Big Rivers
ELECTRIC CORPORATION

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October 30, 2020

Via Electronic Mail to PSCED@ky.gov

Executive Director
Public Service Commission of Kentucky
211 Sower Boulevard
Frankfort, KY 40601

Re: *Big Rivers Electric Corporation's Transmission Vegetation Management Program and Emergency Restoration Plan*

Dear Executive Director:

Pursuant to 807 KAR 5:006, 807 KAR 5:041, and Applicable Standards for Inspection of Utility Operations, Big Rivers Electric Corporation ("Big Rivers") is filing with the letter its (*i*) Transmission Vegetation Management Program and (*ii*) 2020 Emergency Restoration Plan.

Big Rivers will file the requisite paper copies of this filing within thirty days after the current state of emergency is lifted, as required by the Commission's Orders in Case No. 2020-00085.

Please feel free to contact me with any questions you may have about this report.

Sincerely,

/s/ Tyson Kamuf

Tyson Kamuf
Corporate Attorney
Big Rivers Electric Corporation
tyson.kamuf@bigrivers.com

Transmission Vegetation Management Program

TR-FAC-4

Effective Date: 03/18/2020

NERC Standard:
FAC-003-4

Document Information		
Current Revision	**Review Cycle**	**Subject to External Audit**
Rev. 13.0	Annual	Yes

Big Rivers Corporate Approvals		
Prepared By	Randy Hutchison	
Approval - Supervisor	Randy Hutchison	Yes
Approval - Dept. Director	Tim Tapp	Yes
Approval - Vice President	Mike Chambliss	Yes

Revision Information				
Number	**Date**	**Notes**	**Revised by**	**Approved**
Rev. 10.0	06/25/2018	Update inspection procedures	Randy Hutchison/Chris Bradley	Yes
Rev. 11.0	8/1/2018	Additional updates made to procedures	Randy Hutchison/Chris Bradley	Yes
Rev. 12.0	2/4/2019	Update 2019 Work Plan	Randy Hutchison	Yes
Rev. 2.0	01/09/13	Annual Update	Randy Hutchison	Yes
	02/13/13	Corrected Typo in Attachment 2 header.		
Rev. 3.0	01/06/14	Annual Update	Randy Hutchison	Yes
Rev. 4.0	5/27/2014	New standard FAC 003-3 effective 7-1-2014	Randy Hutchison/Chris Bradley	Yes
Rev. 5.0	2/4/2015	Update document to reflect 2015 work plan	Randy Hutchison	Yes
Rev. 6.0	1/15/2016	Annual Review – Update document to reflect 2016 work plan	Randy Hutchison	Yes
Rev. 7.0	9/29/2016	New standard FAC-003-4 effective 10-1-16	Randy Hutchison/Chris Bradley	Yes
Rev. 8.0	2/17/2017	Update 2017 work plan	Randy Hutchison	Yes
Rev. 9.0	1/17/2018	Update 2018 work plan	Randy Hutchison	Yes
Rev. 13.0	3/11/2020	Update 2020 work plan	Randy Hutchison	Yes

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Overview

Big Rivers Electric Corporation (Big Rivers) is responsible for the maintenance of approximately 1298 miles of transmission rights-of-way (ROW) in Kentucky. This includes 849 miles of 69 kV, 14 miles of 138 kV, 368 miles of 161 kV, and 68 miles of 345 kV transmission. Since no lower voltage facilities have been identified as critical by Big Rivers, the Midcontinent ISO Reliability Coordinator (MISO RC), or SERC, only the 345 kV system is subject to NERC Standard FAC-003. Consistent with this standard, the Big Rivers transmission vegetation management program (TVMP) as described in this document applies only to transmission lines 200 kV and above (the Big Rivers 345 kV system). Lower voltage transmission lines (69 kV, 138 kV, and 161 kV) and their associated clearance values are included for use as guidelines when prioritizing lower voltage vegetation management work efforts. This lower voltage vegetation maintenance related information is not intended to be used for NERC compliance efforts or otherwise applied as standards or requirements.

