

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Proposed Rule 4 CSR 240-23.010,)		
Establishing Reliability Standards for)		Case No. EX-2008-0230
Investor-Owned Electrical Corporations.)		
)		

OPINION OF COMMISSIONER ROBERT M. CLAYTON III
CONCURRING IN PART AND DISSENTING IN PART

This Commissioner issues this opinion to explain his position on several rulemakings previously filed under Case Number EX-2007-0214, and subsequently separated into Case Numbers EX-2008-0232 (Vegetation Management), EX-2008-0231 (Infrastructure) and EX-2008-0230 (Reliability Standards). These rules were proposed to improve electrical service reliability during periods of good and bad weather. Because of a number of procedural missteps and because of disagreement among Commissioners on policy, we are now well over a year since the power outages that instigated the rulemakings with no new policies in place.

Case Number EX-2007-0214 was opened to evaluate and strengthen the Commission's rules that affect reliability and durability of electric utilities' power delivery services. Storm-related outages as well as concerns on day-to-day electrical reliability have directed this Commission to consider three separate rulemakings. The original drafts of each of the three rules were designed to complement each other and each is critically important in the overall effort at improving reliability. The first rule

relates to Vegetation Management Standards and Reporting.¹ The second rule relates to Infrastructure Inspection and Reporting.² The third rule is identified as Reliability Standards and Reporting.³

Today's procedural steps begin the process of rulemaking for the third leg of a "three legged stool" of proposed reliability rules. These rules set standards for the collection and organization of data to evaluate the level of service provided by a Missouri electric utility. Currently, Missouri has no standard, for reliable service in place. There are no metrics or statistics to identify what is good service versus poor service. Over the years, the Commission has apparently relied on the utilities to provide their own statistics and analysis to determine whether service was acceptable. Because the Commission has no mandatory service level, prosecutions for poor service are problematic without clear mandates. Each electric utility gathered and organized its data separately making system comparisons difficult. Some data was not collected because infrastructure was not in place to gather it and some utilities only reported data at aggregated levels masking any underlying problems at the circuit level or district level.

¹ Case Number EX-2008-0232. The proposed rules drafted by this Commissioner and former Commissioner Gaw addressing new standards for Vegetation Management and Reporting were initially sent to the Secretary of State on June 14, 2007, for publication. The majority issued its Final Order of Rulemaking with a modified version of the rule, over this Commissioner's objection, on October 2, 2007. Due to procedural problems, this rulemaking was initiated a second time on December 13, 2007, using the final product of the first proceeding.

² Case Number EX-2008-0231. The proposed rules drafted by this Commissioner and former Commissioner Gaw addressing new standards for Infrastructure Inspection and Reporting were initially sent to the Secretary of State on June 14, 2007, for publication. The majority issued its Final Order of Rulemaking with a modified version of the rule, over this Commissioner's objection on October 11, 2007. Due to procedural problems, this rulemaking was initiated a second time on December 13, 2007, using the final product of the first proceeding.

³ Case Number ES-2008-0230. The proposed rule drafted by this Commissioner and former Commissioner Gaw addressing Reliability Standards and Reporting was delivered to the Missouri Department of Economic Development on August 2, 2007 for procedural and fiscal review. The proposed rule was not returned to the PSC until November 2007. The majority, over this Commissioner's objection, issued a new proposed rule on Reliability Standards on November 8, 2007, which was, again, delivered to the Missouri Department of Economic Development on the same day for procedural and fiscal review. The rule was not returned from DED until yesterday, January 14, 2008.

The proposed rules to be published by the Secretary of State will begin the process of setting very basic criteria for the collection and measurement of reliability data. These rules are starkly different from the version originally filed with the Department of Economic Development on August 2, 2007. That version as proposed by former Commissioner Gaw and this Commissioner is attached. The majority has rewritten the proposed reliability rule with a significant change in focus, a reduction in utility obligations and a lack of a number of consumer benefits. It is this Commissioner's hope that the rulemaking process will allow the Commission to rethink its position and strengthen the core of the plan for improved reliability in Missouri.

This Commissioner would urge the Commission to address a number of shortcomings in the proposed reliability rules. These rules do not go far enough in setting high standards to which Missouri customers deserve. The original version set a reliability goal of the top twenty-fifth percentile in nationwide comparisons while the new version ignores setting any standard. The current draft of the reliability rule lacks a number of reliability indices that need to be tracked for this Commission to have the information to evaluate reliability including metrics known as MAIFI (Momentary Average Interruption Event Frequency Index), CELID8 (Customers Experiencing Long Interruption Durations 8) and CEMI6 (Customers Experiencing Multiple Interruptions 6). Furthermore, the current version does not disaggregate the collected data to the circuit level which is critical in evaluating reliable service. The indices included in the rule including SAIDI (System Average Interruption Duration Index), SAIFI (System Average Interruption Frequency Index), CAIDI (Customer Average Interruption Duration Index) and CAIFI (Customer Average Interruption Frequency Index), as well as the above-mentioned

indices, should be calculated at the system-wide level, the district level or sub-system level and at the circuit level.

