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RECEIVED

JUN 29 2007

**PUBLIC SERVICE
COMMISSION**

VIA OVERNIGHT MAIL

June 28, 2007

Ms. Elizabeth O'Donnell
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, Kentucky 40602-0615

Re: An Investigation of The Reliability Measures of Kentucky's Jurisdictional
Electric Distribution Utilities and Certain Reliability Maintenance Practices,
Administrative Case No. 2006-00494

Dear Ms. O'Donnell:

Enclosed are an original and 12 copies of Duke Energy Kentucky, Inc.'s Brief in the above-referenced case. Please date-stamp and return the extra copies in the enclosed self-addressed envelope. Thank you.

Very truly yours,

John J. Finnigan, Jr.
Associate General Counsel

cc: All parties of record (w/encl.)

RECEIVED

JUN 29 2007

**PUBLIC SERVICE
COMMISSION**

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of An Investigation of)
the Reliability Measures of)
Kentucky's Jurisdictional Electric)
Distribution Utilities and Certain)
Reliability Maintenance Practices)
)
)

ADMINISTRATIVE
CASE NO. 2006-00494

BRIEF OF DUKE ENERGY KENTUCKY, INC.

TO THE HONORABLE PUBLIC SERVICE COMMISSION:

Please accept for filing in the above-captioned proceeding the Brief of Duke Energy Kentucky, Inc.

Respectfully submitted,

DUKE ENERGY KENTUCKY, INC.

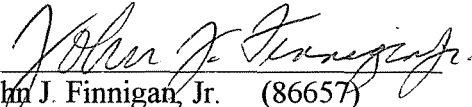

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BRIEF OF DUKE ENERGY KENTUCKY, INC.

I. BACKGROUND

The Public Service Commission (“Commission”) initiated the above-styled proceeding by Order dated December 12, 2006 (“December Order”).¹ The purpose of the proceeding is to investigate the adequacy of the current reliability reporting requirements, determine whether there is a need for consistent standards to report reliability performance, review the reasonableness of Right-of-Way (“ROW”) and vegetation management programs, and to determine if statewide minimum standards are necessary.²

In its December Order, the Commission noted that Kentucky’s jurisdictional distribution utilities’ tariffs require the utilities to provide adequate service and to use reasonable efforts to prevent interruptions of service.³ The Commission further noted that utilities currently must notify the Commission of any “loss of service for four (4) or more hours to ten (10) percent or 500 or more of the utilities’ customers, whichever is less.” But the Commission noted that this rule does not adequately inform the Commission as to whether utilities provide reliable service on a day-to-day basis.⁴ Additionally, the Commission noted ROW maintenance and vegetation management are important for providing reliable service, and that the Commission would consider in this proceeding whether to adopt ROW and vegetation management standards.⁵

The Commission’s December Order included a procedural schedule and issued initial information requests, requiring responses from all utilities and cooperatives

¹ *In the Matter of an Investigation of the Reliability Measures of Kentucky’s Jurisdictional Electric Distribution Utilities and Certain Reliability Maintenance Practices* (hereinafter “*In re Reliability Investigation*”), Administrative Case No. 2006-494 (Order)(December 12, 2006).

² *Id.* at 3.

³ *Id.* at 2.

⁴ *Id.*

⁵ *Id.* at 3.

(hereinafter jointly referred to as “utilities”), to be provided by January 12, 2007.⁶ All interested parties were invited to attend an informal conference at the Commission’s offices on March 8, 2007 to discuss the case. The Commission also posed specific questions to each utility, to be answered during the informal conference.⁷ On April 13, 2007, Duke Energy Kentucky, Inc. (“DE-Kentucky”) timely filed its direct testimony from company witnesses Lee Taylor and Gary Williams. The other utilities also responded to information requests and filed testimony.

The Commission held a public hearing on May 23, 2007. DE-Kentucky, along with many of the other utilities, presented witnesses for cross-examination by Commission Staff. The Commission Staff and the Commissioners posed questions regarding each utility’s reliability practices, monitoring capabilities and opinions regarding possible standards or guidelines to be adopted by the Commission.

