

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

EAST KENTUCKY POWER COOPERATIVE, INC.)	CASE NO. 2015-00263
_____)	
FAILURE TO COMPLY WITH KRS 278.020(2))	

O R D E R

East Kentucky Power Cooperative, Inc. ("EKPC") is an electric generation and transmission operator serving 16 member-owner distribution cooperatives. On July 5, 2013, a formal complaint was filed alleging that EKPC reconstructed an existing 69-kV transmission line across the complainants' property with a dual circuit 345/138-kV line without first obtaining a Certificate of Public Convenience and Necessity ("CPCN").¹

In Case No. 2013-00291, the parties conducted significant discovery and presented voluminous evidence through requests for information, a formal hearing, and briefs. The Commission entered a final Order in Case No. 2013-00291 on July 6, 2015,² a copy of which is attached hereto as an Appendix. In that Order, the Commission made the following findings of fact:

In 2005, EKPC proposed upgrading the line to a double-circuit 345/69-kV line. EKPC proposed to condemn an additional 50 feet of right-of-way to make the easement 150 feet in total width. EKPC asserted that the line would follow the original centerline except in two locations, which would

¹ Case No. 2013-00291, *Harold Barker, Ann Barker and Brooks Barker V. East Kentucky Power Cooperative, Inc.* (Ky. PSC filed July 5, 2013).

² *Id.*, Order (Ky. PSC July 6, 2015).

total 4,000 feet. EKPC requested a Commission Staff opinion as to the need for a CPCN for the proposed upgrade. On October 26, 2005, Commission Staff issued an advisory opinion stating that, based upon the facts as presented in EKPC's request, particularly that the line would involve only minor deviations from the existing right-of-way totaling less than one mile, a CPCN was not required.³ However, in 2006, the line was reconstructed as a double-circuit 345/138-kV transmission line and it deviated from the existing right-of-way by more than 5,280 feet.⁴

In rejecting EKPC's arguments, in Case No. 2013-00291, that no CPCN was needed for the reconstructed transmission line, the Commission found that:

[L]ines that deviate from their original centerline in excess of one mile in total or serve entirely new functions cannot be deemed a replacement or upgrade. In addition to exempting replacement and upgrade projects from the CPCN requirement, KRS 278.020(2)(b) also exempts from the CPCN requirement lines that must be relocated to accommodate certain infrastructure projects. In crafting this discrete exemption, the legislature clearly differentiated a replacement or upgrade from a relocation . . .⁵

Moreover, the Commission finds that the deviations from a transmission line's existing rights-of-way must be assessed in totality and not individually. The 18.5-mile construction comprised one project, and there is no basis for reviewing each individual deviation in isolation. KRS 278.020(2) speaks to construction of "any electric transmission line . . . more than five thousand two hundred eighty (5,280) feet in length." Here, EKPC constructed one double-circuit transmission line and the project should be viewed in its entirety and cannot be broken into discrete unrelated segments for the purpose of determining whether or not a CPCN is required . . .⁶

³ The Commission Staff opinion, at 3, also stated that it "is advisory in nature and not binding on the Commission should the issues be formally presented for Commission resolution."

⁴ Case No. 2013-00291, *Harold Barker, Ann Barker and Brooks Barker V. East Kentucky Power Cooperative, Inc.* (Ky. PSC July 6, 2015), Order at 2 (internal citation omitted).

⁵ *Id.* at 18.

⁶ *Id.* at 18-19.

Because the double-circuit 345/138-kV line deviated from the original centerline for over one mile, the Commission finds that pursuant to KRS 278.020(2), the double-circuit 345/138-kV transmission line was a completely new transmission line. Moreover, due to the significant deviations from the original right-of-way, the Commission need not address whether the addition of the 345-kV line would have been classed as an upgrade had it not deviated from the original right-of-way in excess of one mile. Accordingly, the Commission finds that the new 18.5-mile double-circuit line required a CPCN and that neither circuit was exempted from the ordinary extension exemption set forth in KRS 278.020(2)(a)-(c).⁷

Based on these findings, the Commission concluded "that a separate action should be commenced for the purpose of requiring EKPC to show cause why it should not be subject to the penalties in KRS 278.990 for violating KRS 278.020(2)."⁸

KRS 278.020(2) states in part:

For the purposes of this section, construction of any electric transmission line of one hundred thirty-eight (138) kilovolts or more and of more than five thousand two hundred eighty (5,280) feet in length shall not be considered an ordinary extension of an existing system in the usual course of business and shall require a certificate of public convenience and necessity.