Additionally, the proposed rule is silent relating to benchmarks which must be met to avoid penalties. While this rule requires identification of the worst performing circuits which is an important element, it ignores circuits that are not the worst but are obviously performing at sub-standard levels of service. The original rule identified the worst performing circuits as those at the bottom 10 per cent while the new version reduces that amount to the lowest 5 per cent.


The proposed rule also lacks any reference to bill credits for customers who pay for electrical service only to face long periods of outages. Customers must be given an opportunity to be made whole if paying for substandard or non-existent service. Rather than working to find language to legally address this concern, the proposed rule completely ignores this consumer issue.

Lastly, this rule is silent with regard to penalties and fails to set clear guidelines for what the Commission demands for compliance with its rules and Orders. Benchmarks and high standards would provide objective criteria to impose penalties on a utility. The Commission must be prepared to impose penalties if a utility fails to meet those standards. This rule should identify the circumstances where it will act to force compliance.

This Commissioner supports opening this rulemaking because something must be done to improve reliability. However, this Commissioner believes that the rule needs to be strengthened to give consumers the safe and reliable service they deserve at just and reasonable prices.

For the foregoing reasons, this Commissioner concurs in part and dissents, in part.

Respectfully submitted,


Robert M. Clayton III
Commissioner

Dated at Jefferson City, Missouri,
on this 15th day of January 2008.

Exhibit 1

Proposed Reliability Standards and Reporting Rule

DRAFT 08-02-07

Reliability Rule

4 CSR 240-23.010

(1) Purpose and Scope

This rule sets forth requirements based on a uniform methodology for measuring reliability and ensuring quality of the electric distribution service that is being delivered to Missouri customers by electrical corporations operating in Missouri subject to the Commission's regulatory authority.

(2) Applicability

This rule, which include requirements for data maintenance, records retention and service interruption information, establishes standards to measure the reliability of service on an annual and as needed basis under all operating conditions. It is the general obligation of a regulated electrical corporation to provide sufficient resources in order to provide safe, adequate and proper service to its customers. The Commission may also consider other factors in determining whether or not an electric corporation has provided safe and adequate service.

Electric corporations are encouraged to explore the use of proven state of the art technology and to promote distribution reliability service improvements. Finally, this rule also sets forth requirements for the implementation and scope of outage management systems.

(3) Installation of New Lines

(A) To the greatest extent possible, consistent with utility easements and applicable law, electrical corporations shall locate all newly installed electrical corporation-owned distribution facilities in subdivisions underground.

(B) Conversion of existing overhead feeder line to underground shall not be required for those new buildings or multiple-occupancy buildings on lots that abut an existing overhead feeder line.

(4) Definitions

The following words and terms, as used in this rule, shall have the following meanings, unless the context clearly indicates otherwise.

(A) "Answer" means that an electrical corporation representative, voice response unit, or automated operator system begins to process the call. An acknowledgement that the customer is waiting on the line does not constitute an answer.

(B) "Average System Availability Index" (ASAI) is the ratio of time the system provided service to each customer. ASAI is expressed by the following formula:

$$\text{ASAI} = \text{Total customer hours service was available} / \text{Total customer hours service was demanded.}$$

(C) "Benchmark" means the top 25th percentile of CAIDI, CAIFI, SAIDI, SAIFI, and ASAI or a value determined by the Commission.

(D) "Call" means a measurable effort by a customer to obtain a telephone connection whether the connection is completed or not.

(E) "Call blockage factor" means the percentage of calls that do not get answered. The call blockage factor is calculated by multiplying the remainder obtained by subtracting the number of answers from the number of calls by 100 and then dividing that value by the total number of calls.

(F) "Complaint response" or "response" means a communication from the electrical corporation to the customer that identifies the problem and a solution to the complaint.

(G) "Complaint response factor" means the annual percentage of the complaints forwarded to an electrical corporation by the commission that are responded to within the time period prescribed by these rules.

(H) "Corrective action" means the maintenance, repair, or replacement of electric corporation system components and structures to allow them to function safely and reliably.

(I) "Customer Average Interruption Duration Index (CAIDI)" represents the average time in minutes required to restore service to those customers that experienced sustained interruptions during the reporting period. CAIDI is defined as follows:

$$\text{CAIDI} = \text{Sum of customer interruption durations} / \text{Total number of customer interruptions.}$$

(J) "Customer Average Interruption Frequency Index" (CAIFI) represents the average frequency of sustained interruptions for those customers experiencing sustained interruptions during the year. The customer is counted once regardless

of the number of times interrupted for this calculation. CAIFI is expressed by the following formula:

CAIFI = Total number of customer interruptions / Total number of customers interrupted.

