

THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

Before Commissioners: Shari Feist Albrecht, Chair
Jay Scott Emler
Dwight D. Keen

In the Matter of Empire District Electric)
Company to Show Cause Whether it is in) Docket No. 19-EPDE-180-SHO
Violation of the National Electrical Safety)
Code Rule 214 A.5.)

ORDER TO SHOW CAUSE

NOW, the above-captioned matter comes before the State Corporation Commission of the State of Kansas (“Commission”) for consideration and decision. Having reviewed its files and records and being duly advised in the premises, the Commission makes the following findings:

1. On May 1, 2018, in Docket No. 17-EPDE-393-CPL, the Empire District Electric Company (“Empire”) filed its Kansas Reliability Performance Report which noted in the Major Event Report that a transmission structure supporting two transmission lines had failed and “toppled” on June 17, 2017.¹ Staff later learned through discovery that Empire performed an inspection on September 16, 2015, and discovered agricultural equipment had damaged one of the transmission structure’s legs.²

2. In March of 2016, Empire hired a vendor to make an inspection of the damaged structure and decided the best option was to replace the transmission structure.³ Design of the new transmission structure was finalized in January 2017, and construction on the replacement was scheduled for June 1, 2017.⁴ The damaged transmission structure was never replaced and it was

¹ Empire’s 2017 Kansas Reliability Performance Report, at 8, Docket No. 17-EPDE-393-CPL (May 1, 2018).

² Staff Report and Recommendation, at 1, (Attachment 1) (Oct. 26, 2018).

³ *Id.* at 3.

⁴ *Id.*

eventually toppled by a windstorm. From the time Empire became aware of the damaged transmission structure to the day it fell, approximately 21 months had passed.

3. Through K.A.R. 82-12-2, the Commission has adopted the National Electric Safety Code (NESC) standards and Rule 214 A.5 of the NESC states:⁵

“Lines and equipment with recorded defects that could reasonably be expected to endanger life or property shall be promptly repaired, disconnected or isolated.”

Pursuant to K.S.A. 66-138, Empire is subject to fines up to \$5,000 per violation of the standards imposed generally by K.A.R. 82-12-2 and more specifically by NESC Rule 214 A.5.⁶

4. While the original damage done to the transmission structure was out of the control of Empire, Staff notes the amount of time to replace the damaged structure is unacceptable.⁷ Staff has determined Empire is in violation of K.A.R. 82-12-2 and the NESC Rule 214 A.5 standard.

5. Commission Staff ("Staff") submitted a Report and Recommendation (R&R) dated October 26, 2018, attached hereto and made a part hereof by reference. Staff's R&R recommends the Commission open a proceeding requiring Empire to Show Cause as to why it should not be penalized \$5,000 for violating NESC Rule 214 A.5 for the transmission structure failure and instruct Empire to inspect the insulators and clamps on the existing transmission structures.⁸

6. The Commission finds Staff's findings and recommendation to be reasonable and hereby adopts the same.

⁵ K.A.R. 82-12-2, "The standard entitled the "National Electrical Safety Code," or NESC, of the American National Standards Institute, 1997 edition, ANSI C2-1997, approved June 6, 1996, and published by the Institute of Electrical and Electrical Engineers, or IEEE, is adopted by reference."

⁶ K.S.A. 66-138 states if any public utility governed by the provisions of this act fails to perform any duty enjoined upon it in this act, it shall, for every such violation forfeit and pay to the state treasurer a sum not less than \$100 and not more than \$5,000 for such offense.

⁷ Attachment 1, at 5, (Oct. 26, 2018).

⁸ *Id.*

IT IS, THEREFORE, BY THE COMMISSION ORDERED THAT:

A. Empire shall show cause within thirty (30) days of receipt of this Order, why it did not violate NESC Rule 214 A.5 and should not be subjected to a fine of \$5,000 for failing to maintain compliance with the NESC Rule 214 A.5 and K.A.R. 82-12-2.

B. Any party may file and serve a petition for reconsideration pursuant to the requirements and time limits established by K.S.A. 77-529(a)(1).⁹

C. The Commission retains jurisdiction over the subject matter and parties for the purpose of issuing such further order, or orders, as it may deem necessary.

BY THE COMMISSION IT IS SO ORDERED.