The Commission now finds that this proceeding should be opened to investigate whether any reason exists that EKPC should not be subject to the penalties set forth in KRS 278.990 for violating KRS 278.020(2) by failing to obtain a CPCN prior to constructing the 18.5-mile transmission line at issue in Case No. 2013-00291.

⁷ *Id.* at 19.

⁸ *Id.* at 20.

The Commission, on its own motion, HEREBY ORDERS that:

1. EKPC shall submit to the Commission, within 20 days of the date of this Order, a written response to the violation of KRS 278.020(2) as set forth in the Commission's July 6, 2015 Order in Case No. 2013-00291 and in the findings above.

2. EKPC shall appear on October 27, 2015, at 10:00 a.m., Eastern Daylight Time, in Hearing Room 1 of the Commission's offices at 211 Sower Blvd., in Frankfort, Kentucky, for the purpose of presenting evidence concerning the violation of KRS 278.020(2), and showing cause why it should not be subject to the penalties prescribed in KRS 278.990 for the violation.

3. The October 27, 2015 Hearing shall be recorded by videotape only.

4. Any requests for an informal conference with Commission Staff shall be set forth in writing and filed with the Commission within 20 days of the date of this Order.

By the Commission

ENTERED
AUG 18 2015
KENTUCKY PUBLIC SERVICE COMMISSION

ATTEST:



Executive Director

APPENDIX

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE
COMMISSION IN CASE NO. 2015-00263 DATED **AUG 18 2015**

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

HAROLD BARKER;)	
ANN BARKER; and)	
BROOKS BARKER)	
)	
COMPLAINANTS)	CASE NO.
)	2013-00291
V.)	
)	
EAST KENTUCKY POWER COOPERATIVE,)	
INC.)	
)	
DEFENDANT)	

O R D E R

On July 5, 2013, Complainants Harold Barker, Ann Barker and Brooks Barker ("Complainants") filed a formal complaint against East Kentucky Power Cooperative, Inc. ("EKPC"). Complainants asserted that EKPC upgraded a transmission line crossing their property without first obtaining a certificate of public convenience and necessity ("CPCN"), and they claim that the upgrade has caused them to receive electric shocks and has created health concerns.

BACKGROUND

The dispute and complaint arise in regard to a transmission line which was originally constructed in the 1950s as a 69-kilovolt ("kV") transmission line that crossed property later acquired by Complainants. Complainants eventually constructed a home adjacent to the line, which EKPC later contended slightly encroached upon the transmission line easement.

In 2005, EKPC proposed upgrading the line to a double-circuit 345/69-kV line. EKPC proposed to condemn an additional 50 feet of right-of-way to make the easement 150 feet in total width. EKPC asserted that the line would follow the original centerline except in two locations, which would total 4,000 feet. EKPC requested a Commission Staff opinion as to the need for a CPCN for the proposed upgrade. On October 26, 2005, Commission Staff issued an advisory opinion stating that, based upon the facts as presented in EKPC's request, particularly that the line would involve only minor deviations from the existing right-of-way totaling less than one mile, a CPCN was not required.¹ However, in 2006, the line was reconstructed as a double-circuit 345/138-kV transmission line and it deviated from the existing right-of-way by more than 5,280 feet.

In response to the Complaint, on July 29, 2013, EKPC submitted an offer of settlement in which it offered to pay Complainants the diminution of value of their home or to purchase the house and a lot surrounding the house. Complainants rejected the settlement offer on September 16, 2013. In a subsequent Answer and Motion to Dismiss, EKPC asserted that the transmission line was constructed on a preexisting easement. It noted that Complainants were compensated for the widened easement in the course of a condemnation action in Clark Circuit Court. EKPC stated that Complainants asserted several counterclaims arising in tort in the Clark Circuit Court action.

By Order issued April 7, 2014, the Commission granted in part and denied in part EKPC's motion to dismiss. The Commission dismissed Complainants' request for monetary damages and denied EKPC's request to dismiss the remaining claims

¹ Commission Staff Opinion Letter from Beth O'Donnell, Executive Director, Kentucky Public Service Commission, to Sherman Goodpaster III, counsel, East Kentucky Power Cooperative, Inc., Oct. 26, 2005.

pertaining to the need for a CPCN. In its Order, the Commission further narrowed the issues to be addressed in the case to whether:

(1) a CPCN is required for an entire transmission line project when one or more segments that equal or exceed one mile in length are not replacements or upgrades; or (2) a CPCN is only required for those segments of a transmission line project which equal or exceed one mile in length are not replacements or upgrades of an existing transmission line.²

The Commission also found that "[i]f a CPCN was required for EKPC's entire transmission line project, Complainants were denied an opportunity to present their health and safety concerns for our review."³

HEARING TESTIMONY

A formal hearing was held before the Commission on July 1 and July 8, 2014. In the course of the split two-day hearing, both parties presented multiple expert witnesses regarding electromagnetic field ("EMF") levels, EMF's effect upon human health and safety, and transmission lines generally.

