

BY THE COMMISSION: On July 14, 2017, Duke Energy Progress, LLC (DEP), filed an application and the direct testimony and exhibits of James Umbdenstock and Timothy J. Same, pursuant to G.S. 62-100 et seq. and Commission Rules R1-5 and R8-62, for a certificate of environmental compatibility and public convenience and necessity (CPCN) authorizing the construction of a new 11.5-mile, 230-kilovolt (kV) transmission line near the Cleveland-Matthews area of Johnston County, North Carolina (Proposed Route or Route 31).

On July 18, 2017, the Commission issued an Order Scheduling Hearings, Requiring Filing of Testimony, Establishing Discovery Guidelines and Requiring Public Notice.

On July 24, 2017, DEP filed a Revised Routing Study and Environmental Report (Report or Study).

On September 25, 2017, based upon concerns expressed in consumer statements of position, the Commission ordered DEP to provide additional information about the proposed transmission line and substation. On October 9, 2017, DEP filed verified responses to the Commission's September 25, 2017 Order Requiring Duke Energy Progress, LLC, to Provide Additional Information.

On or before October 24, 2017, the Public Staff - North Carolina Utilities Commission (Public Staff) forwarded consumer statements of position for filing with the Commission. On October 16, 2017, the Public Staff filed a letter recommending that the Commission grant DEP's application on the conditions that: (1) DEP be required to disclose any proposed shift in the centerline of the proposed route and, if such a shift occurs, that the Commission should address whether notice and hearing requirements should be provided to affected landowners; and (2) that the Commission, prior to DEP beginning construction of the line, first receive a letter from the State Environmental Review Clearinghouse stating that no further review action by the Commission is required for compliance with the North Carolina Environmental Policy Act.

On October 23, 2017, Oliver L. Canaday filed a petition to intervene, and requested that the Commission issue a cease and desist order in this proceeding, on the grounds of Mr. Canaday's allegations of fraud against DEP. The Commission granted Mr. Canaday's petition to intervene on October 25, 2017. No other parties petitioned to intervene in this proceeding.

Thirty affected residents or landowners provided statements in opposition to DEP's application, with some of those individuals filing multiple such statements, including Mr. Canaday.

On October 25, 2017, DEP filed rebuttal testimony of witnesses Same and Umbdenstock to respond to the allegations contained in Mr. Canaday's petition to intervene.

On October 30, 2017, a public hearing was held in Smithfield, North Carolina, at which eighteen witnesses testified: Tracy Adams, Jeffrey Canady, Kimberly Canady, Tim

Duke, Carl Holloway, Sam Holloway, Casey Johnson, Lou Ann Johnson, Randy Johnson, Linda Lassiter Keen, Marty Lassiter, Billy Price, Dana Adams Reeves, Alan Roberts, Gwyn Roberts, Ronnie Stewart, John Webster, and Danny Wood.

On October 31, 2017, an evidentiary hearing was held in Raleigh, North Carolina. During this hearing, DEP presented direct testimony, exhibits, and rebuttal testimony. The Public Staff did not present evidence, and Mr. Canaday presented his own testimony and exhibits in opposition to DEP's application.

On November 8, 2017, the State Environmental Review Clearinghouse filed a letter requesting that DEP provide supplemental documentation and information requested by the Department of Natural and Cultural Resources, including the results of an archaeological survey to be conducted by an experienced archaeologist.

On November 13, 2017, the Commission ordered DEP to provide updated information regarding the status of DEP's then-ongoing discussions with affected landowners regarding the landowners' concerns about the Proposed Route.

On November 13, 2017, DEP submitted Late-Filed Exhibit 1 containing an analysis of the feasibility of a new 230-kV transmission line parallel to DEP's existing 500-kV transmission line. Also on November 13, 2017, DEP submitted Late-Filed Exhibit 2 containing cost estimates of the four best-scored transmission line routes, including Route 31.

On November 14, 2017, DEP filed verified responses to the Commission's November 13, 2017 Order Requiring Additional Information.

On December 5, 2017, after such time as the evidentiary record in this proceeding was closed to new evidence, Mr. Canaday submitted additional exhibits, and reiterated his request that the Commission issue a cease and desist order against DEP to prevent construction of the proposed transmission line.

Based upon DEP's verified application, the testimony and exhibits timely received into evidence, and the entire record in this proceeding, the Commission makes the following:

FINDINGS OF FACT

1. DEP is a public utility providing electric service to customers in its service area in North Carolina and is subject to the jurisdiction of the Commission.
2. The Commission has jurisdiction over DEP's application. Pursuant to G.S. 62-100 et seq. and Commission Rule R8-62, a public utility must receive a CPCN prior to constructing transmission lines at or above 161 kV in North Carolina.

