas.<sup>27</sup>

In its Reply Comments, Duke contends, in response to the Public Staff's assertions that no metrics for success have been set forth in Duke's Application, that the establishment of the ET Pilot is necessary to gather data in order to determine the structure of future permanent ET programs.<sup>28</sup> Noted particularly, Duke states that it has pledged to report annual reports featuring operational data and results "concurrent with a stakeholder working group to determine the design of permanent future ET programs."<sup>29</sup> Duke further claims that the "ET Pilot is paramount to gathering the operational data needed to quantify the specific costs and benefits attributable to each program and to assign these costs and benefits to the appropriate parties."<sup>30</sup> Duke Witness Lang Reynolds ("Witness Reynolds") reiterated these objectives during the hearing on this matter and further stating that this is an "emerging market" and that more data and utility investment is needed "to support advanced market growth."<sup>31</sup> Witness Reynolds spoke specifically to the need for specific metrics of success, stating that Duke is "more than willing to identify specific metrics for each of the programs. And really in terms of success we're looking to identify the costs and benefits of these different segments."<sup>32</sup> Witness Reynolds went on to detail that the program cannot be homogenous and that the determination of metrics of success will revolve around the accumulation of data related to underlying costs and benefits for a

<sup>26</sup> *Id.* at 8.

<sup>27</sup> *Id.* at 8-9.

<sup>28</sup> *Duke Reply Comments*, pp. 7-8.

<sup>29</sup> *Id.* at 7.

<sup>30</sup> *Id.* at 8.

<sup>31</sup> Tr pp. 13-14.

<sup>32</sup> Tr p. 18.

number of categories within the program.<sup>33</sup>

The Commission does not find Duke's arguments regarding metrics of success to be persuasive. Without specific metrics of success, the purpose of a pilot program is lost. The Application does not contain sufficient metrics of success and subsequent filings and testimony do not either. The limited outline provided to the Commission during the evidentiary hearing and to NCSEA in response to its data request is insufficient. It is certainly understandable that data needs to be accumulated in order to delineate how to focus future iterations of EV programs, but that does not relieve Duke of its need to display a program with tailored benchmarks to allow for the parties reviewing in the future to determine whether program accomplished those benchmarks. Furthermore, Duke seems to be outlining the expansion of an already expansive pilot program, which if accepted, as noted further herein, would already make Duke the largest owner of electric vehicle infrastructure in North Carolina. While the Commission understands the exploratory nature inherent to a pilot program, there must be benchmarks set forth to determine how the pilot program is set up and what needs to be accomplished for the program to be considered successful and, therefore, lead to further, similar programs or program expansion.

The Commission finds the arguments of the Public Staff, NCSEA, EDF, Sierra Club, and NCJC/SACE persuasive. In particular, the Commission finds that Duke has failed to establish necessary metrics for success for its pilot program, including failing to provide metrics for success for all consumers, involving stakeholders to determine what success looks like to different groups, and how often those metrics and the underlying data should be compared in the form of reporting and surveys. A stakeholder process is

<sup>33</sup> Tr pp. 18-19.

necessary to determine what success looks like for a Duke ET Pilot.

#### **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 5**

The evidence for this finding is found in the Application, the initial comments of NCSEA, the Public Staff, the reply comments of Duke, and the transcript.

#### **DISCUSSION AND CONCLUSIONS**

Duke’s proscribed capital investment plan is too large, and, as set forth more fully below, the Commission recommends a “make-ready” program which won’t cause so many ratepayer costs. However, as stated by the Public Staff, the currently proposed ET Pilot is “a request for preapproval of infrastructure spending and not a proof-of-concept pilot program.”<sup>34</sup> The Public Staff also astutely observed that ET Pilot programs in other states, including Duke’s past programs in North and South Carolina, should be reviewed for data to inform and tailor the ET Pilot program proposed here. “While the Public Staff recognizes that EV and EVSE technology is changing, that does not mean that the lessons learned from [a prior] pilot are irrelevant or bear repeating in another, much more expensive pilot.”<sup>35</sup>

This enlarged scope is particularly notable when examining the market size considerations for DCFC. As noted by NCSEA, Duke’s assertions that the Pilots would be “installing a foundational level of DC fast charging stations in North Carolina,” and that “The number of chargers installed under the Pilots is a fraction of the anticipated need for charging infrastructure in light of the goals of EO80, leaving ample room for third-party investment[,]” are simply unsupported by the evidence.<sup>36</sup> Duke also provides conflicting

<sup>34</sup> *Public Staff Initial Comments*, p. 19.