Complainants proffered John Pfeiffer, a professional engineer, who submitted testimony and an extensive report on numerous topics, including health concerns, EMF levels, and his opinion that the transmission line project required a CPCN. Mr. Pfeiffer testified that EKPC could have and should have relocated the transmission line away from Complainants' residence for a minimal cost at the original time of construction.

David Carpenter, M.D., on behalf of Complainants, testified to his beliefs regarding the alleged dangers of EMF exposure to human health. Dr. Carpenter asserted that a

² Order. (Ky. PSC Apr. 7, 2014) at 7.

³ *Id.*

causal link exists between EMF exposure and increased risk of neurodegenerative diseases such as Alzheimer's and certain cancers.

EKPC offered the testimony of several expert witnesses. Paul Dolloff, Ph.D., an EKPC electrical engineer, and Kenneth Foster, Ph.D., with the University of Pennsylvania, both testified regarding EMF standards. They testified that EMF levels were measured at Complainants' property and indicated that the levels are below any established safety or health standards. Gabor Mezei, M.D., Ph.D., and Benjamin Cotts, Ph.D., with Exponent, Inc., a scientific research and engineering consulting company, testified regarding their respective research experience and opinions relating to EMF and the absence of any associated health issues. Dr. Mezei stated that based upon his research there is no scientific evidence that EMF exposure at the levels created by transmission lines creates any adverse human health effects. Dr. Cotts testified that, based upon his calculations, such low levels of EMF do not create any safety hazards.

Finally, EKPC presented Mary Jane Warner, EKPC's Director of Production Engineering and Construction, who testified to the general nature of the project and discussed its classification as an upgrade. Ms. Warner asserted that the entire project should be deemed an upgrade, excepting 4,314 feet of new 345-kV line, 3,755 feet of which is near the North Clark Switching Station and 559 feet near the Hunt substation. In distinguishing the 4,314 feet of new line from the remaining 18-plus-mile project, Ms. Warner indicated that the two sections noted are not co-located with the preexisting 69-kV line. She asserted that while the line deviated from the original centerline in multiple locations totaling 10,730 feet, a line need not duplicate the original centerline to be categorized as an upgrade. She argued that emphasis should instead be placed upon the purpose of the line in discerning whether the line is an upgrade, replacement, or new line.

Ms. Warner was unable to iterate a defined set of factors that EKPC utilizes in assessing whether a line is an upgrade or a new line. Ms. Warner asserted that in considering landowner requests regarding line placement, EKPC takes into account the positive or negative impact the deviation would have on the project cost and all deviations that were undertaken with regard to the instant project resulted in net savings to the utility. Ms. Warner further testified that the project was necessary to alleviate overloading of the Avon autotransformer.

ARGUMENTS

On July 24, 2014, the Commission ordered the parties to submit post-hearing briefs with particular discussion regarding the potential range of remedies available in the event the Commission were to find that a CPCN was required for the project.

Complainants devote the bulk of their post-hearing brief to discussing two primary issues: first, whether the transmission line required a CPCN; and second, the human health hazards of EMF exposure. As to the first issue, Complainants argue that EKPC presented numerous differing statements regarding the path of the upgraded line. Complainants note that at varying times in this proceeding, EKPC has been inconsistent in its statements regarding the length of the new line's deviation from the original right-of-way. They note that EKPC initially asserted the deviation would be less than 4,000 feet. Later, in EKPC's response to a request for information, EKPC indicated the total deviations would be 13,240 and 10,739 feet, respectively. In EKPC witness Mary Jane Warner's pre-filed testimony, she provided yet another number of 4,314 feet.⁴ Finally, Ms. Warner asserted that the cost to redesign the transmission line away from Complainants' residence as proposed by Mr. Pfeiffer would have been approximately

⁴ Complainants' post-hearing brief at 13.

\$69,000 to \$72,000. However, Ms. Warner noted that EKPC did acquiesce to one of Complainants' requests in removing one pole structure identified as UT79 and upsized the two adjacent structures, UT78 and UT80. To compensate for removing the pole, EKPC was forced to install two larger poles. The larger poles resulted in an increased cost, which was not charged to Complainants.