3. The proposed transmission line would originate at the site of a new Cleveland-Matthews Road Substation, to be located at the southeast corner of Polenta Road and Matthews Road in Johnston County, North Carolina, and would terminate at the tap point along the existing Erwin-Selma 230-kV Transmission Line. The approximate total length of the proposed transmission line is 11.5 miles.

4. Mr. Canaday gave testimony and submitted statements opposing the proposed transmission line. Thirty affected residents or landowners also submitted public comments opposing the proposed transmission line, and eighteen public hearing witnesses testified in opposition to the line.

5. DEP's application meets the requirements of G.S. 62-102.

6. DEP has carried its burden of proof under G.S. 62-105(a) through substantial, competent evidence showing that:

- (a) the proposed transmission line is necessary to satisfy the reasonable needs of the public for an adequate and reliable supply of electricity;
- (b) when compared with reasonable alternative courses of action, construction of the transmission line in the proposed location is reasonable, preferred, and in the public interest;
- (c) the costs associated with the proposed transmission line are reasonable;
- (d) the impact that the proposed transmission line will have on the environment is justified considering the state of available technology, the nature and economics of the alternatives, and other material considerations; and
- (e) the environmental compatibility, public convenience and necessity require the construction of the transmission line.

7. Mr. Canaday did not satisfy his burden of proof under G.S. 62-105(a), by failing to provide substantial, competent evidence proposing a reasonable alternate route.

8. It is in the public interest, reasonable, and appropriate to grant the requested certificate.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1-2

These findings of fact are essentially informational, jurisdictional, and procedural in nature and uncontroverted.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 3-8

The evidence supporting these findings of fact appears in DEP's application, the direct and rebuttal testimony of witnesses Same and Umbdenstock, the testimony and exhibits timely submitted by Mr. Canaday, the testimony of public witnesses and the consumer statements of position filed with the Commission, the Study filed by DEP, and the filings of the Public Staff.

The parties' respective burdens of proof in this proceeding are governed by statute. G.S. 62-105(a). The Commission has in the past interpreted the burden of proof requirement set forth in G.S. 62-105(a) as follows:

In interpreting this statute, the Commission concludes that the electric utility applying for approval to site a transmission line has the initial burden of proof, including that it examined "reasonable alternative courses of action" and that "construction of the transmission line in the proposed location is reasonable, preferred, and in the public interest." A landowner or other intervenor who believes that an alternative route studied by the utility is preferable to that proposed or that the utility did not consider or appropriately weigh relevant factors in reaching its decision may introduce evidence and otherwise argue that the utility has not met its burden of proof. Once the utility has sustained its burden of proof, a landowner or other intervenor proposing an alternative not originally examined by the utility has the burden under the statute of proving that its alternative should have been studied and is preferable to the proposed route.

Final Order Overruling Exceptions and Affirming Recommended Order, Docket No. E-2, Sub 796, at 2 (August 29, 2002).

In considering other "relevant and material" factors pursuant to G.S. 62-105(a), the Commission notes that "[i]t is hereby declared to be the policy of North Carolina: ... (5) To encourage and promote harmony between public utilities, their users and the environment." G.S. 62-2. In addition, the Commission considers the following declaration of State environmental policy:

The General Assembly of North Carolina, recognizing the profound influence of man's activity on the natural environment, and desiring, in its role as trustee for future generations, to assure that an environment of high quality will be maintained for the health and well-being of all, declares that it shall be the continuing policy of the State of North Carolina to conserve and protect its natural resources and to create and maintain conditions under which man and nature can exist in productive harmony. Further, it shall be the policy of the State to seek, for all of its citizens, safe, healthful, productive and aesthetically pleasing surroundings; to attain the widest range of beneficial uses of the environment without degradation, risk to

health or safety; and to preserve the important historic and cultural elements of our common inheritance.

G.S. 113A-3.

Showing of Need

Witnesses Same and Umbdenstock testified regarding the need to build a new 230-kV/23-kV transmission-to-distribution substation and a new 230-kV transmission line to provide power thereto in the Cleveland-Matthews area of Johnston County, North Carolina. Witness Umbdenstock testified that there currently are no transmission lines or substations directly serving the Cleveland-Matthews area of Johnston County, which is roughly bounded by Interstate 40 on the west, Highway 70 Bypass on the north, Highway 70 on the east, and Interstate 95 on the south. The Cleveland-Matthews area encompasses approximately 125,000 acres and, with the exception of the far southeast corner of land within Smithfield's city limits, is located almost entirely within DEP's service territory. Nine different substations and thirteen distribution circuits currently feed into this area, including two substations located in Wake County. Six 23-kV feeders from four substations as far as thirteen miles away terminate less than 1.5 miles from the proposed substation site. All six of those 23-kV feeders exceeded 17.6 megavolt-amperes (MVA), which served as the winter planning limit for 23-kV feeders during the 2015 winter peak (January 2015). DEP purchased the proposed substation site in 2015 based on the projected load center in and near the vicinity of Cleveland Road and Matthews Road in Johnston County, North Carolina.