DE-Kentucky recognizes and applauds the Commission’s initiative in this proceeding to investigate the issue of service reliability. DE-Kentucky strives to provide safe, adequate and reliable service at reasonable cost, and welcomes the opportunity to discuss its reliability practices. DE-Kentucky thanks the Commission for the opportunity to participate in this investigation.

DE-Kentucky respectfully requests that the Commission consider the following matters as the Commission weighs whether to adopt statewide reliability, ROW and vegetation management standards.

⁶ *Id.* at Appendix A and B.

⁷ *In re Reliability Investigation*, Administrative Case No. 2006-494 (Intra-Agency Memorandum) (March 14, 2007).

II. DISCUSSION

A. Reliability Reporting

1. If the Commission adopts a reliability reporting standard, it should be based upon IEEE 1366, and should require reporting of SAIDI and SAIFI, with Major Event Day segmentation.

DE-Kentucky agrees with the majority of utilities that a statewide reliability standard is not necessary.⁸ If, however, the Commission decides to adopt a reliability reporting standard, the reporting standard should be based on the Institute of Electrical and Electronics Engineers (“IEEE”) Standard No. 1366-2003 (hereinafter “IEEE Standard 1366”). This standard is the most commonly used and the most widely accepted standard for calculating reliability metrics, including momentary versus sustained interruptions, and Major Event Day (“MED”) segmentation.⁹

If the Commission adopts a reliability reporting standard consistent with IEEE Standard 1366, this would provide the Commission consistent data for all utilities. This would also facilitate the utilities’ reporting of reliability data, because vendors of outage management reporting software products incorporate IEEE Standard 1366 reporting capabilities into their products. If the Commission adopts a reliability reporting standard based on IEEE Standard 1366, the Commission should allow a transition period for those utilities that may not be fully using IEEE Standard 1366 for their internal reporting.

If the Commission adopts a reliability reporting standard, the Commission should require utilities to report their reliability index scores both with and without MED segmentation. The Commission should require reporting of the System Average

⁸ Cross-examination of Everett Phillips, Kentucky Power (TR at 29); cross-examination of Leroy S. Taylor, Duke Energy Kentucky (TR at 34); cross-examination of Scott Sidwell, Clark Energy (TR at 44); cross-examination of Tony Wells, Farmers Rural Electric (TR at 49); and cross-examination of Greg Thomas, KU and LG&E (TR at 37).

⁹ Cross-examination of Leroy S. Taylor, Jr. (TR at 74).

Interruption Frequency Index (“SAIFI”) and the System Average Interruption Duration Index (“SAIDI”). The Commission could also consider including the Customer Average Duration Index (“CAIDI”), which is simply the SAIDI score divided by the number of customers. SAIFI, SAIDI and CAIDI are clearly defined industry standard indicies, which measure average number of interruptions, total time to restore power, and average time to restore power per customer, respectively.¹⁰

In particular, SAIDI and SAIFI are useful for a utility to measure its system performance against historic levels over a long time period.¹¹ These two indices provide a measurement of service adequacy, and more importantly, an indication whether the quality of service is deteriorating or improving over time. In conjunction, SAIDI and SAIFI can be used to quantify the number, type and level of interruptions and afford a utility the opportunity to become proactive in identifying ways to improve service on the system.

2. The Commission should not implement a statewide reliability performance requirement that all utilities must meet. Rather, the Commission should evaluate the reliability of each individual utility’s service against that utility’s own past performance.

The Commission should not adopt an identical statewide reliability performance requirement for all utilities. One utility’s SAIDI and SAIFI scores cannot easily be compared to another utility’s scores. A utility providing service in a rural or mountainous region faces significantly different reliability challenges than a utility providing service in an urban area.¹² Given the unique service area characteristics faced by each utility, any reliability performance standard or target should be flexible and based

¹⁰ Rick Bertelson, Commission Staff (TR at 27).

¹¹ Cross-examination of Everett Phillips (TR at 28); *see also* cross-examination of Scott Sidwell (TR at 45).

¹² Cross-examination of Leroy S. Taylor, Jr. (TR at 32).

upon each utility's individual circumstances.¹³ The appropriate comparison for the Commission to make is to compare a utility's reliability scores against the utility's own past reliability scores.