<sup>35</sup> *Id.* at 9.

<sup>36</sup> *NCSEA Initial Comments*, p. 2.

information about the size of the DCFC market. In its Application, Duke says that nearly 300 DCFC plugs are necessary to support 80,000 EVs<sup>37</sup>, however, Duke thereafter provided conflicting information, telling NCSEA that 455 plugs<sup>38</sup> are necessary, telling the Public Staff that 455 *stations*<sup>39</sup> are necessary, and telling the Commission at the hearing that “455 chargers will be needed.”<sup>40</sup> Furthermore, as NCSEA noted, Duke projects only 20% of EV drivers will not have access to home charging in establishing market size for public need for DCFC. As NCSEA notes, without evidence, this assumption is unreasonable, especially given that Duke is also proposing deployment of a larger Level 2 Charger deployment in the Application for multi-family residences, a type of residence assumedly which is typically underserved in terms of at-home charging.

Finally, with regard to market size, Duke inexplicably does not include Tesla charging stations in its examination of the size of the DCFC market.<sup>41</sup> As noted by NCSEA, in 2018, Tesla sold more EVs than all other EV manufacturers combined (191,627 Tesla EVs sold to 169,680 other EVs) and that trend has continued through May 2019 (58,175 Tesla EVs sold compared to 52,711 other EVs).<sup>42</sup> Accordingly, when measuring EV adoption including Tesla, but not accounting for the Tesla charger network in calculating market size, Duke has made a fatal error. Duke did not address Tesla in their Reply Comments, but during the evidentiary hearing, Duke Witness Reynolds stated:

So Tesla chargers only work with Tesla cars and so the fact that they don't serve the mass market -- you know, if we're going to get to 80,000 EVs by 2025, we have to have mass market participation from other auto makers

<sup>37</sup> *Application*, p. 14.

<sup>38</sup> *NCSEA Initial Comments*, p. 2.

<sup>39</sup> *NCSEA Initial Comments*, p. 2. NCSEA further notes that the EVI-Pro Lite tool utilizes 2.9 charging plugs per station, which, with 455 *stations* would mean 1,320 plugs as opposed to the 300 plus highlighted in EO80 or even the 455 plugs Duke outlined in its discovery response to NCSEA.

<sup>40</sup> Tr p. 71, l. 17.

<sup>41</sup> *Application*, fn. 8.

<sup>42</sup> *NCSEA Initial Comments*, p. 5.

and those cars will not be going to Tesla chargers. So, you know, what percentage Tesla will make up in the market is kind of an unknown, but we think that in the long run this has to be a mass market, you know, mass market has to be successful for EVs. So we excluded them because they don't serve the mass market.<sup>43</sup>

Witness Reynolds's answer does not answer the fundamental underlying question – why did Duke exclude the Tesla charging network, which is the charging network for by-far the largest EV car company in the state, when evaluating market size for DCFC? It seems pertinent to include the market leader assets, who has helped to establish the EV market in the entire country, in an evaluation of charging needs for the state.

The Commission also has some concerns about the marketing and education budget outlined by Duke. As noted by NCSEA, Duke plans to spend \$3,375,000 on education and outreach to implement the Pilot and such a high spend is concerning given past program failures in customer acquisition (such as the DEP Time of Use (“TOU”) and DEC TOU programs).<sup>44</sup> During the evidentiary hearing, Duke Witness Reynolds indicated that Duke planned to use existing and future partnerships and also utilize “digital marketing as well as print marketing and other physical marketing towards our customers.”<sup>45</sup> Further, Duke Witness Reynolds indicate that Duke would utilize partnerships with organizations such as auto dealerships, Plug-In NC and Advanced Energy, and other partners that Duke generally works with, but he could not provide sufficient details. The Commission is concerned about this sort of budget for a marketing and education outreach without a well-designed plan for customer engagement. The Commission does think partnerships with well-established North Carolina organizations with an interest in this matter, such as North Carolina Clean

<sup>43</sup> Tr p. 72, ll. 3-13.

<sup>44</sup> *NCSEA Initial Comments*, p. 15.

<sup>45</sup> Tr p. 11, ll. 19-21.