- (K) "Customers Experiencing Long Interruption Durations⁸" ("CELID⁸") represents the total number of customers that have experienced a cumulative total of more than eight hours of outages.
- (L) "Customers Experiencing Multiple Interruptions⁶" ("CEMI⁶") is an index that represents the total number of customers that have experienced nine or more interruptions in a single reporting year. CEMI⁶ is expressed by the following formula:
- CEMI⁶: total number of customers that experienced more than six (6) sustained interruptions / total number of customers served.
- (M) "Distribution circuit" means a three phase set of conductors emanating from a distribution substation circuit breaker serving customers in a defined local distribution area. This includes three phase, two phase and single phase branches.
- (N) "Subdivision Distribution systems" refers to terminal poles, manholes, feeder lines, service lines, switchgear, pad-mounted or submersible transformers, and pedestals utilized to provide electric service to subdivisions.
- (O) "Electric corporation" means an electrical corporation as defined in § 386.020(15), RSMo. Cum. Supp. 2005.
- (P) "Electric distribution system" means that portion of an electric system which delivers electric energy from transformation points on the transmission system to points of connection at the customers' premises.
- (Q) "Subdivision Feeder lines" are the portions of single-phase or three-phase circuits extending from terminal poles or manholes at or near the perimeter of the subdivision into and throughout the subdivision, used to provide service within the subdivision and from which the submersible or pad-mounted transformers are energized. Subdivision feeder lines also include that portion of the secondary circuit extending from a transformer to pedestals, but excluding service lines.
- (R) "Interruption" means the loss of electric service to one or more customers. See "outage" and "major event." The types of interruption include momentary event, sustained and scheduled.
- (S) "Interruption, duration" means the period (measured in minutes, hours, or days) from the start of an interruption of electric service until service is restored to the customer. An interruption may require step-restoration tracking to provide reliable index calculations.

(T) "Interruption, momentary event" means an interruption of electric service to one or more customers of duration limited to the period required to restore service by an interrupting device. Such switching operations by interrupting devices must be completed in five minutes or less. This includes all reclosing operations which occur within five minutes of the first interruption. For example, if a recloser or breaker operates two, three, or four times and then holds within five minutes, the event shall be considered one momentary event interruption.

(U) "Interruption, scheduled" means an interruption of electric power that results when one or more components are deliberately taken out of service at a selected time, usually for the purposes of preventative maintenance, repair or construction.

1. This interruption does not apply to generation interruptions.
2. To determine if the loss of electric service should be classified as a scheduled interruptions. If it is possible to defer the interruption, the interruption is a scheduled interruption. Scheduled interruptions shall not be included in the SAIDI, SAIFI, CAIDI, CAIFI, and ASAI calculations.

(V) "Interruption, sustained" means an interruption of electric service to one or more customers which is longer than five minutes in duration.

(W) "Interrupting device" means a device capable of being reclosed whose purpose includes interrupting fault currents, isolating faulted components, disconnecting loads and restoring service. These devices can be manual, automatic, or motor operated. Examples include transmission and distribution breakers, line reclosers, motor operated switches, fuses or other devices.

(X) "Major event" means any of the following:

1. A sustained interruption of electric service resulting from conditions beyond the control of the electrical corporation. Causes may include, but are not limited to, thunderstorms, tornadoes, hurricanes, heat waves or snow and ice storms, which affect at least 10 percent of the customers in an operating area. The major event shall be deemed to extend to those other operating areas of that electrical corporation which provide assistance to the affected area(s). The Commission retains authority to examine the characterization of a major event;
2. An unscheduled interruption, which affects one or more customers, of electric service resulting from an action:
 - a. Taken by an electrical corporation under the direction of an Independent System Operator;
 - b. Taken by the electrical corporation to prevent an uncontrolled or cascading interruption of electric service; or

c. Taken by the electrical corporation to maintain the adequacy and security of the electric system, including emergency load control, emergency switching and energy conservation procedures;

3. A sustained interruption occurring during an event which is outside the control of the electrical corporation and is of sufficient intensity to give rise to a state of emergency or disaster being declared by State government; and
4. When an electrical corporation provides mutual aid to another electrical corporation or utility, the assisting electrical corporation may apply to the Commission for permission to exclude its sustained interruptions from its SAIDI, SAIFI, CAIDI, CAIFI, and ASAI calculations.

a. Interruptions occurring during a major event in one or more operating areas shall not be included in the electrical corporation's SAIDI, SAIFI, CAIDI, CAIFI, and ASAI calculations of those affected operating area(s). However, interruption data for major events shall be collected, according to the reporting requirements outlined in 4 CSR 240-23.010(11).

(Y) "Minimum bill prorated on a daily basis" means the amount that results from dividing the customer's minimum bill amount by the number of days in the billing period and then by multiplying that quotient by the number of days during which the customer remained out of service.