A statewide firm target level of reliability could be problematic for the Commission to monitor and for all utilities to implement and achieve. Continuity of service to a particular customer depends upon many variables, such as weather extremities, weather variability, geography, load density, and service configuration. Many of these variables are entirely outside the utility's control. For example, annual weather variability is the single largest factor affecting DE-Kentucky's measured reliability performance. Each Kentucky utility has a different mix of these variables.

The Commission should consider these variables in determining whether utilities are providing reliable service.¹⁴ Accordingly, the Commission should determine whether a utility is providing reasonable and adequate service based upon the individual utility's own performance, not an arbitrary benchmark regulating all jurisdictional utilities. The Commission should remain mindful of the delicate balance between providing, achieving, and maintaining a particular level of reliability versus what customers are willing to pay through rates. Considering all factors, a statewide reliability standard would likely be too high for some utilities and too low for others, due to the mix of variables described above. DE-Kentucky therefore recommends that the Commission not adopt a single uniform reliability performance requirement for all utilities.

¹³ *Id.* at 32- 34.

¹⁴ Cross-examination of Greg Thomas (TR at 35).

3. SAIDI and SAIFI Reporting should be at the System Level and the Commission should Evaluate an Individual Utility's Reliability Performance Over a Period of Years.

DE-Kentucky, like many of the other utilities, can measure SAIDI and SAIFI levels at the circuit, substation or even customer level.¹⁵ However, DE-Kentucky believes an assessment at the higher system level will provide the Commission with the most useful information and the best indication of the utility's overall provision of service.¹⁶

As thoroughly discussed at the evidentiary hearing, individual circuits and substations experience varying types and levels of interruptions depending upon the geographic location in the state.¹⁷ Some circuits are naturally more susceptible or vulnerable to the elements simply because of the area in which they are situated. Reliability metrics at the circuit level are highly variable from year-to-year.¹⁸ Infrequent, random events on individual circuits often produce large annual differences in circuit reliability measurements.¹⁹ Reporting at the system level normalizes those discrepancies, giving a more accurate picture of the utility's overall continuity of service.²⁰

Although, a comparison by circuit or substation is useful to the utility in identifying potential trouble spots in a system, this measurement does not give an accurate indication of the utility's overall performance throughout its entire service territory and is not a truly comparable assessment of the utility's overall quality of service. In addition, reporting at a level lower than the system level would likely become

¹⁵ Cross-examination of Leroy S. Taylor, Jr. (TR at 32-33).

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

cumbersome for the Commission to evaluate because of the sheer volume of information.²¹

A system-level reporting requirement is the most reasonable approach.²² Therefore, if the Commission determines that a reliability reporting requirement is necessary, it should be based upon SAIDI, SAIFI and possibly CAIDI levels, and should be reported by each utility at the system level.

Additionally, if the Commission requires reliability reporting, the measurement should also be over a period no less than five years.²³ Undoubtedly, the number and length of interruptions directly affects customer satisfaction and in turn, the adequacy of service. All utilities strive to minimize interruptions in the most cost-effective and reasonable manner possible. A reporting requirement that is based upon data gathered in a single year is little more than a snapshot of the utility's performance at a particular time.

The Commission should not set an annual target level for each utility. By definition, SAIDI, SAIFI, and even CAIDI, are a hindsight look at the utility's performance. The utility has no real time indication of its performance until the end of a particular year when it is too late to take corrective action. Such a snapshot does not reflect the ability to maintain adequate service levels because it fails to sift out atypical years and events. The ability to maintain and even improve service levels over time is the goal of DE-Kentucky. A measurement over several years however, establishes trends and allows an examination into the utility's ability to maintain or improve upon its

²¹ Cross-examination of Gary Grubbs, Fleming-Mason Energy Cooperative (TR at 41).

²² Cross-examination of Everett Phillips (TR at 28); *see also* cross-examination of Leroy S. Taylor, Jr. (TR at 31 and 33); cross-examination of Scott Sidwell (TR at 44); cross-examination of Tony Wells (TR at 48); and cross-examination of Don Schaefer (TR at 51).