Witness Umbdenstock testified that customer energy usage in the Cleveland-Matthews and surrounding areas is increasing. Witness Umbdenstock further testified that the Dixon Road and Johnson Crossroads peaks will in the future likely exceed the 17.6 MVA winter planning limit for the existing 23-kV feeders now serving the area. DEP considered eight potential substation sites within a one-mile radius of the proposed Cleveland-Matthews site, and selected and purchased the currently proposed site because it was the site with the highest ranking, pursuant to the criteria DEP included in its siting study, which also had a willing seller. Witness Umbdenstock testified that in 2017, DEP was in the process of building two distribution projects as a stopgap measure to relieve circuits in the area due to increased customer growth, but that such stopgap measures would provide neither a permanent solution, nor would they eliminate the need for the proposed 230-kV line and substation at issue in this proceeding.

Through appearances at the public hearing and numerous statements of consumer position, opponents of the proposed transmission line challenged the necessity of the new transmission line and its substation. As discussed subsequently, many commenters argued that existing right-of-way should be used, specifically that of the existing 500-kV line on the western edge of the study area, rather than establishing a new right-of-way. These commenters believe that other routes would be shorter and less costly. Others note that the proposed line was not needed to serve the Four Oaks area, but rather for the growth occurring in the Cleveland area to the north; they feel the new line should be

located to the north, where the power is needed. Others express skepticism that the line is needed and state that the growing area should be required to meet stringent energy efficiency requirements. Some suggest that the Commission consider whether renewable energy could meet the Cleveland area's growing need for electricity.

The Route Study and Selection Process

After having established the need for transmission of power to the Cleveland-Matthews area, witness Same testified that DEP retained Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell), a full service international engineering and construction firm with utility and infrastructure siting experience. Burns & McDonnell was retained to assist DEP with the line siting and soliciting of public input necessary for the project. Burns & McDonnell prepared the Study attached as Exhibit A to DEP's application. Burns & McDonnell established the study area, which was designed to provide a set of reasonable and geographically-distinct transmission line route options. Data was then collected from publicly available sources, grouped into categories, and then assigned a weight from one to five to reflect potential sensitivity to the presence of a transmission line. With this data, Burns & McDonnell completed a suitability analysis, identified potential routes, and ultimately selected Route 31 as the preferred route for the transmission line. The objective of the routing analysis was to identify an economically feasible route that would supply the most reliable electric service, while also minimizing to the extent possible adverse impacts to the economic, social and natural environment.

DEP contacted the following State and federal agencies to solicit input regarding the proposed transmission line's potential impact on threatened or endangered species, wetlands, wildlife resources, stream sensitivity, hydric soils, and other potential issues: U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, N.C. Wildlife Resources Commission, N.C. Natural Heritage Program, and N.C. Department of Environmental Quality, which includes N.C. Division of Water Resources and N.C. Division of Land Quality. Witness Same testified that, from these external agency contacts, the primary concern identified is the presence of a federally-protected mussel species and other aquatic species of federal concern in the study area.

Burns & McDonnell identified 32 distinct routes using a combination of 39 line segments. Route 31, which was ultimately proposed by DEP in its application for a CPCN, originates at the site of the proposed Cleveland-Matthews Road Substation, located on the southeast corner of Polenta Road and Matthews Road in Johnston County, North Carolina. Route 31 exits the substation site to the southeast and extends for approximately half of a mile before turning west for approximately two-tenths of a mile while crossing Matthews Road. Route 31 then continues south for approximately nine-tenths of a mile before crossing Middle Creek. From this point, the Proposed Route extends generally southeast for approximately 1.8 miles before crossing State Highway 210. Route 31 then continues in a south-southeasterly direction for approximately nine-tenths of a mile before crossing Lassiter Road. From there, Route 31 extends approximately half of a mile in a south-southeasterly direction before crossing Hickory Grove Church Road. Route 31 then extends southeast for approximately

nine-tenths of a mile and crosses King Mill Road. Continuing southeast for another two-tenths of a mile, Route 31 then turns and travels east for approximately four-tenths of a mile before turning south. From there, Route 31 extends in a south-southeasterly direction for six-tenths of a mile and crosses Black Creek. Turning southeast, Route 31 then extends eight-tenths of a mile and crosses Elevation Road. The Proposed Route continues toward the southeast for approximately nine-tenths of a mile before turning south for six-tenths of a mile and crossing Old School Road. Route 31 then turns southwest for only one-tenth of a mile, then turns south for three-tenths of a mile before crossing Jackson Road. Route 31 continues to the south for three-tenths of a mile before turning southeast, extending approximately four-tenths of a mile, and crossing an existing CSX/Amtrak railroad line. The Proposed Route continues southeast for approximately 1.3 miles, crossing U.S. Highway 301, Parker Road, and Interstate 95 before terminating at a tap point along the existing Erwin-Selma 230-kV Transmission Line.