Complainants argue that the newly constructed line is not merely an upgrade that can escape the CPCN requirement based upon two main rationales. First, they state that the new line as compared to the original line deviated from the original center line in excess of one mile, thereby exceeding the threshold for a CPCN set in KRS 278.020(2). Second, Complainants state that only the 138-kV line could reasonably be construed as an upgrade. They opine that while 69 kV to 138 kV could arguably be an upgrade, the addition of a 345-kV circuit built on top of the 138-kV circuit created an entirely new line rather than a replacement, and thus the instant line required a CPCN. Due to both the centerline deviation and the fact that the 345-kV line was entirely new, Complainants contend that EKPC cannot satisfy the exception to the CPCN requirement set forth in KRS 278.020(2).

Regarding the second main issue, Complainants' voluminous discussion pertaining to EMF exposure details the opinion of their expert witness, Dr. Carpenter, who believes that the EMF levels existing at Complainants' property is a hazard to human health. Complainants dispute EKPC's measurements regarding the exact EMF levels.

Complainants request that the Commission order EKPC to relocate the transmission line 309 feet to the east, away from their house. Complainants argue that EKPC should not be rewarded or protected as a result of its failure to seek a CPCN.

They assert that the Commission has broad authority, which includes requiring issuing a retroactive CPCN conditioned on the transmission line's relocation.

In its post-hearing brief, EKPC admits that it shifted the route of the new transmission line in two primary locations, neither of which is on the Barkers' property. EKPC restates that the first deviation consisted of a total length of 3,755 feet of new, non-replacement or upgraded 345-kV line near the Sideview/North Clark Switching Station, while the second deviation spans a total of 6,975 feet of new 345-kV line near the Hunt substation. However, EKPC maintains that all but 559 feet of this second deviation was a replacement of the original line. It also states that of the two above deviations not within the replacement or upgrade category, all but 2,434 feet was on EKPC-owned property, and as such should not require a CPCN. EKPC argues that the mere fact that the line deviated from the original centerline is not dispositive on the issue of whether or not the line is categorized as a replacement or upgrade versus a new line. Instead, EKPC contends that a variety of factors go into the determination of whether a line is classified as an upgrade or new line.

EKPC argues that almost the entire 18.5-mile transmission line project should be classified as either a replacement or upgrade, and that the brand new portions do not exceed one mile in cumulative length. EKPC stresses that the terms *replacement* and *upgrade* should not be narrowly read so as to be restricted to considerations of *voltage* and *length*. Instead, it argues that a line could be a replacement or upgrade without regard to voltage or length, dependent upon the nature and purpose of the line.

As to the 138-kV portion of the new line, EKPC argues that no portion required a CPCN, as that circuit can currently operate at only 69 kV. It states that although the line was constructed and insulated to operate at 138 kV at an additional incremental cost of 2

percent of the total project cost, even if the line was not a replacement or upgrade, a CPCN was not required because additional improvements to the substations would be required to actually enable it to operate at 138 kV.

Even if the Commission were to view the 138-kV line as being 138 kV rather than the 69 kV at which the line is presently capable of operating, EKPC contends that because the line operates in the same manner, for the same purpose, and is in generally the same location as the original line, it is undeniably an upgrade.

Because the 345-kV line is predominantly co-located with the 138-kV line, EKPC argues the 345-kV line enhances the line's usefulness and is thereby also an upgrade. It avers that the discrete segments of 345-kV line that diverge from the 138-kV path are each individually less than one mile in length. EKPC states that the one-mile threshold is still not breached, even when combining the segments. However, arriving at this conclusion, EKPC does not count the portions of the deviations that are solely located on EKPC-owned property. EKPC asserts that transmission lines constructed on utility-owned property should never require a CPCN.

EKPC argues that if a CPCN was required for any portion of the line, it should be required only for those segments that deviated from the original centerline. To reach this conclusion, EKPC states that KRS 278.020(2)(a) does not require a rebuilt or upgraded line to follow the exact right-of-way or centerline of the original line. Thus, it argues that the totality of the circumstances, as well as the nature and the purpose of the line, must be considered in rendering any determination. EKPC believes that requiring a CPCN for any portion of a transmission line replacement or upgrade project would violate KRS 278.020.

EKPC notes that the EMF levels at Complainants' residence are far below the limit of any established safety standard. It asserts that only two states have magnetic field standards, and only six have electric field standards, which were not established based upon safety, but were instead adopted to maintain the existing EMF levels in each jurisdiction. EKPC states that the EMF levels at its right-of-way on Complainants' property would comply with all standards across the country. EKPC further attacks the credibility of both Complainants' expert witnesses, Mr. Pfeiffer and Dr. Carpenter. It states that neither of the witnesses' testimonies meets the *Daubert*⁵ standard for reliability and admission of scientific expert testimony. As to Complainants' health and safety concerns regarding implanted medical devices and micro shocks, EKPC notes that there is no scientific support or reported instances of implanted medical devices ever having been adversely affected by EMF. In respect to micro shocks, EKPC, contends that any shocks that may be experienced are far below any established threshold for harm.