Energy Technology Center or Plug-In NC, would be particularly lucrative with regard to customer engagement and would encourage that here.

The Commission finds that the Application and subsequent filings and testimony do not appropriately tailor Duke's EV programs. The Commission further finds that Duke's marketing and education plan is not thoroughly explained in the Application and in Duke's subsequent filings and testimony. To the limited extent this Pilot program is allowed, in part, Duke needs to provide to the Commission a filing which outlines the marketing plan, including budgetary considerations, for the ET Pilot Program.

#### **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 6**

The evidence for this finding is found in the Application and NCSEA's Initial Comments.

#### **DISCUSSION AND CONCLUSIONS**

N.C. Gen. Stat. § 62-3(24) defines "rate" as "every compensation, charge, fare, tariff, schedule, toll, rental and classification, or any of them, demanded, observed, charged or collected by any public utility, for any service product or commodity offered by it to the public, and any rules, regulations, practices or contracts affecting any such compensation, charge, fare, tariff, schedule, toll, rental or classification." It is undisputed that DEC and DEP are "public utilities" within the context of N.C. Gen. Stat. § 62-3(24). The Fast Charge Fee, as proposed in the Application, is a rate because it is a ". . . charge . . . charged or collected by any public utility, for any service product or commodity offered by it to the public[.]"

This Commission has previously written that:

North Carolina statutes and case law contain explicit limits as to the procedures through which the Commission may revise the rates of a public



utility. They are as follows: (1) a general rate case pursuant to G.S. 62-133; (2) a proceeding pursuant to a specific, limited statute, such as G.S. 62-133.2; (3) a complaint proceeding pursuant to G.S. 62-136(a) and G.S. 62-137; or (4) a rulemaking proceeding.<sup>46</sup>

The proceeding currently before the Commission does not fall within any of these four categories. Therefore, the proposed Fast Charge Fee, as set forth in the Application, is impermissible as single-issue ratemaking.

Finally, the Commission notes that House Bill 329 does not exempt Duke from the requirements of N.C. Gen. Stat. § 62-133 for electricity sold for EV charging. N.C. Gen. Stat. § 62-3(23)n states that “Nothing in this sub-subdivision shall be construed to limit the ability of an electric power supplier to use electric vehicle charging stations to furnish electricity for charging electric vehicles.” The Commission acknowledges that Duke is legally permitted, under N.C. Gen. Stat. § 62-3(23)n, to sell electricity for the purpose of EV charging. However, N.C. Gen. Stat. § 62-3(23)n does not relieve Duke of its obligations under N.C. Gen. Stat. § 62-133.

The Commission further notes that N.C. Gen. Stat. § 62-3(23)n is more generally applicable to persons who *resell* electricity to the public, for compensation for the purpose of EV charging. In its Application, Duke is not proposing to *resell* electricity for EV charging; rather, Duke is both generating and selling the electricity, and therefore is still considered a public utility even after the adoption of N.C. Gen. Stat. § 62-3(23)n.

At no point in this proceeding did Duke attempt to or rebut the contention that the Fast Charge Fee is a rate, as defined in N.C. Gen. Stat. § 62-3(24), and the adoption of N.C. Gen. Stat. § 62-3(23)n does not relieve Duke of its obligation to propose new rates in a

<sup>46</sup> *Order Denying Request to Implement Rate Rider and Scheduling Hearing to Consider Request for Creation of Regulatory Asset Account*, fn. 2, Docket No. E-7, Sub 849 (June 2, 2008) (internal citations omitted).

general rate case pursuant to N.C. Gen. Stat. § 62-133. Therefore, the Commission finds that adopting the Fast Charge Fee in the instant proceeding would constitute impermissible single-issue ratemaking, and the Fast Charge Fee must be rejected.

#### **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 7**

The evidence for this finding is found in the initial comments of ChargePoint, NCSEA, and the Public Staff, the reply comments of ChargePoint and Duke, and the Transcript.

#### **DISCUSSION AND CONCLUSIONS**

In its reply comments, Duke stated that “the concerns and opposition expressed by NCSEA and NCCEBA are understandable because their membership includes potential market entrants who believe, incorrectly so, that their businesses will be helped by excluding or limiting Duke Energy’s participation in this developing market.”<sup>47</sup> This statement by Duke underscores the tension in this proceeding. In most aspects of their business, DEC and DEP are regulated monopolies. However, DEC and DEP are granted no such monopoly over EV charging. Thus, for EV charging, they would be a market participant in a competitive market. This is inherently different from their core business model. To allow DEC and DEP to recover costs for EV charging would be to give them an inherent market advantage over other participants who do not share that luxury. Thus, the Commission must carefully consider the extent to which DEC and DEP should be allowed to participate in the retail sale of electricity for EV charging.