Albrecht, Chair; Emler, Commissioner; Keen, Commissioner

Dated: 11/15/2018



Lynn M. Retz
Secretary to the Commission

CAB

⁹ K.S.A. 66-118b; K.S.A. 77-503(c); K.S.A. 77-531(b).

STATE OF KANSAS



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SHARI FEIST ALBRECHT, CHAIR | JAY SCOTT EMLER, COMMISSIONER | DWIGHT D. KEEN, COMMISSIONER

TO: Chair Shari Feist Albrecht
Commissioner Jay Scott Emler
Commissioner Dwight D. Keen

FROM: Tim Stringer, Energy Engineer
Leo Haynos, Chief Engineer
Jeff McClanahan, Director of Utilities

DATE: October 26, 2018

SUBJECT: Recommendation to Order Empire District Electric Company to Show Cause
Whether it is in Violation of the National Electrical Safety Code Rule 214 A.5

EXECUTIVE SUMMARY:

On June 17, 2017, a transmission structure operated by Empire District Electric Company (Empire) toppled to the ground after a summer windstorm. Through discovery, Staff determined Empire was aware of the damage to the structure since at least September 16, 2015, when an inspection¹ found that agricultural equipment had damaged the transmission structure.² Staff contends that the delay in replacing the structure is a violation of the National Electric Safety Code (NESC) Rule 214 A.5 as adopted by K.A.R. 82-12-2. In this case, Staff recommends the Commission assess a \$5,000 civil penalty against Empire for the above described violation of Kansas regulations. Because there may be extenuating circumstances regarding the transmission structure failure that are unknown to Staff, we recommend the Commission order Empire to Show Cause as to why it should not be penalized for violating NESC Rule 214 A.5

BACKGROUND:

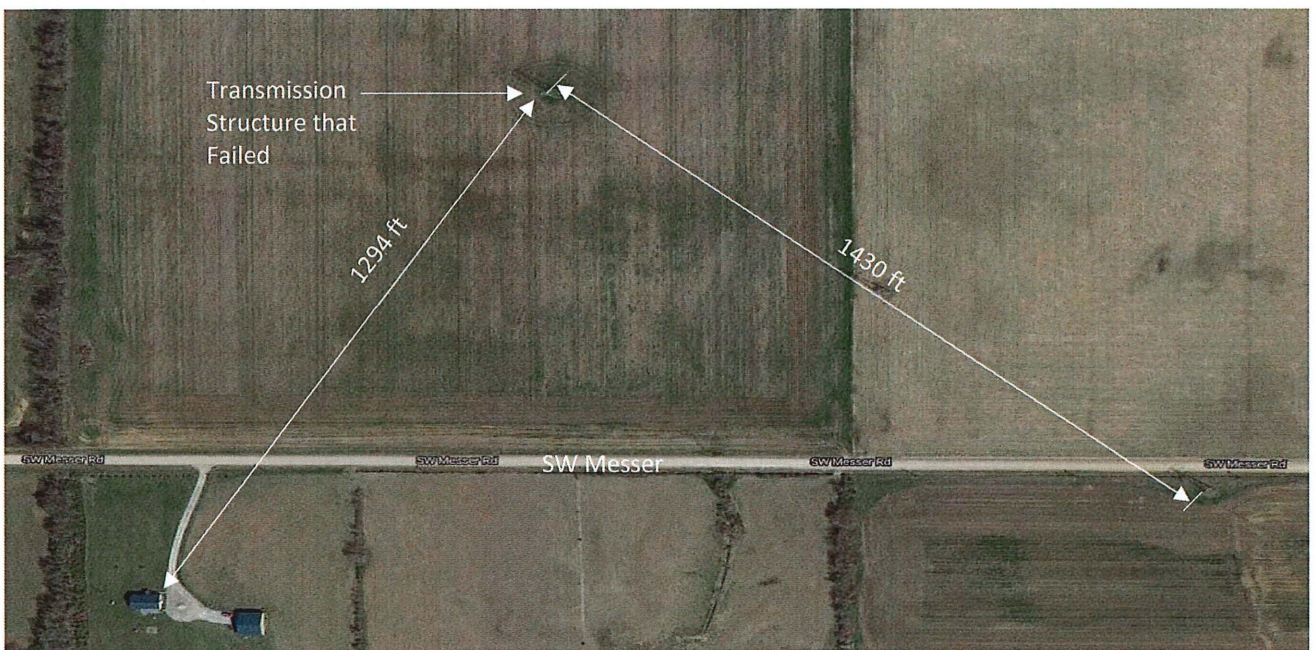
In Empire's 2017 Kansas Reliability Performance Report, Empire reported that on June 17, 2017, a significant power outage occurred on its system when a transmission structure supporting two transmission lines – 161kV and 69kV- collapsed. Through discovery, Staff has learned that Empire performed an inspection on September 16, 2015, and discovered agricultural equipment had damaged one leg of the transmission line's four-legged lattice steel structure. Below is a snapshot from Google Earth showing the transmission line crossing SW Messer Rd near Columbus, Kansas.