Finally, EKPC argues that an individual should not be able to build adjacent to an existing transmission line and later force a utility to relocate said line and to permit such a result would eviscerate EKPC and other utilities' property rights.

As to the potential range of penalties, EKPC argues that the Commission cannot order the line to be moved without finding that the line's current location creates a safety hazard. As iterated above, EKPC contends no such hazard exists, and thus, even if KRS 278.020 was violated, the Commission lacks the authority to mandate moving the line. Should the Commission find that a CPCN was required, EKPC opines that the sole remedy rests within KRS 278.990, which provides for a separate show cause action to assess the willfulness of a utility's allegedly wrongful action.

⁵ *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

COMPLAINANTS' MOTION TO COMPEL

On June 15, 2015, Complainants filed a motion to compel EKPC to provide voltage and load data for several stated dates and times, which were originally requested on December 9, 2014.

EKPC responded by arguing that the record was closed on July 8, 2014, at the conclusion of the two-day hearing. EKPC asserts that it would be improper to allow further discovery at this stage of the proceedings. EKPC further objects to complainants attempt to enter, through their December 9, 2014 counter offer, a statement from Mr. Fred Farris. 807 KAR 5:001, Section 11(4), provides in part that "the commission shall not receive in evidence or consider as a part of the record a book, paper, or other document for consideration in connection with the proceeding after the close of the testimony." The formal hearing in this matter concluded on July 8, 2014 and the evidentiary record was closed at that time. Complainants filed their initial motion for the load data five months after the record was closed. Complainants did not set forth any grounds as to why the request was not made prior to the close of the record or why such information should now be entered into the record. Accordingly, the Commission will deny Complainants' motion to compel.

EKPC'S MOTION TO STRIKE

EKPC has moved to strike certain portions of Complainants' brief as being in violation of 807 KAR 5:001, Section 11(4), which states:

Except as expressly permitted in particular instances, the commission shall not receive in evidence or consider as a part of the record a book, paper, or other document for consideration in connection with the proceeding after the close of the testimony.

EKPC points to four specific items in Complainants' brief that it contends comprise new evidence which should be stricken from the record. The four items are:

1. The development of expert definitions for certain key statutory terms;
2. EKPC's payment of "penalties" for self-reported reliability issues;
3. Hypothetical dangers from micro shocks based upon specific scientific characteristics of human development; and
4. The minutes of a public meeting held before the Legislative Research Commission ("LRC") on November 8, 2007.

Item 1 above is in regard to definitions of a "new transmission line," "rebuilt transmission line," "upgraded transmission line," and "relocation (deviation) of a transmission line" as presented in Complainants' brief and attributed to their expert witness John Pfeiffer.⁶ EKPC asserts that the stated definitions were not contained within Mr. Pfeiffer's pre-filed testimony, nor were they expressed during his testimony at the July 1, 2014 hearing. Moreover, EKPC contends that the proffered definitions are inconsistent with his testimony at the hearing.

Item 2 above relates to Complainants' discussion of an alleged penalty payment EKPC made to the Southeast Electric Reliability Coordinator ("SERC"). Item 3 above is an additional discussion of human resistance to micro shocks. EKPC contends that Complainants are attempting to introduce additional scientific and technical evidence regarding the impact of micro shocks without citing to any actual authority for the assertions. Item 4 above is a discussion and minutes of a 2007 LRC Hearing on transmission line siting in which Mary Jane Warner testified. Complainants reference the testimony to note Ms. Warner's alleged acknowledgement that EMF and its health effects

⁶ Complainants' post-hearing brief at 7.

are a consideration in siting transmission lines. EKPC asserts that the meeting summary was available to Complainants, and if Complainants had desired to introduce the summary as evidence, they could and should have done so prior to the close of the evidentiary record. As the summary is seven years old, EKPC argues that Complainants cannot demonstrate that the information was previously unavailable.