The TVMP addresses only vegetation within the ROW easement plus hazard trees and grow-ins. The TVMP is an integrated program consisting primarily of herbicide application and mechanical and manual methods of cutting and trimming trees. This document in its entirety fulfills the TVMP.

Requirement 1:

R1. Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the MVCD of its applicable line(s) which are either an element of an IROL, or an element of a Major WECC Transfer Path; operating within their Rating and all Rated Electrical Operating Conditions of the types shown below4[*Violation Risk Factor: High*] [*Time Horizon: Real-time*]:

R1.1 An encroachment into the MVCD as shown in FAC-003-Table 2, observed in Real-time, absent a Sustained Outage.

R1.2 An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage.

R1.3 An encroachment due to the blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage.

R1.4 An encroachment due to vegetation growth into the MVCD that caused a vegetation- related sustained Outage.

N/A: No lines within Big Rivers Transmission System have been identified or labeled as an element of and IROL, or an element of a Major WECC Transfer Path.

Requirement 2:

R2. Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the MVCD of its applicable line(s) which are not either an element of an IROL, or an element of a Major WECC Transfer Path; operating within its Rating and all Rated Electrical Operating Conditions of the types shown below [*Violation Risk Factor: High*] [*Time Horizon: Real-time*]:

2.1 An encroachment into the MVCD, observed in Real-time, absent a Sustained Outage.

2.2 An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage,

2.3 An encroachment due to blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage.

2.4 An encroachment due to vegetation growth into the line MVCD that caused a vegetation- related Sustained Outage.

Requirement 3:

R3. Each applicable Transmission Owner and applicable Generator Owner shall have documented maintenance strategies or procedures or processes or specifications it uses to prevent the encroachment of vegetation into the MVCD of its applicable lines that accounts for the following:

3.1 Movement of applicable line conductors under their Rating and all Rated Electrical Operating Conditions;

3.2 Inter-relationships between vegetation growth rates, vegetation control methods, and inspection frequency.

ROW Objectives

The overall TVMP objective is to improve system reliability through the prevention of vegetation contacts with transmission facilities consistent with all applicable requirements of NERC Standard FAC-003. This will be accomplished by eliminating vegetation grow-ins and on ROW fall-ins and by reducing the risk of off ROW fall-ins. As part of this plan, Big Rivers intends to establish low- growing plant communities along the rights-of-way to control the development of potentially threatening vegetation. All work shall be accomplished in a safe manner in accordance with the National Electrical Safety Code and Big Rivers standards.

Herbicide Objective – Provide vegetation control over the full ROW width through aerial and/or ground spraying of herbicide and selective tree removal.

Herbicide application is on a four year cycle. With the herbicide application, all on ROW woody stem vegetation (unless prohibited by chemical restriction or ornamental trees in developed areas) will be chemically killed. This will be accomplished through an aerial and/or ground application of herbicides to the entire easement width. A ground crew clean-up will follow the aerial spraying. This clean-up will include the spraying of missed spots and buffer areas to ensure vegetation clearance meets the specifications illustrated in Appendix A. Mechanical or manual means of tree removal will be utilized when chemicals cannot be applied. Vegetation on creeks, ditch banks, and wet areas will be hand cut with stumps chemically treated as necessary to avoid encroachment of the ATC of 15', depending upon species and topography. A follow-up inspection will be completed in the spring months and subsequent cleanup/spraying in the summer months of the year following the herbicide application/hand cutting/mowing.

Tree Cutting and Trimming Objective - Obtain the described Trimming Clearance through removal and/or trimming of on and off ROW hazard trees and on ROW danger trees.

Tree cutting and trimming of trees is an ongoing process on assigned priority. This work includes the cutting and trimming of on and off ROW hazard trees, the cutting of on ROW danger trees, and the trimming of ornamental yard trees. Mechanical and manual means of tree removal and trimming will be employed. All trees/brush that are directly under the line or all on either side of the line will be hand cut to provide the required Trimming Clearance from the power line conductor to vegetation. See Appendix A for graphical representation of vegetation targeted.