After analyzing route alternatives based on social, environmental, and engineering factors, DEP's siting team determined that Route 31 was the preferred route for the following reasons: it would affect the least number of homes located within 300 feet of the centerline; no places of business or public facilities are located within 500 feet of the centerline; no open space would be crossed by Route 31; during DEP's route selection process, DEP received minimal concerns regarding Route 31; Route 31 contains no highly sensitive stream crossings; it utilizes cropland where possible to avoid extensive tree removal; and it crosses wetlands and hydric soils in a perpendicular manner where possible so as to require fewer permit conditions. For these reasons, DEP's line siting process identified Route 31 as the preferred and least detrimental route to serve transmission needs in the Cleveland-Matthews area. It should be noted that one public witness testified that he owned a business that operated in his home and was within 500 feet of the proposed centerline. It was not established, however, whether this was a business that drew customer traffic, nor was it established that the reclassification of his property would materially change the results of the Burns and McDowell ranking study.

Thirty people filed consumer statements of position in this proceeding, with some of those individuals submitting multiple such statements to oppose DEP's proposed transmission line. All of the individuals who filed public statements live or own property in the Four Oaks, North Carolina area, and more than half of said individuals stated that the proposed line would cross their land. Some individuals stated that the proposed route would split their property in half, and argued that in so doing their land could be less amenable to future residential development. Eighteen people spoke in opposition to the proposed line route at the public witness hearing held on October 30, 2017, in Smithfield, North Carolina. Most of the individuals who testified at the public hearing reside in the Four Oaks area, although three individuals reside in Benson. Many of the people who testified and filed statements stated that their respective properties have sentimental value to them because of having been owned, occupied, or farmed by members of their family for multiple generations. Individuals further expressed concern that the proposed transmission line would negatively impact recreational uses of the affected land, including activities such as shooting, fishing, hiking, camping, and hunting. Others stated that the proposed route would destroy trees that are being grown with the intent to harvest, or for

the purpose of increased privacy or additional wildlife habitat. Some individuals expressed concern that DEP's proposed line would have the potential to reduce the value of their respective properties, and consequently the amount of their respective children's inheritances. Several individuals commented that DEP's surveyors had inappropriately cut some trees that were larger than the permitted size of six inches in diameter.

In response to questions from the Commission, witness Same testified that DEP would agree to consider minor adjustments to the Proposed Route, provided that additional landowners would not be affected by such adjustments.

As demonstrated by witness Same's testimony, the Study and DEP Late-Filed Exhibit No. 2, the projected cost of constructing the transmission line on Route 31 is \$13,692,398.00. No party to this proceeding presented evidence alleging that this estimated cost is unreasonable. Furthermore, DEP Late-Filed Exhibit 2 demonstrates that the proposed costs associated with Route 31 are consistent with or lower than alternative routes reviewed in the siting process.

Mr. Canaday testified that DEP's application was incomplete and the Study was deficient in that it assigned insufficient weight to farmland and forests in the ranking process. In response to Mr. Canaday's allegations regarding the weight assigned in the siting process to farmland and forested land, witness Same testified that DEP assigned a weighting of 2 for "cropland crossed" and a weighting of 3 for "upland forest crossed." Witness Same explained that the intent of weighting is to differentiate between the levels of perceived impact on the underlying land uses and to help determine areas of higher versus lower constraint when routing the line. "Cropland crossed" was assigned a lower weight than "upland forest crossed," witness Same explained, because continued farming activity is permitted and is feasible under DEP transmission lines. Witness Same noted that only the following four routing factors were assigned a higher weighting than "upland forest crossed": "residential proximity" and "open space/green areas" had a weighting of 5, while "wetland crossing" and "stream sensitivity" had a weighting of 4. These weightings, DEP contends, appropriately reflect the values and risks of land uses that could impact and potentially preclude DEP from siting and eventually constructing the proposed line. In addition, these weightings reflect input from past transmission line siting proceedings, as well as public feedback obtained during the study process.