Complainants respond in arguing that the items EKPC moves to strike were all raised, at least tangentially, in pre-filed testimony or at the hearing. They note that Mr. Pfeiffer provided definitions of certain terms upon questioning by Vice Chairman James Gardner. They assert that the issue of SERC penalties is necessary to rebut Mr. Dolloff's testimony regarding overloading on the Avon autotransformer. Complainants contend that Mr. Pfeiffer testified regarding the effect on humans of micro shocks and the attendant technical evidence. Complainants argue that various individuals' testimony indirectly discusses the 2007 LRC Commission research Report No. 348. Finally, Complainants assert that had they been given the opportunity to present rebuttal testimony, many of the above points would have been brought forth.

EKPC replies that simply because a topic was addressed at the hearing should not permit additional and more detailed information on that topic to be presented for the first time in a post-hearing brief. Most significantly, it notes that while the LRC Commission report at issue was properly admitted into the evidentiary record in this matter, the minutes to the report were never entered and cannot be boot-strapped into the record.

The Commission finds that each of the four items noted by EKPC relate to information or evidence that Complainants could have discovered with reasonable due diligence. Complainants had an opportunity to present the information to the Commission in the course of the two-day hearing in this matter. Mr. Pfeiffer testified during the hearing

regarding the definitions and meanings of terms, including what constitutes an upgraded transmission line. At the time of the hearing, his definitions and understanding largely comported with that of EKPC. However, in their post-hearing brief, Complainants' for the first time proffered revised definitions on behalf of Mr. Pfeiffer. Complainants' attempt to amend testimony in the record after the fact deprives EKPC of its opportunity to conduct meaningful cross-examination regarding the statements and should not be permitted.

Similarly, Complainants presented significant evidence pertaining to micro shocks. However, for the first time in their post-hearing brief, Complainants discuss specific data points regarding contact resistance of certain groups of individuals. The specific examples and information regarding the voltage and ohms were not previously presented. Furthermore, Complainants do not cite to any source regarding the origination of the numbers of their impact.

Complainants' have also not indicated that the information pertaining to the SERC penalties and summary of the 2007 LRC Hearing was unavailable prior to the close of the record at the conclusion of the July 8, 2014 Hearing. Both pieces of information are several years old, are publically available information, and could have been presented at the hearing as part of Complainants' direct case or through cross-examination of EKPC. However, the information was not presented for the first time until it appeared in Complainants' brief, thereby depriving EKPC of an opportunity to address the allegations. Accordingly, The Commission will grant EKPC's motion to strike.

HEALTH AND SAFETY

Complainants were unable to cite to any definitive study establishing a causal link between EMF exposure and verified health risks. Complainants' expert witness, Dr. Carpenter, testified to his belief that EMF levels far below those at Complainants' property

are more than likely carcinogenic and otherwise harmful. However, Dr. Carpenter's testimony has been roundly criticized and rejected by many other tribunals in which he has appeared as a witness.⁷ Dr. Carpenter has never personally conducted any studies regarding EMF exposure. Tribunals including the Pennsylvania and Minnesota Commissions, Washington Supreme Court and U.S. District Court for the Southern District of Indiana have found that his testimony is more akin to advocacy.⁸

Conversely, EKPC presented several witnesses who have personally conducted multiple studies regarding the effect of EMF exposure on human health. The cumulative analysis of a multitude of studies by EKPC's witnesses shows that there is no reliable evidence to demonstrate any harmful effects of EMF at levels generated by transmission lines. EKPC demonstrated that the maximum EMF levels at the transmission lines' right-of-way are well under EMF standards, by several orders of magnitude, established in the few states that have adopted EMF standards.

The Commission therefore finds that Complainants have failed to demonstrate a verifiable health or safety concern in regard to the EMF generated by the enhanced transmission line. In the absence of a mandatory EMF standard in the Commonwealth or reliable evidence demonstrating actual harm to health or safety, the Commission further finds that there is no basis to require EKPC to relocate the transmission line from its existing location on the Barkers' property.

⁷ EKPC's brief at 33.

⁸ *Id.* at footnotes 143–147.

CPCN

Kentucky statute requires that a utility must first acquire a CPCN prior to beginning any construction, except for certain service connections for electric-consuming facilities and ordinary extensions in the usual course of business.⁹ This general CPCN requirement is further impacted by specific CPCN requirements for transmission lines, as set forth by KRS 278.020(2), which states:

For the purposes of this section, construction of any electric transmission line of one hundred thirty-eight (138) kilovolts or more and of more than five thousand two hundred eighty (5,280) feet in length shall not be considered an ordinary extension of an existing system in the usual course of business and shall require a certificate of public convenience and necessity. However, ordinary extensions of existing systems in the usual course of business not requiring such a certificate shall include:

- a) The replacement or upgrading of any existing electric transmission line; or
- b) The relocation of any existing electric transmission line to accommodate construction or expansion of a roadway or other transportation infrastructure; or
- c) An electric transmission line that is constructed solely to serve a single customer and that will pass over no property other than that owned by the customer to be served.