Work Methods

Detailed work methods utilized for all Big Rivers vegetation management activities (all voltage classes) can be found in the Big River's document: ***Attachment 1: TV Work Methods***. This document is included as Attachment 1. The Annual Big Rivers Work Plan is included as Attachment 2.

Personnel Qualifications

Big Rivers personnel directly involved in the design and implementation of the TVMP shall have, or be directly supervised by someone who has, a minimum of 5 years electric utility ROW or related experience. Personnel shall be annually trained on all the requirements of the TVMP and have the appropriate license/certification issued by the Kentucky Department of Agriculture Division of Pesticides or other governmental regulators as required by law.

Independent contractors are utilized for a significant portion of the vegetation work. However, Big Rivers does employ internal staff to supplement the work and to administer the TVMP implementation. The use of internal staff allows for greater flexibility in scheduling for inspections, emergency work, and hot spot work

Required Clearances

Trimming Clearance - Big Rivers Electric has adopted the minimum clearance from the conductor to vegetation both under and beside the line as described below. The trimming clearance values shown in the following table are based on our four year herbicide cycle and on-going tree cutting and trimming process with consideration given to the average growth rate in Western KY.

Experience has shown that under normal environmental and weather conditions, target vegetation does not exceed threshold limits within 4 years. Due to the small geographic area of our transmission system, the values are uniformly applied to all facilities within each voltage class unless otherwise documented. Overall, these clearances provide a larger margin for higher voltages. These values can be modified if local conditions dictate the need to do so. Local conditions that could result in adjusted clearances include: elevated fire risks, terrain, wetland areas, a prominent presence of species types that have a higher expected growth rate, etc. Any Trimming Clearance deviations will be documented and approved by the Transmission Manager. The side clearance will extend to a projected vertical line preventing vegetation overhanging the wire zone. This minimum clearance shall be obtained at the tree trimming cycle interval.

All trimming shall be in accordance with International Society of Arboriculture (ISA) methods and standards.

Trimming Clearance

Line	Beside Line	Under Line
345 kV	(MVCD: 4.3 ft.) + (blow out: 19.5 ft.) + (cycle grow and misc. margin: 16.2 ft.) = 40 feet	Min. Vegetation = 30 feet
Lower voltage target clearances		
138 kV/161 kV	(MVCD: 2.7 ft.) + (blow out: 17 ft.) + (cycle grow margin: 16.3 ft.) = 36 feet	Min. Vegetation = 25 feet
69 kV	(MVCD: 1.1 ft.) + (blow out: 13.5 ft.) + (cycle grow margin: 16.3 ft.) = 31 feet	Min. Vegetation = 25 feet

Action Threshold Clearance (ATC) – Conductor to vegetation clearance threshold used to determine hot spot areas that need near-term vegetation management work. With consideration given to line sag, spray cycle, expected growth under various weather conditions, and maximum blowout, 15 feet was deemed an appropriate ATC for 345 kV circuits. 15 feet is also applied to any lower voltage circuits deemed critical or identified as an IROL (to-date no such identification have been made). 10 feet is applied for all other lower voltage circuits. Vegetation found to be less than ATC will require a priority assignment to remove the vegetation.

Minimum Clearance - Absolute minimum conductors to vegetation clearances under all possible operating conditions are based on Table 2 of NERC Standard FAC-003-4 (from the Gallet Equation). The MVCD values have been updated to be consistent with the more restrictive values found in the May 14, 2015 NERC advisory and the FAC-003-4 standard. Consistent with the actual elevation of the Big Rivers territory, the MVCD applicable to elevations over sea level up to 500 feet was applied. The blowout values are based on a typical maximum span length and typical structure type utilized by Big Rivers. Minimum Clearance encroachment would be the minimum Clearance distance plus the actual blow out distance at the specific location of the vegetation (Note: max blow out does not apply to full span).