During the hearing on this matter, Commissioners Clodfelter and Brown-Bland both questioned why the EV charging element of this pilot program was being offered

<sup>47</sup> *Duke Reply Comments*, p. 6.

through the regulated utility instead of through an unregulated subsidiary<sup>48</sup>. In response, both Duke Witness Laura Bateman (“Witness Bateman”) and Witness Reynolds explained that they didn’t believe that current usage levels or traffic at EV stations, particularly DC fast charge stations, was enough to attract the participation of unregulated competitive providers at levels sufficient to meet state goals.<sup>49</sup> While the Commission does not affirm or deny the assertion that current usage levels aren’t enough to attract the participation of competitive providers at levels needed to meet state goals, it remains unconvinced that Duke’s proposal to offer EV charging through the regulated utility is the appropriate or best response to meeting state goals.

The Commission agrees with assertions by NCSEA, NCCEBA, and ChargePoint that the public charging station programs included in this pilot would significantly distort the emerging market for EV charging services.<sup>50</sup> The Commission agrees with the statement by ChargePoint that, “Unnecessarily expansive pilots may effectively predetermine long-term market outcomes, capture prime locations for charging infrastructure, and slow the broader entrance of potential or actual competitive market participants.”<sup>51</sup> Further, the Commission shares concern of the Public Staff that they are, “unable to identify any unique learning opportunities arising out of the construction of over 400 public charging stations across the State, especially given the cost.”<sup>52</sup>

Duke’s own filings also call into question the extent to which the Commission should allow their regulated entities to participate in the EV charging market. In its reply

<sup>48</sup> Tr pp. 49-50, 62-64.

<sup>49</sup> Tr pp. 49-50, 62-64.

<sup>50</sup> *ChargePoint Initial Comments*, pp. 10-17; *NCSEA Initial Comments*, pp. 7-8; *NCCEBA Revised Initial Comments*, pp. 4-6.

<sup>51</sup> *ChargePoint Initial Comments*, p. 11.

<sup>52</sup> *Public Staff Initial Comments*, p. 11.

comments, Duke offers to remove the Multi-Family Charging Stations and Public L2 charging stations from the ET Pilot, stating that “the Companies are open to leaving the Level 2 market to develop without utility investment in the near term.”<sup>53</sup> However, the Commission is concerned with Duke’s proposed compromise, given that the evidence suggests that, due to the possibility of managed Level 2 charging, utility investment would be better placed in Level 2 than DCFC.<sup>54</sup> Duke provides no support or discussion for why they chose to remove Level 2 charging from their pilot and not DCFC.

In order to address the concerns about a regulated utility distorting an emerging competitive market in such a substantial way and concerns about the specific types and amounts of chargers that Duke has chosen to deploy, the Commission directs Duke to refile the public charging components of the pilot as a “make-ready” program and update the estimated costs for such a program. As described by both NCSEA and ChargePoint, a “make-ready” program directs the utility to install and maintain the charging hardware and supporting electrical infrastructure on the distribution side as well as the customer side of the meter up to the connection point.<sup>55</sup> Such a program would be consistent with Duke’s line extension policies that have been approved by the Commission.<sup>56</sup> Allowing Duke to rate base EV charging stations would distort the competitive market for EV charging services, and reduce the likelihood of rapid technological and business model innovation.<sup>57</sup> Therefore, the Commission directs Duke to remove the public charging station components of this pilot program and instead refile them as a “make-ready” program within 90 days of

<sup>53</sup> *Duke Reply Comments*, p. 10.

<sup>54</sup> *NCSEA Initial Comments*, pp. 8-9.

<sup>55</sup> *ChargePoint Initial Comments*, pp. 6-7; *NCSEA Initial Comments*, p. 12.

<sup>56</sup> *NCSEA’s Initial Comments*, p. 12.

<sup>57</sup> *Id.* at 12.

this Order.

#### **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NOS. 8-9**

The evidence for this finding is found in the Application, the initial comments of EDF, NCJC/SACE, the Public Staff, and NCSEA, the reply comments of NCJC/SACE, and the transcript.