²³ Cross-examination of Leroy S. Taylor, Jr. (TR at 34).

quality of service.²⁴ If DE-Kentucky sees service quality trending downward on a particular circuit or at the system level, it can better respond in a cost effective manner to the benefit of all jurisdictional ratepayers.

Accordingly, DE-Kentucky respectfully suggests that if the Commission determines that reliability targets should be established, the Commission should focus on gathering consistent reliability data before setting reliability targets.

B. The Commission Should Not Implement a Statewide Right-of-Way Maintenance or Vegetation Management Standard.

DE-Kentucky shares the opinion of the majority of utilities, that the Commission should not implement a statewide ROW or vegetation management standard.²⁵ Utilities would have to overcome significant obstacles before being able to implement a statewide ROW or vegetation management standard. Each utility circuit or part of a circuit has varying factors affecting reliability. Vegetative growth is one of those factors.

A comprehensive statewide vegetation management standard would likely place a significant cost burden upon the utility as it adapts to meet the requirements.²⁶ For example, a utility's ability to cut or trim in certain areas is wholly dependent upon property rights already acquired from customers.²⁷ If a minimum clearance standard were implemented, utilities would be placed in the position of having to re-negotiate and purchase rights-of-way or easements from individual property owners along a particular circuit. This would lead to cost increases that would eventually be passed along to customers in the form of higher rates.

²⁴

Id.

²⁵

Cross-examination of Gary Williams, Duke Energy Kentucky, Inc. (TR at 129).

²⁶

Cross-examination of Everett Phillips (TR at 132).

²⁷

Cross-examination of Gary Grubbs (TR at 117).

If the Commission determines that some measure of greater monitoring of vegetation management practices is necessary, the Commission should permit each utility to design and file its own, individually tailored vegetation management plan to address each utility's specific needs. If the Commission does require the filing of such a plan, DE-Kentucky agrees with the majority of utilities that such a plan should be at a high level with deference given to the utility's experience in maintaining its system, should permit a reasonable level of flexibility to address specific situations, and should be based upon National Electric Safety Code ("NESC") Standard No. 218.²⁸

DE-Kentucky maintains that a vegetation management plan should include total system ROW inspections and trim cycles of approximately five years in frequency. The plans should also include clearing distance recommendations rather than strict standards requiring absolute compliance.²⁹ As explained by Jerry Carter of Farmers Rural Electric, utilities need to be flexible to address individual circumstances, be responsive to customer needs, and consider growth cycles of various types of trees.³⁰

Based on the Commission's general supervisory authority over utilities, the Commission would have the authority to investigate deviations from filed plans through a show cause order and could require a corrective action plan to correct unreasonable deviations from the management plans.

²⁸ Cross-examination of Wayne Anderson, Shelby Energy (TR at 82-83); *see also* cross-examination of Steve Conover, South Kentucky RECC (TR at 85-88); and cross-examination of Gary Grubbs (TR at 118).

²⁹ Cross-examination of Scott Sidwell (TR at 124).

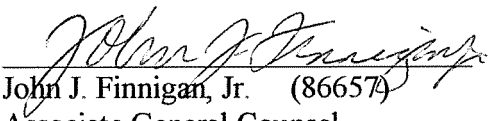
³⁰ Cross-examination of Jerry Carter, Farmers' Rural Electric (TR at 120-122).

III. CONCLUSION

DE-Kentucky congratulates this Commission on organizing and conducting this review of utilities' reliability reporting, ROW and vegetation management practices. Through testimony, responses to interrogatories and this brief, DE-Kentucky has shown that if the Commission determines that a statewide reliability reporting plan is necessary, it should be at the system level, based upon SAIDI and SAIFI levels, with MED segmentation, and include five years of data. It should not include a benchmark or target level of achievement. Similarly, a statewide vegetation management or ROW management standard is not necessary. Rather, Companies should be permitted to file their own high-level plans with trimming and inspection cycles that allow flexibility to account for consumer property rights, species of vegetation and varying growth rates.

Respectfully submitted,

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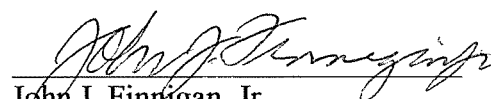
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