Line	Minimum Clearance in All Directions	Mid-Span Max Blow Out
345 kV	4.3 feet	19.5 feet
Lower voltage target clearances		
138 kV/161 kV	2.7 feet	17 feet
69 kV	1.1 feet	13.5 feet

Danger Tree – As described in the *Best Management Practices Companion publication to ANSI A300 Part 7: Tree, Shrub, and Other Woody Plan Maintenance – Standard Practices*, a danger tree is a tree on or off right-of-way with the potential to contact electric supply lines.

Hazard Tree – As described in the *Best Management Practices Companion publication to ANSI A300 Part 7: Tree, Shrub, and Other Woody Plan Maintenance – Standard Practices*, a hazard tree is a structurally unsound tree that could strike a target (such as electric facilities) when it fails.

Hot Spot – ROW areas in which the vegetation clearance is less than the established ATC. These areas generally require near-term attention which may result in an update to the Annual Vegetation Management Work plan.

Emergency – Conditions that result in the need for immediate vegetation management attention in a particular ROW area. Conditions could include severe storms or weather that result in transmission or vegetation damage or any identified Clearance 2 violation.

Outage Reporting

Big Rivers shall report quarterly to SERC any sustained transmission line outages caused by vegetation. Multiple sustained outages caused by the same vegetation on an individual line will be reported as one outage regardless of the actual number of outages within a 24-hour period.

The outage information that will be provided to SERC includes:

- the name of the circuit(s) outage
- the date, time and duration of the outage
- a description of the cause of the outage
- other pertinent comments
- countermeasures taken by Big Rivers

Big Rivers shall categorize an outage as one of the following:

1. An encroachment into the MVCD, observed in Real-time, absent a Sustained Outage,
2. An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage,
3. An encroachment due to blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage,
4. An encroachment due to vegetation growth into the line MVCD that caused a vegetation-related Sustained Outage.

Big Rivers will not report to SERC:

1. Vegetation-related outages from vegetation falling into lines from outside the ROW as a result of a natural disaster.
2. Vegetation-related outages due to human or animal activity.

Other circumstances beyond Big Rivers' control as defined in FAC-003

Requirement 4:

R4. Each applicable Transmission Owner and applicable Generator Owner, without any intentional time delay, shall notify the control center holding switching authority for the associated applicable line when the applicable Transmission Owner and applicable Generator Owner has confirmed the existence of a vegetation condition that is likely to cause a Fault at any moment[*Violation Risk Factor: Medium*] [*Time Horizon: Real-time*].

Energy Control Notification

All reports of ROW vegetation conditions deemed "imminent threats" to the transmission system will be directed to the Energy Control Department for action. Such reports can be expected from Big Rivers field personnel, line clearance contractor personnel, Big Rivers employees, and the public.

Examples of vegetation related threats to the system that can lead to transmission outages:

- Conductor sag into tree crowns
- Toppled trees in contact with conductors
- Dead trees close enough to lines to fall or break up onto conductor
- Poorly anchored trees leaning towards the lines (especially in drainages where tree roots have been loosened by moving water)

Upon receipt of an "imminent threat" report that safe clearance is jeopardized, Big Rivers Energy Control will evaluate the threat and implement appropriate operational measures. Energy Control will consider temporary reduction in line rating, switching the line out of service, etc. until the threat is eliminated. Energy Control will coordinate all such actions will the MISO RC.

When required, Energy Control will direct the on call maintenance supervisor to summon and dispatch the needed line clearance crew(s) to the site of clear/eliminate the interfering vegetation.

Requirement 5:

R5. When a applicable Transmission Owner and applicable Generator Owner is constrained from performing vegetation work on an applicable line operating within its Rating and all Rated Electrical Operating Conditions, and the constraint may lead to a vegetation encroachment into the MVCD prior to the implementation of the next annual work plan, then the applicable Transmission Owner or applicable Generator Owner shall take corrective action to ensure continued vegetation management to prevent encroachments [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning*].