Mr. Canaday further took issue with DEP's route selection process, noting that the Company did not appropriately classify farms as being businesses, and, therefore, the Company's planning matrix was weighted in favor of routing the line through farmland. Similarly, Mr. Canaday argued that DEP's process did not acknowledge the forestry businesses in the path of the proposed route. Other individuals stated that DEP's route scoring matrix was biased against them because they were not able to attend the open houses and voice their concerns. One commenter noted that DEP had not achieved any of its own routing goals in that the proposed route does not use any existing right of way, nor does it follow any highways or roads. Another stated that DEP should work with the county to locate new power lines simultaneous with the approval of new housing subdivisions.

In November 2016, DEP held two community workshops for the purpose of informing potentially affected landowners regarding the need for a transmission line, to explain the decision-making process to be used to select a preferred route, and to provide a forum for the public to express concerns. DEP witnesses stated that two weeks in advance of the community workshops, DEP mailed to all landowners within 500 feet of all possible routes a letter describing the project and advertising the workshops. DEP also posted on its website a news release seven days in advance of the workshops and other information about the project, including the proposed routes. At the workshops, DEP and Burns & McDonnell answered questions, received comments, and distributed questionnaires for attendees to complete and return up to six weeks following the workshops. Over 200 people attended the workshops, and DEP received input from many landowners at the workshops themselves and through the completed questionnaires.

Mr. Canaday testified that DEP failed to notify all impacted property owners, including himself, about the open houses that DEP hosted in November 2016 to gather community input for its routing process. Many people (including more than half of those who filed consumer statements of position) stated that they had not been made aware of the community workshops held in November 2016. Some stated that they did not receive the invitation to the community workshops altogether, while others who did receive the invitation said that the notice and enclosed map were difficult to understand. Some felt that DEP should have sent the invitation by certified mail to make sure property owners were aware of the proposed line. Several people commented that residents in the affected area do not have reliable internet service or choose not to use the internet, and, hence, were not able to avail themselves of the interactive map that DEP posted on its website. Some stated that the questionnaire that DEP provided to people who attended their open houses should also have been mailed to people who own property near the proposed routes. Several people commented that DEP's surveyors had inappropriately cut some trees that were larger than the threshold size of six inches in diameter. Others contended that DEP did not give the requisite twenty-four hours' notice before entering their land for surveying.

In response to individuals' concerns regarding the inappropriate cutting of trees during the survey process, the Commission issued an Order Requiring Additional Information on September 25, 2017, which required DEP to respond to several questions, including the following:

Public commenters state that trees had been inappropriately cut down during the survey process. Explain in detail what occurred and whether it was necessary to compensate any landowners for damage.

DEP responded to this Commission inquiry by explaining that they immediately and temporarily ceased surveying activity upon learning of certain landowner complaints regarding DEP's handling of the surveying process. DEP further stated that they took remedial measures to ensure that no such improper tree cutting again occurred, and offered to reimburse the affected landowners for any damage caused.

In response to Mr. Canaday's and others' contentions concerning deficiencies in the notice procedures for the community workshops, witness Same testified that even if Mr. Canaday and other landowners had received the community workshop invitation and had participated therein, the relative weighting and ranking of all routes considered would not have changed, thus resulting in the same selection of Route 31 as the preferred route. Witness Same testified that this is primarily because all participants in the community workshop process opposed any transmission line route that would cross their own property. As for Mr. Canaday's alleged lack of notice about the community workshops, witness Same testified that DEP had mailed to Mr. Canaday at his Panama City, Florida address a letter, via priority mail, inviting Mr. Canaday to attend one or both community workshops. DEP witness Same further testified that the priority mail letter was not returned to DEP marked as "undeliverable," and that Mr. Canaday admitted that the address DEP had on file for him was correct and that Mr. Canaday did, in fact, receive subsequent correspondences mailed to him by DEP at the same address. Witness Same testified that, in total, DEP sent letters to 1,036 individuals owning 1,313 land parcels. In addition, letters were mailed to both Johnston and Wake County administrators and each municipal government within the study area. Two newspaper advertisements also ran in the News & Observer in the weeks leading up to the community workshops.

It appears from the record that more complete and comprehensive notice of the community workshops could probably have been provided, especially to property owners located in the Four Oaks community. However, the Commission must take note of the fact that these community workshops are not required by the governing statute or by Commission rule and were voluntary efforts by DEP. Although some affected landowners may not have received DEP's community workshop notification correspondences, there was no evidence of similar issues with respect to the statutorily-required notice that DEP sent to affected landowners following its selection of and application for a CPCN for Route 31. The Commission notes that while some landowners did not receive notice of the DEP community workshops, said workshops are not required by G.S. 62-101, but rather were scheduled by DEP in an effort to allow for public input in excess of the minimum statutory requirements. DEP did, however, provide to all necessary parties the required 30-day notice to enter property for the purpose of surveying, soil borings, appraisals, and assessments to the 67 landowners whose properties would contain some portion of the proposed 125-foot right-of-way. In the event that survey crews needed to access a portion of their property, DEP also provided said notice to an additional 23 landowners whose properties would lie within 200 feet of the centerline of the Proposed Route. All 90 notification letters were mailed certified U.S. Postal Service, return receipt requested, and included the appropriate reference to the 30-day notice requirement specified by G.S. 40A-11.