(Z) "Minimum reliability level" is defined as the minimum acceptable reliability as measured by SAIDI, SAIFI, CAIDI, CAIFI, and ASAI data and outlined in 4 CSR 240-23.010(9). Performance equal to or better than the minimum reliability level is acceptable. Performance worse than the minimum reliability level is unacceptable and may be subject to penalty as permitted under Missouri statutes.

(AA) "Operating area" means a geographical subdivision of each electrical corporation's service area as defined by the electrical corporation. These areas may also be referred to as regions, divisions or districts.

(BB) "Out-of-service" means the current operational status of a component that cannot perform its intended function due to its condition.

1. An out-of-service component may or may not cause an interruption of electric service to customers, depending on system configuration.
2. This definition does not apply to generation equipment.

(CC) "Outage Management System" (OMS) as described under 4 CSR 240-23.010(18).

- (DD) "Power quality" means the characteristics of electric power received by the customer, with the exception of interruptions. Power quality characteristics include waveform irregularities and voltage variations--either prolonged or transient. Power quality problems include, but are not limited to, disturbances such as high or low voltage, voltage spikes or transients, flickers and voltage sags, surges and short-time overvoltages, as well as harmonics and noise.
- (EE) "Reliability" means providing safe, proper and adequate electric service is supplied to customers without interruption.
- (FF) "Same-circuit repetitive interruption" means a grouping of more than 10 customers on a distribution circuit who experience multiple interruptions under all conditions.
- (GG) "Service line" is that portion of the distribution circuit extending from a transformer or pole, directly to the point of delivery to the customer at the building or multiple-occupancy building.
- (HH) "Service restoration" means that the interruption condition has been corrected and that the interrupted customer(s) have regained normal electric service.
- (II) "Step restoration" means the restoration of service to blocks of customers in an area until the entire area or circuit is restored.
- (JJ) A "subdivision" is a lot, tract, or parcel of land divided into two or more lots, plots, sites, or other divisions for use for new residential buildings or on which is constructed new multiple-occupancy buildings pursuant to a recorded plat (if recording is required).
- (KK) "System Average Interruption Duration Index" (SAIDI) represents the average time each customer experiences a sustained interruption. SAIDI is expressed by the following formula:
- $$\text{SAIDI} = \text{total number of customer sustained interruption durations} / \text{Total number of customers served.}$$
- (LL) "System Average Interruption Frequency Index" (SAIFI) represents the average frequency of sustained interruptions per customer during the reporting period. SAIFI is expressed by the following formula:
- $$\text{SAIFI} = \text{total number of customer sustained interruptions} / \text{total number of customer's served.}$$
- (MM) "Total number of customers served" means the number of active metered accounts as of the last day of the prior year or the average of 12 months of active

monthly metered accounts. This number generally excludes all street lighting (dusk-to-dawn lighting, municipal street lighting, traffic lights) and sales to other electric utilities.

(5) Reliability performance levels

(A) An electrical corporation at year-end shall calculate SAIDI, SAIFI, ASAI, CAIDI, CAIFI, CELID8, and CEMI6 indices, with and without major events:

1. On a system wide basis;
2. For each operating area; and
3. For each distribution circuit.

(B) Data included in the above calculations shall include all interruptions associated with or related to high voltage components (above 600 volts).

(6) Service reliability

(A) Each electrical corporation shall have reasonable programs and procedures necessary to maintain the minimum reliability levels for its respective operating areas.

(B) The programs shall be designed to sustain reliability and, where appropriate, improve reliability. Each electrical corporation shall utilize appropriate and qualified resources to maintain at a minimum the minimum reliability levels for its respective operating areas.

(C) Interruptions shall not be reduced by unduly characterizing a sustained interruption as a series of momentary event interruptions. Electric service interruptions shall be reported to Commission staff in accordance with this rule.

(7) Power quality

(A) Each electrical corporation shall consider power quality in the design and maintenance of its distribution system components. Each electrical corporation shall mitigate, to the extent feasible and cost effective, power quality disturbances under its control that adversely affect customers' properly designed equipment.

(B) Each electrical corporation shall, as a minimum, maintain a power quality program that includes objectives and procedures. The program shall provide for prompt response to customer reports of power quality problems. The program shall prevent, mitigate or resolve power quality problems within the electrical corporation's control to the extent feasible and cost-effective.

(C) The electrical corporation's power quality program shall be filed with the Commission by January 31, 2008, and verified by an officer who has knowledge of the matters stated therein.

(8) Individual circuit reliability performance

- (A) Each electrical corporation shall maintain records of reliability performance levels for each circuit on its system. The SAIDI, SAIFI, CAIDI, CAIFI, and ASAI values shall be calculated for each circuit.
- (B) Each electrical corporation shall identify poor performing circuits. A poor performing circuit is one that serves ten or more customers that sustain a SAIDI, SAIFI, CAIDI, ASAI, or CAIFI value for a reporting year that is among the highest (worst) 10% of that EC's circuits each year.
- (C) Each electrical corporation shall maintain and operate its distribution system so that no distribution circuit during any two consecutive reporting years exceeds a SAIDI, SAIFI, CAIDI, CAIFI, or ASAI value for a reporting year by more than 300% greater than the electric corporation's total Missouri system wide average of all circuits, or exceed 1.5 times it's respective benchmark set for the system under 4 CSR 240-23.010(9).
- (D) Each electrical corporation shall identify and analyze poor performing circuit(s) in accordance with 4 CSR 240-23.010(10)(J).