#### DISCUSSION AND CONCLUSIONS

The Application does not propose to implement any EV-specific rate designs. However, EV-specific rate designs can encourage EV owners to charge their vehicles at times that are beneficial to the grid, helping to mitigate increases in peak demand. As noted by the Public Staff, “As a pilot project, the Public Staff would expect to see the Companies piloting various rate designs to evaluate the extent to which various rate designs impact customer usage and promote, or inhibit, managed charging.”<sup>58</sup> The Public Staff further noted: “As 80% of residential EV owners charge at night, any pilot project should explore the vast array of mechanisms to determine what drives, and does not drive, customer behavior.”<sup>59</sup> The Commission agrees and is disappointed that Duke has did not file pilot EV rate designs in its Application.

Duke should develop target rates that seek to conform participating customers’ actual load profiles to target load profiles that minimize the overall cost to serve and minimize pollution from electric generation to the greatest degree practicable. Such target rates should include at least one control group along with one EV-specific time-varying group. Further, Duke should propose more rates for actively-managed EV customer accounts and also account for low and moderate income communities and consumers when

<sup>58</sup> *Public Staff Initial Comments*, p. 10.

<sup>59</sup> *Public Staff Initial Comments*, p. 10.

drafting rate designs specific to EV adoption needs. While the Application “seeks to establish the extent to which utility-managed charging can shape charging behavior and the value of doing so[,]” the Application’s proposal for demand-side management for EV charging, or managed charging, is modest in scope.<sup>60</sup> Managed charging of residential participants would only occur in the second and third years of the Pilot.<sup>61</sup> Similarly, EV school buses would be used for load management and bi-directional charging capabilities,<sup>62</sup> but the other programs proposed in the Application would not include managed charging. This is insufficient.

The Commission has also not found persuasive Duke’s argument regarding demand charges. Witness Bateman stated during the hearing:

I think in order to get the most benefit out of electric vehicles in terms of a utility system perspective, we want to encourage off-peak charging. And so if you look at time-of-use, the ones where we require the customers to be on a time-of-use demand rate, if you look at the differential between the on-peak and off-peak demand rates, to the extent there are any demand rates off-peak, they're very, very low.<sup>63</sup>

Witness Bateman’s assertions here assume that volumetric rate design will not properly incentivize off-peak charging. However, the Commission disagrees that a pricy demand charge will properly incentivize off-peak charging while also encouraging electric vehicle adoption. Therefore, the Commission disagrees with Witness Bateman’s inference that rate designs specific to EVs should include demand charges.

Since filing the Application, both DEC and DEP have filed general rate cases with the Commission. *See*, Docket Nos. E-2, Sub 1219 and E-7, Sub 1214. As such, the

<sup>60</sup> *Application*, p. 7.

<sup>61</sup> *Id.* at 9-10.

<sup>62</sup> *Id.* at 11.

<sup>63</sup> Tr p. 73, ll. 14-22.

opportunity is ripe for DEC and DEP to develop EV-specific rate designs. However, given the fact that both DEC and DEP are currently in the midst of general rate cases, those would be a preferable venue for discussing EV-specific rates. Accordingly, the Commission will direct DEC and DEP to file EV-specific rates for both residential and non-residential customers in their respective ongoing general rate cases. Furthermore, the Commission is interested in NCJC/SACE's proposal related to a tariffed on-bill investment program.<sup>64</sup> The Commission further directs Duke to develop and propose a tariffed on-bill investment program to address the concerns laid out by NCJC/SACE (and consistent with the outlined approaches there) in concert with their rate design proposals in the Duke rate cases.

#### **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NOS. 10-11**

The evidence for this finding is found in the Application, the initial comments of NCJC/SACE and NCSEA, Duke's reply comments, and the transcript.

#### **DISCUSSION AND CONCLUSIONS**

The rebates proposed in Duke's Application represent sensible incentives for the different rate classes. However, the Residential EV Charging Program Rebate is too high and does not match the probable demand or what other rebate amounts tend towards. According to Duke's own estimates, the rebate could cover the entire cost of a home charger.<sup>65</sup> Other rebates offered by Duke generally do not cover the entire cost of a measure, such as the installation of energy efficiency upgrades or rooftop solar. Duke indicated in its reply comments that Duke was willing to lower the residential amount with the caveat to reexamine the issue later if necessary.<sup>66</sup> Therefore, the Commission directs

<sup>64</sup> *NCJC/SACE Initial Comments*, pp. 26-27.