KRS 278.020(8) further provides, in part, that:

In a proceeding on an application filed pursuant to this section, any interested person, including a person over whose property the proposed transmission line will cross, may request intervention, and the commission shall, if requested, conduct a public hearing in the county in which the transmission line is proposed to be constructed, or, if the transmission line is proposed to be constructed in more than one county, in one of those counties.

Accordingly, a CPCN is not required for any transmission line that is (1) less than one mile in total length; (2) less than 138 kV; (3) a replacement or upgrade; (4) a relocation due to other construction; or (5) constructed solely to serve a single customer.

⁹ KRS 278.010(1).

Here, despite EKPC's attempts to categorize the line as an upgrade and replacement project, our analysis need not venture beyond a finding that the sum of the deviations from the existing rights-of-way, in total, exceed one mile. EKPC has admitted to that threshold number, which differs from the facts as presented in the 2005 request for a Commission Staff opinion, subject to certain allegedly ameliorating circumstances. In an attempt to reduce the length of the total line deviation from the original centerline to a distance under one mile, EKPC contends that each individual deviation should be looked at in isolation; that portions of the deviation were on EKPC property and should not apply to the one-mile restriction; and that those portions that deviated from the original centerline that are upgrades or replacements should not count against the one-mile limitation.

The 345-kV line was constructed to function as an entirely new line. It did not replicate the original path of the existing 69-kV line and instead deviated from the original centerline in several significant segments totaling in excess of one mile in length, as discussed below. The 345-kV line extends beyond the 138-kv line to the North Clark Switching Station and was constructed to alleviate frequent overloading at the Avon autotransformer.¹⁰ The new 345-kv line accomplished this through bypassing the Avon autotransformer and thereby providing a new circuit to the J.K. Smith Generating Station.¹¹ This was a wholly unrelated purpose and function to the preexisting 69-kv transmission line. The 345-kV line, therefore, cannot in any way be classed as a mere replacement or upgrade.

¹⁰ Direct Testimony of Mary Jane Warner at 6.

¹¹ *Id.* at 4.

As to the 138-kV line, had EKPC simply replaced the existing 69-kV line with a new 138-kV line on the same rights-of-way of the existing line, it is undisputed that that project would have been classed as an upgrade and a CPCN would not have been required. However, while EKPC replaced the existing 69-kV line with a double circuit 345/138-kV line, it deviated from the original transmission line's path at several points. Although the exact length of the specific deviations and the number of deviations has evolved throughout the case, the deviations have consistently totaled in excess of 5,280 feet in length. EKPC posits that a line can be a replacement or upgrade without following the exact path of the preexisting line. It also argues that any deviations should be treated individually and not in composite. Additionally, for the first time in its brief, EKPC suggests that the Commission should treat the 138-kV line as a 69-kV line because, while the line is insulated to operate at 138 kV, all of the modifications necessary to operate at this voltage were not installed and it is unknown when they will be installed. The Commission finds that throughout the brunt of this proceeding EKPC has presented the 138-kV line as a 138-kV line, and it did in fact expend an approximate additional 2 percent of the total project cost to upgrade the line to eventually operate at 138 kV. Thus, for purposes of determining the need for a CPCN, the line is properly considered to be, and in practice should be treated as, a 138-kV line.

Next, EKPC's attempt to fit the 345/138-kV transmission line into the safe harbor provision of KRS 278.020(2) is untenable. In its post-hearing brief, EKPC states it made two significant deviations — the first being 3,755 feet of new, non-replacement, and upgraded, 345-kV line near the Sideview/North Clark Switching Station, and the second being a relocation near the Hunt substation of both circuits, for a total distance of 6,975

feet.¹² However, EKPC argues that all but 559 feet of the second deviation should be construed as a replacement and upgrade and that only 2,434 feet of the entire project should be deemed "new."¹³

The Commission finds that lines that deviate from their original centerline in excess of one mile in total or serve entirely new functions cannot be deemed a replacement or upgrade. In addition to exempting replacement and upgrade projects from the CPCN requirement, KRS 278.020(2)(b) also exempts from the CPCN requirement lines that must be relocated to accommodate certain infrastructure projects. In crafting this discrete exemption, the legislature clearly differentiated a replacement or upgrade from a relocation. Taken to the extreme conclusion, if adopted, EKPC's contention that a line need not follow its original right-of-way would permit a utility to construct a new line zigzagging across its service territory under the guise of a replacement or upgrade, without any regard to the actual placement of the preexisting line. Such an interpretation would significantly undermine the CPCN requirement codified in KRS 278.020(2).