(9) Establishment of benchmark service level values

- (A) An electrical corporation's reliability performance level is established as follows:
 - 1. The CAIDI benchmark for the operating areas and the total Missouri system wide area is the top 25th percentile of the best performing electrical corporations and rural electric cooperatives in the prior year's national average or a value determined by the Commission;
 - 2. The SAIDI benchmark for operating areas and the total Missouri system wide area is the top 25th percentile of the best performing electrical corporation and rural electric cooperatives in the prior year's national average or a value determined by the Commission;
 - 3. The SAIFI benchmark for operating areas and the total Missouri system wide area is the top 25th percentile of the best performing electrical corporation and rural electric cooperatives in the prior year's national average or a value determined by the Commission;
 - 4. The CAIFI benchmark for operating areas and the total Missouri system wide area is the top 25th percentile of the best performing electrical corporation and rural electric cooperatives in the prior year's national average or a value determined by the Commission;
 - 5. The ASAI benchmark for operating areas and the total Missouri system wide area is the top 25th percentile of the best performing electrical corporation and rural electric cooperatives in the prior year's national average or a value determined by the Commission.
- (B) When the CAIDI, SAIDI, SAIFI, ASAI, and CAIFI levels of an electrical corporation's operating areas and total Missouri system area do not meet the minimum reliability level, further review, analysis and corrective action are required to explain how to meet and implement the benchmark standard.

(C) The initial minimum reliability is:

1. Total Missouri system wide area CAIDI = 90 minutes, SAIDI = 100 minutes, SAIFI = 1.2 occurrences, and CAIFI = 1.9 occurrences.
2. Operating area CAIDI = 110 minutes, SAIDI = 150 minutes, SAIFI = 1.4 occurrences, and CAIFI = 2.2 occurrences.

(D) The minimum reliability level to be assigned to each operating area shall be reviewed and may be adjusted for subsequent years after consideration of various factors including:

1. A comparison of actual multi-year CAIDI, SAIDI, SAIFI, ASAI, and CAIFI;
2. Trends among indices;
3. The average high and low values of multi-year indices;
4. Local geography, weather and electric system design of an operating area;
5. The relative performance of an operating area in relation to other operating areas of a given electrical corporation's franchise area;
6. A comparison of the performance of all operating areas of all electrical corporation; and
7. A comparison of the performance of the electrical corporation to other states or industry statistics.

(10) Annual System Performance Report

(A) Each electrical corporation shall file with the Commission, on January 31st of each year, an Annual System Performance Report (the "Annual Report") verified by an officer who has knowledge of the matters stated therein.

(B) The Annual Report shall include the electric service reliability performance for the electric corporation's system, by operating area and distribution circuit, levels of SAIFI, SAIDI, CAIFI, CAIDI, and ASAI. The report filed on January 31st of each year shall cover the preceding operating year.

(C) The Annual Report shall include a summary of:

1. The electrical corporation's reliability programs, including inspection and maintenance programs;
2. Changes and exceptions to the electrical corporation's current program(s);
3. The electrical corporation's new reliability program(s);
4. The electrical corporation's power quality program
5. Technology initiatives to improve reliability;
6. The number of personnel (broken down by bargaining and non-bargaining unit) in each electrical corporation's operating area(s) and a summary statement referencing each electrical corporation's reliability enhancement training program; and

7. Verification by an officer of the electrical corporation that the electric corporation is funding and addressing, in its business plan, the reliability programs to achieve the benchmark reliability levels and as a minimum to maintain the minimum reliability levels for each operating area.
8. The call blockage factor. If the call blockage factor is more than 5%, then the annual report shall contain a detailed explanation of the steps that the electrical corporation is taking to bring its performance to at least that level.
9. The complaint response factor. If the complaint response factor is less than 90% within 3 business days, then the annual report shall contain a detailed explanation of the steps that the electrical corporation is taking to bring its performance to at least that level.
10. The average customer call answer time. If the average customer call time is 90 seconds or more, then the report shall contain a detailed explanation of the steps that the electrical corporation is taking to bring its performance to at least that level.
11. The service restoration factor for all conditions. If the service restoration factor is less than 90% of customers restored within 36 hours or less, then the report shall contain a detailed explanation of the steps that the electrical corporation is taking to bring its performance to at least that level.
12. The service restoration factor for normal conditions. If the service restoration factor is less than 90% of customers restored within 8 hours or less, then the report shall contain a detailed explanation of the steps that the electrical corporation is taking to bring its performance to at least that level.
13. The service restoration factor for major events. If the service restoration factor is less than 90% of customers restored within 60 hours or less, then the report shall contain a detailed explanation of the steps that the electrical corporation is taking to bring its performance to at least that level.
14. The same-circuit repetitive interruption factor. If the same circuit repetitive interruption factor is more than 5% of circuits experiencing 5 or more same-circuit repetitive interruptions within a 12-month period, then the report shall contain a detailed explanation of the steps that the electrical corporation is taking to bring its performance to at least that level.
15. Identify 2% of distribution feeders or 10 feeders, whichever is more, that have the poorest reliability. The electrical corporation shall identify the method used to determine the feeders with the poorest reliability and shall indicate any planned corrective actions to improve feeder performance and target dates for completion or explain why no action is required. The electrical corporation shall ensure that feeders, identified as having the poorest reliability, shall not appear in any two consecutive Performance Reports without corrective action.