The Commission concludes that DEP complied with the siting statute and took reasonable, albeit imperfect, measures to inform the public of the proposed line and alternative routes, including working with landowners to alter the route when possible and incorporating public opinion into DEP's analysis for selecting Route 31 as the preferred route. The Commission acknowledges that there is evidence supporting Mr. Canaday's position that some affected landowners did not receive notice of the community

workshops. However, the Commission notes that the community workshops were voluntarily undertaken by DEP and that, although they potentially should be in the future, they are not presently required by statute or Commission rule. The Commission suggests that DEP endeavor, in the future, to improve its communications with prospectively affected landowners, through any or all of the following measures: request delivery confirmation on all correspondences mailed to affected landowners, include on the outside of each envelope containing such correspondence a conspicuously-marked notice that the correspondence is important and involves construction activity in the recipient's neighborhood, employ electronic means of communication wherever possible, and otherwise endeavor to provide an opportunity for meaningful input to all potentially affected landowners. The record in this proceeding shows that DEP made a satisfactory effort to include the public in the siting process, and that DEP has indicated that it will take lessons learned from this proceeding and incorporate them into future transmission siting projects.

Consideration of Alternative Routes That Were Not Part of the Study

Mr. Canaday testified that DEP's application mistakenly asserts that there currently is no transmission line in the Cleveland area, when in fact there is an existing 500-kV line in the vicinity that Mr. Canaday contends could be tapped to serve the proposed new distribution substation. Other public witnesses, while seemingly acknowledging that the need for transmission exists, expressed a preference that the Cleveland-Matthews area be served by a new line either tapped directly from the existing 500-kV line or routed parallel to that existing line. On September 25, 2017, the Commission ordered DEP to provide a verified response to these (and other) points raised by the public commenters, including the following:

Public commenters questioned why DEP did not propose a shorter route, one using the existing ROW for the Cumberland-Wake 500-kV line. Please respond to that question. In addition, is it possible to serve the area directly from that 500-kV line?

In its October 9, 2017 response, DEP stated that the Company's bulk transmission system is reserved for the bulk transport of large amounts of electricity. DEP stated, for example, that only electric generators of 500 megawatts (MW) or larger are allowed to interconnect to the 500-kV system. During the October 31, 2017 hearing, witness Umbdenstock confirmed that the Company has never allowed distribution load connections to its 500-kV transmission lines. Witness Umbdenstock further stated that even if it were feasible to serve a 230-kV retail transmission-to-distribution substation from the 500-kV transmission system, this would require about 200 contiguous acres for the 500-kV/230-kV transmission-to-transmission substation in addition to the construction of the 230-kV/23-kV transmission-to-distribution substation. In response to questions from the Commission, witness Umbdenstock stated that his testimony was based on two substations, the Wake County 500-kV substation and the Cumberland County 500-kV substation, each of which are located on approximately 200 acres of land.

On December 5, 2017, after the record in this proceeding was closed to new evidence, Mr. Canaday submitted documentation purporting to show that DEP has existing 500-kV/230-kV substations that do not require or occupy 200 acres. Mr. Canady argues that these purportedly existing substations require approximately 27.5 acres or less. While there are two 500-kV to 230-kV substations in the approximate locations that Mr. Canaday cites, the photographs constituting this submission are not sufficiently clear to permit a determination on Mr. Canaday's allegation regarding acreage.

The Commission notes that witness Umbdenstock has a degree in electrical engineering, and that he has worked for DEP for almost 38 years and is currently a lead engineer. Further, he is a licensed Professional Engineer in the State of North Carolina. If Mr. Canaday has similar credentials, that information was not included in the record. Further, his December 5, 2017 submittal was not timely for the October 31, 2017 hearing. As such, it was not the topic of cross examination, nor did it qualify for inclusion in the record (based on the November 6 deadline established during that hearing). For these reasons, the Commission finds witness Umbdenstock's testimony regarding the land requirements for substations to be more persuasive than Mr. Canaday's December 5, 2017 submittal.