Moreover, the Commission finds that the deviations from a transmission line's existing rights-of-way must be assessed in totality and not individually. The 18.5-mile construction comprised one project, and there is no basis for reviewing each individual deviation in isolation. KRS 278.020(2) speaks to construction of "any electric transmission line . . . more than five thousand two hundred eighty (5,280) feet in length." Here, EKPC constructed one double-circuit transmission line and the project should be viewed in its entirety and cannot be broken into discrete unrelated segments for the

¹² EKPC's brief at 6.

¹³ EKPC does not reconcile its assertion that only 2,434 feet of the 10,730 of total deviations should be treated as new, despite its assertion in the same paragraph on page 6 of its post-hearing brief that the entire 3,755 feet of new line near the Sideview/North Clark Switching Station is new 345-KV line.

purpose of determining whether or not a CPCN is required. Additionally, that a portion of the deviations are on EKPC owned property does not render those portions of the deviations immune from the one-mile deviation limitation. Neither KRS 278.020(1) nor KRS 278.020(2) contain an exemption from the requirement to obtain prior Commission approval for the construction of transmission lines constructed on utility-owned property. Rather, KRS 278.020(2) exempts from the CPCN requirement transmission lines constructed solely to serve one customer where such lines will not cross property owned by any other individual. This exemption is wholly inapplicable in this circumstance, and the fact that certain segments of the deviations occur on EKPC-owned property is irrelevant to our conclusion as to the need for a CPCN.

Furthermore, KRS 278.020(8) provides a means for any interested person, including a landowner on whose property a transmission line will be routed, to intervene and be heard in an action before the Commission regarding the line. Through failing to seek a CPCN, EKPC deprived those impacted individuals of the opportunity to intervene and to request and participate in a formal hearing prior to the line's construction. Because the double-circuit 345/138-kV line deviated from the original centerline for over one mile, the Commission finds that pursuant to KRS 278.020(2), the double-circuit 345/138-kV transmission line was a completely new transmission line. Moreover, due to the significant deviations from the original right-of-way, the Commission need not address whether the addition of the 345-kV line would have been classed as an upgrade had it not deviated from the original right-of-way in excess of one mile. Accordingly, the Commission finds that the new 18.5-mile double-circuit line required a CPCN and that neither circuit was exempted from the ordinary extension exemption set forth in KRS 278.020(2)(a)-(c).

REMEDY

Having determined that EKPC was required to procure a CPCN prior to constructing the 18.5-mile transmission line, the Commission finds that a separate action should be commenced for the purpose of requiring EKPC to show cause why it should not be subject to the penalties in KRS 278.990 for violating KRS 278.020(2).

While Complainants request that the Commission order EKPC to relocate the transmission line, as discussed above, Complainants have failed to demonstrate a verifiable health concern. Thus, there is no basis to require the line's relocation as a matter of health or safety. Furthermore, relocating the line would adversely impact other nearby residents and could not be done without a significant cost to ratepayers. Complainants have failed to show sufficient justification for placing this burden on their neighbors. Accordingly, the Commission finds that Complainants' request to relocate the 345/138-kV transmission line should be denied and this matter should be closed.

IT IS THEREFORE ORDERED that:

1. EKPC's Motion to Strike is granted.
2. The following portions of Complainants' post-hearing brief are stricken from the record:
 - a. On page 7, under the heading "Definitions as they Relate to Transmission Lines," the discussion regarding expert definitions for certain statutory terms;
 - b. On pages 24-25, the discussion regarding SERC and payment of "penalties" for self-reported reliability issues;
 - c. On pages 26-27, the discussion regarding human resistance to micro shocks; and

- d. The Legislative Research Commission minutes attached thereto.
3. Complainants' motion to compel is denied.
4. Complainants' request for EKPC to relocate the 345/138-kV transmission line is denied.
5. A separate action shall be commenced for the purposes of requiring EKPC to show cause why it should not be subject to penalties pursuant to KRS 278.990 for violation of KRS 278.020(2).
6. This proceeding shall be closed and removed from the Commission's docket.

By the Commission

ENTERED
JUL 06 2015
KENTUCKY PUBLIC SERVICE COMMISSION

ATTEST:

Executive Director



*East Kentucky Power Cooperative, Inc.
4775 Lexington Road
P. O. Box 707
Winchester, KY 40392-0707

*Patrick C Woods
Director, Regulatory & Compliance
East Kentucky Power Cooperative, Inc.
P. O. Box 707
Winchester, KY 40392-0707