(D) The Annual Report shall also include statistical tables and charts as follows for electrical corporation reliability performance Statewide and by each operating area and circuit:

1. Current year and ten years of SAIDI, SAIFI, CAIDI, CAIFI, CEMI6, CELID8, and ASAI classified by system, operating area, and circuit; and
2. Ten years of causes of interruptions.

(E) The Annual Report shall provide the Commission with the ability to assess the electrical corporation's efforts to maintain reliable electric service to all customers in the State of Missouri. Such reporting shall include the following items:

1. Current year expenditures, labor resource hours, and progress measures for each capital and/or maintenance program designed to support reliable electric service, overall and broken down into the following components:
 - a. Transmission vegetation maintenance;
 - b. Transmission maintenance, excluding vegetation, by total, preventive, and corrective categories;
 - c. Transmission capital infrastructure improvements;
 - d. Distribution vegetation maintenance;
 - e. Distribution maintenance, excluding vegetation, by total, preventive and corrective categories;
 - f. Distribution capital infrastructure improvements; and
 - g. Any related process, practice or material improvements.

(F) The Annual Report shall also include current operations management system (OMS) data to include:

1. Number of outages by outage type;
2. Number of outages by outage cause;
3. Total number of customers at year end;
4. Total number of customers that experienced an outage; and
5. Total customer minutes of outage time.

(G) Causes of interruptions compared to the previous ten-year (10 year) performance.

Example of categories to be evaluated include:

1. Ice;
2. Wind;
3. Rain;
4. Customer equipment;
5. Equipment failure;
6. Animals;
7. Human element;
8. Lightning;
9. Loss of supply;
10. Major events;
11. Scheduled outages;

12. Tree contacts; and
13. Unknown.

(H) The Annual Report shall include a summary of each major event.

(I) In the event that an electrical corporation's reliability performance in an operating area does not meet the minimum reliability level for the calendar year, the Annual Report shall include the following:

1. An analysis of the service interruption causes, patterns and trends;
2. A description of the corrective actions taken or to be taken by the electrical corporation and the target dates for completion; and
3. If no corrective actions are planned, an explanation shall be provided.

(J) Each annual report shall, at a minimum, provide the following information for each distribution circuit:

1. Circuit identification number;
2. The location of each distribution circuit;
3. The number of outages and their cause by distribution circuit;
4. The worst performing distribution circuits as set out in 4 CSR 240-23.010(8)(B); and
5. All the circuits that do not meet the standards set out in 4 CSR 240-23.010(8)(C).
 - a. For circuits identified under this rule, 4 CSR 240-23.010(10)(J)(4 & 5), the electrical corporation shall indicate any planned corrective action to improve circuit performance and target dates for completion.
 - b. The electrical corporation shall ensure that circuits, identified as having the poorest reliability, under either 4 CSR 240-23.010(8)(B) or (C), shall not appear in any two consecutive Annual System Performance Reports without initiated corrective action. If a circuit appears three or more times in any five year period then the Commission may seek penalties against the electric corporation.

(K) Each electrical corporation shall report the age, current conditions, reliability and performance of the jurisdictional entity's existing transmission, distribution facilities and circuits.

(L) Each electrical corporation shall, within 15 business days after filing the annual report, make it available to the public and the media. The electrical corporation shall also make the annual report available on its website.

(11) Major event report

(A) The electrical corporation shall, within 15 business days after the end of a major event, file a report to the Commission verified by an officer who has knowledge of the matters stated therein, which shall include the following:

1. The date and time when the electrical corporation's storm center opened and closed;
2. By operating area or distribution circuit, the total number of customers out of service over the course of the major event, by four hour intervals.
3. The date and time when 75%, 95% and 100% of customers affected by a major event were restored;
4. The total number of trouble assignments repaired by facility classifications (poles, miles of wire, transformers)
5. The number of trouble locations and classifications;
6. The total number of customers affected;
7. The location, substation and feeder identifiers of all affected facilities;
8. The total number of customer-minutes of the event (sum of the interruption durations times the number of customers affected)
9. The time at which the mutual aid and non-company contractor crews were requested, arrived for duty and were released, and the mutual aid and non-contractor response(s) to the request(s) for assistance;
10. A timeline profile of the number of company line crews, mutual aid crews, non-company contractor line and tree crews working on restoration activities during the duration of the major event; and
11. A timeline profile of the number of company crews sent to an affected operating area to assist in the restoration effort.