As noted above, several public commenters suggested that the new 230-kV line should parallel the existing 500-kV line, and then approach the new distribution substation from the west. In its October 9, 2017 submittal, DEP stated that such a route would be longer than the Company's preferred route, and that additional right of way adjacent to the 500-kV line would be needed. At the conclusion of the October 31, 2017 hearing, the Commission ordered the Company to submit a late-filed exhibit providing more detailed information about what would be required to run the new line parallel to the existing 500-kV line.

On November 13, 2017, DEP submitted a late-filed exhibit providing the additional information. DEP noted that the existing 500-kV line is located in a 180-foot-wide easement, and that to accommodate a new 230-kV line, an additional 82.5 feet of easement would be needed adjacent to the existing easement. DEP stated that it had analyzed four options, two coming from the north and two coming from the south, one on each side of the existing line. All four options would be longer than DEP's proposed 230-kV line, and all have homes located within the required right-of-way. (The number of homes ranged from 11 to 43, and one of the options also impacted eight apartment buildings and three places of business.) DEP stated further that it might be possible to avoid the homes if one of the southern routes were selected, but this would require the new line to cross under the 500-kV line multiple times, adding to the length, the cost, and the number of impacted landowners. The Commission concludes, based on this evidence, that the construction of a new 230-kV line paralleling the existing 500-kV transmission line is neither feasible nor cost effective and likely would have greater negative impacts on more properties.

Other Issues Raised by the Participants

Mr. Canaday testified that the Study submitted by DEP is incomplete because it does not address either the environmental impact of the electromagnetic fields (EMF) that the proposed transmission line would generate, or the potential impact on the environment and public health and safety. On this basis, Mr. Canaday moved the Commission to issue a cease and desist order against DEP to prevent construction of the line. In his submittals, Mr. Canaday raised additional concerns about DEP's proposed line. He asserted that the people living in the Parker Town Road area of Four Oaks would not benefit from the line and, therefore, should not be at risk of "radiation sickness" from the project, and that the line should be sited in the area that needs it. He stated that property values tend to go down near new transmission lines.

Mr. Canaday (and other public commenters) submitted articles and copies of website pages, some of them dating as far back as 1990, on the topic of potential impacts on human health (and other biological impacts) from EMF. One public witness provided confidential documentation indicating that she, and possibly members of her family, have a genetic pre-disposition toward developing life-threatening cancers. Others testified that the proposed line would have negative impacts on their farming operations, with the potential to harm grazing livestock, reduce crop and milk yields, and complicate fencing arrangements that allow for the rotational grazing of livestock.

In response to Mr. Canaday's and others' allegations regarding "EMF pollution" and other purported health risks, witness Same testified that the expected EMF readings would be essentially identical along any transmission line route and, therefore, would have no impact on the relative rankings when considering alternative routes. DEP denied that EMF constitutes "pollution," and stated through witness Same that the proposed Cleveland-Matthews Transmission Line does not pose an inappropriate EMF risk. DEP also provided brochures that were drafted by the Company, one of which concluded that "[a]ccording to a number of science and health experts researching the issue, including panels convened by the World Health Organization, the National Academy of Sciences and the American Institute of Biological Sciences, there exists no persuasive scientific evidence that electric and magnetic fields can lead to public health problems."

There was no expert testimony or evidence presented by any party to this proceeding regarding the purported health impacts of electromagnetic fields. The Commission is aware that numerous studies have been conducted in an attempt to discern the relationship, if any, between exposure to EMF and biological impacts. It is the Commission's understanding that after decades of study, there has been no scientifically recognized consensus establishing a relationship, and that virtually all laboratory studies on animals and cells have failed to establish a consistent link between EMF and disease. No expert testimony to the contrary was provided in this proceeding. EMF is all around us, not only from power lines but also from electrical wiring in buildings, electric motors, TVs, computers, and appliances. One public witness submitted materials in this proceeding apparently published by the American Cancer Society, which stated, "The electromagnetic field directly under a power line is typically in the range of what you could

be exposed to when using certain household appliances.” Neither Mr. Canaday nor any other witness presented themselves as experts in the science of biological impacts from electromagnetic fields. Therefore, the Commission finds that Mr. Canaday’s testimony (and that of public witnesses as well) relative to EMF is anecdotal and not persuasive evidence as to his allegation that DEP’s application was incomplete or that DEP’s Study was faulty.

The Commission further notes that many of the commenters expressed concerns that the line could have negative impacts on people, livestock, and crops. While it was not discussed during the hearing, a consumer statement of position referenced, and the Commission is aware, that DEP routinely uses herbicides to assist in managing vegetation in its rights-of-way. In its vegetation management policies, the Company has agreed to allow landowners to designate their property as being a “no-spray” area. In order to address the alleged environmental risks expressed by consumers, the Commission suggests that the Company inform each affected landowner, in writing, of the option to designate his or her own land as a no-spray area. In any event, DEP is required to comply with its vegetation management plan in the construction and maintenance of the proposed transmission line and substation, including the provisions allowing landowners to elect not to have herbicides sprayed on their property. See Duke Energy Progress, LLC, Revised Vegetation Management Plan and Policies, Docket No. E-2, Sub 1010 (March 22, 2016).