¹ Response to Staff Data Request 4.

² Empire's 2017 Kansas Reliability Performance Report, Page 8, Docket 17-EPDE-393-CPL.



The snapshot below shows the location of the transmission structure in the farm field and the distances to the nearest farmhouse and distance to the road crossing.



Two pictures of the damaged transmission structure:



To investigate the extent of the damage to structure, Empire hired an inspection vendor who informed Empire (March 2016) that a replacement of the structure was the best option.³ Empire then hired an engineering consultant to develop a replacement solution for the existing structure. The design was finalized in January 2017, issued for construction, and was scheduled to be replaced on June 1, 2017. Empire states the replacement was delayed because of scheduling issues with the contractor.⁴ They further state that accessing the energized structure complicated the scheduling because the ground needed to be dry and solid in order to minimize crop damage and maintain positive working relationships with landowners.⁵ Before the new structure could be erected, a windstorm with 60 miles per hour wind and .75-inch hail⁶ toppled the damaged structure causing an extended outage.

³ Response to Staff Data Request 10.

⁴ Response to Staff Data Request 4.

⁵ Response to Staff Data Request 10.

⁶ National Weather Service *Storm Data and Unusual Weather Phenomena*, June 17, 2017, Cherokee County, Kansas.

Below are pictures of the toppled transmission structure and the replacement structure.



ANALYSIS:

In reviewing this explanation, Staff has determined the amount of time to replace the damaged structure is a violation of the National Electric Safety Code (NESC) Rule 214 A.5 as adopted by K.A.R. 82-12-2. The NESC requirement is as follows:

“Lines and equipment with recorded defects that could reasonably be expected to endanger life or property shall be promptly repaired, disconnected, or isolated.”

The transmission structure, located in the middle of the tilled field, presented itself as a hazard to the farmers who worked in the field near the structure. If the structure fell when a farm worker was near it during planting, cultivating, and harvesting, it could have caused fatal injuries to the worker and destroyed farm equipment. In addition, the toppled transmission structure was located next to the transmission tower that spanned the gravel road. If the toppled transmission structure had collapsed the tower next to the road, the transmission line potentially would have fallen low enough for a car or farm vehicle to come into contact with it. Staff is also concerned that the fallen structure stressed the conductor clamps and insulators on the adjacent towers and could accelerate their failure.

CONCLUSION:

The severely damaged transmission structure remained in service for 21 months with Empire’s knowledge before being replaced. Staff acknowledges the original damage to the structure was beyond the control of the utility, but the timeframe to replace the structure is Empire’s responsibility and Staff contends the delay in this case is unacceptable. Staff notes K.S.A. 66-138 exposes the utility to a civil penalty of up to \$5,000 per day per violation. Assuming Empire needed six months to design, build, and construct a replacement pole, the violation would have existed for 180 days, which would result in a maximum penalty of \$900,000. However, Staff recognizes Empire was taking steps to make the repair. Although the structural collapse resulted in a prolonged outage, there were no injuries or property damage from the collapse. Therefore, Staff recommends the Commission impose a minimum fine of \$5,000 for the violation.

RECOMMENDATION:

Because there may be extenuating circumstances regarding the transmission structure failure that are unknown to Staff, we recommend the Commission order Empire to Show Cause as to why it should not be penalized \$5,000 for violating NESC Rule 214 A.5 for the above described transmission structure failure. Staff recommends the Commission instruct Empire to inspect the insulators and clamps on the existing transmission structures, if not already inspected.

CERTIFICATE OF SERVICE

19-EPDE-180-SHO

I, the undersigned, certify that the true copy of the attached Order has been served to the following parties by means of electronic service on 11/15/2018.

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REGULATORY AFFAIRS (CENTRAL REGION)
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/S/ DeeAnn Shupe

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