(B) The electrical corporation shall continue to cooperate with any Commission request for information before, during and after a major event.

(C) The electrical corporation is expected to restore service to customers as quickly and safely as permitted by major event conditions.

(12) Interruptions of service

(A) Each electrical corporation shall exercise reasonable diligence to avoid interruptions of service and, when such interruptions occur, service shall be restored promptly, in accordance with 4 CSR 240-23.010(13), consistent with safe

practice. Each electrical corporation shall keep a record for a period of three year of each reported interruption of service.

- (B) Records of the interruptions of service shall be kept in a manner suitable for analysis for the purpose of minimizing possible future interruptions and shall include the time, cause, and duration of the interruptions as well as the remedial action taken.
- (C) Interruptions to service made in accordance with provision in interruptible service contracts between the electrical corporation and its customers need not be reported.

(13) Prompt restoration standards

- (A) Electrical corporations shall begin the restoration of service to an affected operating area within two hours of notification by two or more customers of any loss of electric service affecting those customers served by the same affected distribution circuit protective device within the system. Beginning restoration of service shall be defined as dispatching an individual or crew to an affected area to begin the restoration process.
- (B) The electrical corporation shall meet the following restoration standards:
 - 1. Under normal conditions, an electrical corporation shall restore service within 8 hours of notification to not less than 90% of its customers experiencing service interruptions.
 - 2. In response to major events, an electrical corporation shall restore service within 60 hours of notification to not less than 90% of its customers experiencing service interruptions.
 - 3. In the aggregate when responding to both outages during normal conditions and major events, an electrical corporation shall restore service within 36 hours of notification to not less than 90% of its customers experiencing service interruptions.
 - 4. Considering data derived through the amalgamation of data from both normal and catastrophic conditions, an electrical corporation shall not experience not more than four (4) same circuit repetitive interruptions in a 12-month period on more than five percent (5%) of its circuits.
- (C) When possible, each electrical corporation shall place the highest priority on responding to emergency (safety) situations and high priority on restoring service to other facilities essential to the public welfare. These priority requests may come from police, fire, rescue, authorized emergency service providers or public facility operators.
- (D) In situations where it is not practicable to respond within two hours to a reported interruption (including but not limited to safety reasons, inaccessibility, multiple

simultaneous interruptions, storms or other system emergencies), the electrical corporation shall respond as soon as the situation permits.

(14) Service Quality Levels of Performance

(A) An electrical corporation shall meet the following service quality standards:

1. An average customer call time of less than 90 seconds.
2. A call blockage factor of 5% or less.
3. A complaint response factor of 90% or more within 3 business days.
4. An electrical corporation shall have a meter reading factor of 85% or more within the approved period, including customer reads.
5. Complete 90% or more of its new service installations within 15 business days.

(15) Customer Credits for Failure to Restore Service Promptly (Major event)

(A) Unless an electrical corporation requests a waiver pursuant to (§_____) of these rules, an electrical corporation that fails to restore service to a customer within 120 hours after an interruption that occurred during the course of a major event shall provide to any affected customer a bill credit on the customer's next bill. The amount of the credit provided to a residential customer shall be the greater of \$25.00 or the customer's monthly customer charge.

(16) Customer Credits for failure to restore service promptly (normal conditions)

(A) Unless an electrical corporation request a waiver pursuant to _____ of these rules, an electrical corporation that fails to restore service to a customer within 16 hours after an interruption that occurred during normal conditions shall provide to any affected customer that notifies the electrical corporation of the interruption a bill credit on the customer's next bill. The amount of the credit provided to a residential customer shall be the greater of \$25.00 or the customer's monthly customer charge. The amount of the credit provided to any other distribution customer shall be the customer's minimum bill prorated on a daily basis.

(17) Multiple Billing Credits allowed

(A) An electrical corporation's obligation to provide a customer with billing credit for one reason does not excuse the obligation to provide an additional billing credit in the same month for another reason.

(18) Credits for repetitive interruptions same circuit

(A) Unless an electrical corporation request a waiver from the Commission pursuant to _____, a customer of an electrical corporation that experiences and notifies the electrical corporation of more than 7 interruptions in a 12 month period due to a same-circuit repetitive interruption shall be entitled to a billing credit on the customer's next bill. The amount of the credit provided to a residential customer

shall be the greater of \$100.00 or the customer's monthly customer charge. The amount of the credit provided to any other distribution customer shall be the customer's minimum bill prorated on daily basis.