Summary

For the reasons discussed herein, the Commission concludes that DEP has carried its burden of proof pursuant to G.S. 62-105(a) in demonstrating that the proposed transmission line is necessary for an adequate and reliable supply of electric energy to its service area. The Commission next concludes that DEP has carried its burden of proof in successfully demonstrating that Route 31 is the preferred transmission line route, that construction of a transmission line along Route 31 is in the public interest, and that the proposed costs associated therewith are reasonable. The Commission concludes that the environmental compatibility, public convenience, and necessity require construction of the proposed transmission line along Route 31. In so concluding, the Commission rejects Mr. Canaday’s arguments that DEP’s route selection process was faulty.

Further, for the reasons discussed herein, the Commission concludes that Mr. Canaday has not met the burden of proof required by G.S. 62-105(a) with regard to any alternative route for the transmission line. Mr. Canaday has not proven that any of his alternative suggestions are preferable to the proposed route or would provide long-term, reliable electric service to the Cleveland-Matthews area of Johnston County. DEP’s Late-Filed Exhibit 1 demonstrates that a new 230-kV transmission line adjacent to the existing 500-kV transmission line would not be a feasible option. No evidence was presented regarding the feasibility or cost of alternative routes or their impact on other landowners.

Having carefully reviewed the application, and based upon all the evidence of record and the recommendation of the Public Staff that the CPCN be issued, the Commission finds and concludes that the proposed transmission line satisfies the environmental compatibility and public convenience and necessity requirements of G.S. 62-100 et seq., and, therefore, a certificate of environmental compatibility and public convenience and necessity should be issued for the proposed transmission line construction.

IT IS, THEREFORE, ORDERED as follows:

1. That Mr. Canaday's motion requesting that the Commission issue against DEP a cease and desist order to preclude construction of the proposed transmission line is denied.

2. That pursuant to G.S. 62-102, a certificate of environmental compatibility and public convenience and necessity to construct approximately 11.5 miles of new 230-kV transmission line in Johnston County and Wake County, North Carolina, as described in DEP's application, is hereby issued to DEP, and the same is attached hereto as Appendix A, subject to the conditions set forth herein and therein.

3. That, prior to DEP's construction of the transmission line, the Commission first must receive confirmation from the State Environmental Review Clearinghouse that the Department of Natural and Cultural Resources concurs with DEP's application and that no further review by the State Environmental Review Clearinghouse is required. The Commission reserves the right to reconsider its decision in the event that further review, not known as of the date of this Order, is subsequently required by the State Environmental Review Clearinghouse.

4. That DEP is required to notify the Commission of any proposed shift to the centerline of the approved transmission line route for the Commission's review and determination of whether DEP will be subject to the public notice and hearing requirements set forth in Article 5A of Chapter 62 of the General Statutes.

5. That, prior to DEP's construction of the transmission line, DEP is required to provide written notice to affected landowners of their option to designate their land as a "no-spray area," consistent with DEP's Revised Vegetation Management Plan and Policies.

ISSUED BY ORDER OF THE COMMISSION.

This the 12th day of January, 2018.

NORTH CAROLINA UTILITIES COMMISSION



Linnetta Threatt, Deputy Clerk

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-2, SUB 1150

KNOW ALL PERSONS BY THESE PRESENTS THAT

DUKE ENERGY PROGRESS, LLC
410 South Wilmington Street
Raleigh, North Carolina 27601

is hereby issued this

**CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC CONVENIENCE
AND NECESSITY PURSUANT TO G.S. 62-102**

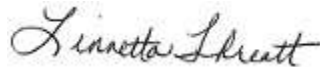
to construct approximately 11.5 miles of new 230-kV Transmission Line, located in Johnston County and a small portion of Wake County, North Carolina, which will originate at the site of a new Cleveland-Matthews Road Substation, located at the southeast corner of Polenta Road and Matthews Road, and which will terminate at the tap point along the existing Erwin-Selma 230-kV Transmission Line

subject to receipt of all federal and state permits as required by existing and future regulations prior to beginning construction and further subject to all other orders, rules, regulations, and conditions as are now or may hereafter be lawfully made by the North Carolina Utilities Commission.

ISSUED BY ORDER OF THE COMMISSION.

This the 12th day of January, 2018.

NORTH CAROLINA UTILITIES COMMISSION



Linnetta Threatt, Deputy Clerk