<sup>65</sup> *NCSEA Initial Comments*, p. 13.

<sup>66</sup> *Duke Reply Comments*, p. 11; Tr. pp. 21-22.

the rebate for the Residential EV Charging Program should be lowered from \$1,000 to \$500, which we think would more closely tailor the rebate amount appropriate for the Residential EV Charging Program. This would also match the incentive levels used elsewhere. In addition, lowering the rebate amount to \$500 would allow participation to double from 500 residential customers in DEC and 300 residential customers in DEP<sup>67</sup> to 1,000 and 600 respectively for the same amount of cost, providing further managed charging benefits to the grid and Duke's ratepayers. As Duke noted in their Application, "the EV market in North Carolina has increased significantly, with a compound annual growth rate of 39% since 2011."<sup>68</sup> The demand has clearly been established, so increasing the rebate award numbers while decreasing rebate monetary amounts for residential EV customers is a logical step towards a successful pilot rebate program.

Duke has adequately stated their case for a Fleet EV Charging Program Rebate. The Commission agrees that "there is potential for significant operational (fuel and maintenance) cost savings to operators of EV fleet vehicles, as well as emissions reductions and electric system benefits from the adoption of EV fleets."<sup>69</sup> However, like the Residential EV numbers, the Commission is not certain that the proposed amount of Fleet EV rebates is sufficient to fill demand. Duke claims that they have relied on their own understanding of charger installation costs and industry studies in determining a rebate amount<sup>70</sup>, but this is not sufficiently detailed or understood to be the basis for the rebate. The Commission agrees with NCJC/SACE that Duke has not adequately stated where the amount of the rebates was surmised and that other rebates similar to this around the country

<sup>67</sup> *Application*, p. 9.

<sup>68</sup> *Application*, p. 2.

<sup>69</sup> *Application*, p. 10.

<sup>70</sup> Tr p. 60.



have been for lower amounts.<sup>71</sup> Accordingly, the Commission directs Duke to work with stakeholders during the above-described metrics process to determine an applicable monetary amount to be used for commercial and industrial fleet rebates without reducing the investment promised in this area. The Commission does not approve of the first-come, first-served nature of the rebates and instructs Duke to work with the above-outlined stakeholder group in determining the best method for rebate allocation, including outlining the related metrics for success regarding equitable distribution of these benefits.

The Rebate allocations in the Program Costs are outlined in the *Application*: \$1.175 million for DEC Residential, \$705,000.00 for DEP Residential, respectively; and \$1.925 million for DEC Commercial and Industrial fleet customers, and \$1.54 million for DEP Commercial and Industrial fleet customers, respectively<sup>72</sup>. The Commission finds these program costs appropriate as a means to enable the rebate program to incent the adoption of electric vehicles in North Carolina.

IT IS, THEREFORE, ORDERED as follows:

1. The residential EV charging rebate proposal, the fleet EV charging rebate proposal, the EV school bus charging rebate proposal, and the EV transit bus charging proposal, as modified above and subject to stakeholder feedback as outlined, are approved.
2. The public charging programs proposed in the *Application* are rejected.
3. DEC and DEP shall propose a make-ready program consistent with the recommendations made herein for public EV charging within 90 days of the issuance of this order. Parties may file comments within 14 days of Duke's make-ready program filings, and parties may file reply comments within 14 days of the filing of initial

<sup>71</sup> *NCJC/SACE Initial Comments*, pp. 9-10.

<sup>72</sup> *Application*, p. 17.

comments.

4. DEC and DEP shall each propose EV-specific rates for both residential and non-residential customers in their respective ongoing general rate cases within 30 days.

5. DEC and DEP shall both propose EV-specific demand-side management programs for both residential and non-residential customers within 90 days.

6. Duke shall coordinate a stakeholder process to evaluate and determine metrics of success for an ET Pilot, consistent with the concerns and directives shown herein, to begin within 30 days of the issuance of this order and to be done in concert and complimentary to the make-ready program outlined in ordering paragraph 3.

ISSUED BY ORDER OF THE COMMISSION.

This the \_\_\_ day of \_\_\_\_\_, 2020.

NORTH CAROLINA UTILITIES COMMISSION

Kimberly A. Campbell, Chief Clerk