- (B) Following provision of the billing credit to a customer experiencing more than 7 interruptions in a 12 month period due to a same-circuit repetitive interruption, the electrical corporation's interruption counter shall be reset to zero to ensure that another credit to the customer will be processed only after the occurrence of another 8 interruptions in a 12 month period.

(19) Outage management systems (OMS)

- (A) Each electrical corporation shall substantially implement the outage management system as described in this section by December 31, 2008.
- (B) At a minimum the outage management system shall consist of a fully integrated geographic information system (GIS), a voice response unit (VRU), a software driven outage assessment tool and an energy management system/supervisory control and data acquisition (EMS/ SCADA).
- (C) When fully implemented the outage management system shall be able to digitally map the entire electric distribution system, group customers who are out of service to the most probable interrupting device that operated, associate customers with distribution facilities, generate street-map indicating outage locations, dispatch crews and/or troubleshooters via computer (mobile data terminals), the accurately identify the number of customers without electric service, accurately communicate the number of customers without electric service and estimate their expected restoration time, and accurately communicate the number and when customers were restored.

(20) Filing of an Emergency Operations Plan

(A) Emergency Operations Plan.

1. **Filing requirements.** By December 31, 2007, each electrical corporation shall file with the commission a general description of its emergency operations plan verified by an officer who has knowledge of the matters stated therein. The electrical corporation's senior operations officer shall verify that all relevant operating personnel within the electrical corporation are familiar with the plan, and will follow the plan and its provisions in the event of a system or local emergency. Each time an electrical corporation updates its plan, it shall file with the commission, a description of the updates to the plan at least 30 days before such changes take effect.
2. **Copy available for inspection.** A general description of the plan shall also be made available at the electrical corporation's main office for inspection by the public.
3. **Information to be included in the plan.** Each electrical corporation's emergency plan must include, but need not be limited to, the following:

- a. A registry of critical loads directly served by the electrical corporation. This registry shall be updated as necessary, but not less often than annually. The description of the plan filed with the commission shall include the location of the registry, how the electrical corporation ensures that it is maintaining an accurate registry, how the electrical corporation will provide assistance to critical load customers in the event of an unplanned outage, how the electrical corporation intends to communicate with the critical load customers, and how the electrical corporation is training its staff with respect to serving critical customers and loads
- b. A communications plan that describes the procedures for contacting the media, customers and critical loads directly served by the electrical corporation as soon as reasonably possible either before or at the onset of an electrical emergency. The communications plan should also address how the electrical corporation's telephone system and complaint-handling procedures will be augmented during an emergency. Electrical corporations should make every reasonable effort to solicit help from cogenerators and independent power producers during times of generation shortages to prevent interruptions in service;
- c. Curtailment priorities and procedures for shedding load and rotating black-outs;
- d. Priorities for restoration of service;
- e. A summary of power plant weatherization plans and procedures; and
- 4. A summary of the electrical corporation's alternative fuel and storage capacity.

(21) Penalties, Fines, Sanctions and/or Ratemaking Disallowances

(A) Failure to comply with any provision of this rule may subject the violator to penalties, fines, sanctions and /or ratemaking disallowances in accordance with the Commission's statutory authority. No penalties, fines, sanctions and/or ratemaking disallowances shall be imposed for violations of this rule for a period of six months from the effective date of this rule.

(B) An electrical corporation that violates this rule may be subject to a penalty of not less than one hundred dollars (\$100.00) and not more than two thousand dollars (\$2,000.00) per day per violation, for each day the violation occurs as permitted under Missouri Statutes. The Commission shall notify the electrical corporation of the violation(s) in writing. Upon receipt of the written notice of violation, the electrical corporation shall have five business days to correct the violation(s). Any failure to correct the violation may subject the electrical corporation to a penalty of not less than \$100.00 per day for each violation, calculated from the day such written notice was received by the electrical corporation.

(C) The Commission may consider violations of this rule as a relevant factor in setting rates for the electrical corporation in a case where the Commission is examining the propriety of the electrical corporation's rates.

(D) Penalties, fines, sanctions and/or ratemaking disallowances imposed for violations of

this rule are in addition to, not a replacement for, other penalties, fines and/or sanctions that apply under other State laws and regulations and under Federal laws and regulations.

(E) In determining the appropriate penalties, fines, sanctions and/or ratemaking disallowances for violation of this rule, the Commission shall consider the following criteria, and any other factors deemed appropriate and material to the electrical corporation's delay or failure to comply:

1. The good faith efforts, if any, of the electrical corporation in attempting to comply with this rule;
2. The gravity of the violation;
3. The number of past violations by the electrical corporation, including violations of this rule, as well as of other standards, guidelines and procedures adopted by the Commission;
4. The appropriateness of the sanction(s) in light of the size of the electrical corporation;
5. Events judged by the Commission to be beyond the control of the electrical corporation; and
6. Mitigating factors.

(22) Variances

A variance from a provision of this rule may be granted only for good cause shown.