Mitigation Measures

If Big Rivers is restricted from attaining proper clearance due to landowner refusal to give permission to apply herbicide or to remove/cut trees, details of the situation will be documented on a "Danger/Hazard Tree(s) Form" as seen in Appendix B. These forms will be submitted to the Engineering Department as they are prepared. Following the submittal of these forms, an easement agent will pursue a resolution with the landowner.

If a resolution cannot be obtained or if the restriction is caused by other situations, Big Rivers will investigate possible mitigation measures on a case-by-case basis. Facility modifications, design changes, operational limitations such as line outage or facility re-rate, and other options will be considered in the investigation.

To date, Big Rivers has identified no instances in which clearance attainment is restricted on the 345 kV system.

Requirement 6:

R6. Each applicable Transmission Owner and applicable Generator Owner shall perform a Vegetation Inspection of 100% of its applicable transmission lines (measured in units of choice - circuit, pole line, line miles or kilometers, etc.) at least once per calendar year and with no more than 18 calendar months between inspections on the same ROW [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning*].

Inspection Schedule

The Big Rivers inspection schedule is intended to be consistent with NERC standards and is based on anticipated vegetation growth in the western Kentucky region. At minimum, either an aerial inspection or ground inspection is completed for all applicable transmission ROW (345 kV) once per calendar year and with no more than 18 calendar months between inspections. While not specifically required by the NERC standard or by the Big Rivers TVMP, the performance of both an aerial inspection and a ground inspection of all 345 kV ROW once per year is desired and is the general practice implemented by Big Rivers. The ground and aerial inspection schedules created each year may be adjusted to account for unforeseen and changing conditions. At minimum, one annual inspection will be completed during a period with foliage present. Additionally, one or more inspectors shall be focused exclusively on vegetation when performing aerial inspections.

Vegetation problems are addressed as soon as practical when located by inspectors. See the **Energy Control Notification** section.

Following each maintenance cycle that involves herbicide application, inspections will be undertaken the following spring growing season in order to determine the successfulness of the work. The objective of this inspection is to identify areas that require re-treatment to obtain the maintenance contract objectives.

Requirement 7:

R7. Each applicable Transmission Owner and applicable Generator Owner shall complete 100% of its annual vegetation work plan of applicable lines to ensure no vegetation encroachments occur within the MVCD. Modifications to the work plan in response to changing conditions or to findings from vegetation inspections may be made (provided they do not allow encroachment of vegetation into the MVCD) and must be documented. The percent completed calculation is based on the number of units actually completed divided by the number of units in the final amended plan (measured in units of choice – circuit, pole line, line miles or kilometers, etc.) Examples of reasons for modification to annual plan may include [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning*]:

- Change in expected growth rate/ environmental factors
- Circumstances that are beyond the control of an applicable Transmission Owner or applicable Generator Owner15
- Rescheduling work between growing seasons
- Crew or contractor availability/ Mutual assistance agreements
- Identified unanticipated high priority work
- Weather conditions/Accessibility
- Permitting delays
- Land ownership changes/Change in land use by the landowner
- Emerging technologies

Documentation

All ROW activities shall be documented in the ROW database maintained by the Big Rivers transmission department. All planned vegetation management work is inspected by Big Rivers to ensure that the work was completed according to work specifications and is documented in the database. The database contains the following types of ROW work information:

1. Line Number
2. Line Name
3. Inspector Name
4. Inspection Date
5. Work Completed Date
6. Start Structure
7. End Structure
8. RW Width
9. Type of Work (spray or cut)
10. Full Width (*verifies work completed to full width of ROW*)
11. Priority
12. SERC Compliant (identifies SERC lines)
13. Completed(*verifies work has been completed in line section*)
14. Remarks

Records indicating adherence to required clearances are maintained. In addition, modifications to the work plan in response to changing conditions or to findings from vegetation inspections may be made (provided they do not allow encroachment of vegetation into the MVCD) and must be documented.

Appendix A: Tree Trimming Illustration

Appendix A: Tree Trimming Illustration

Appendix A

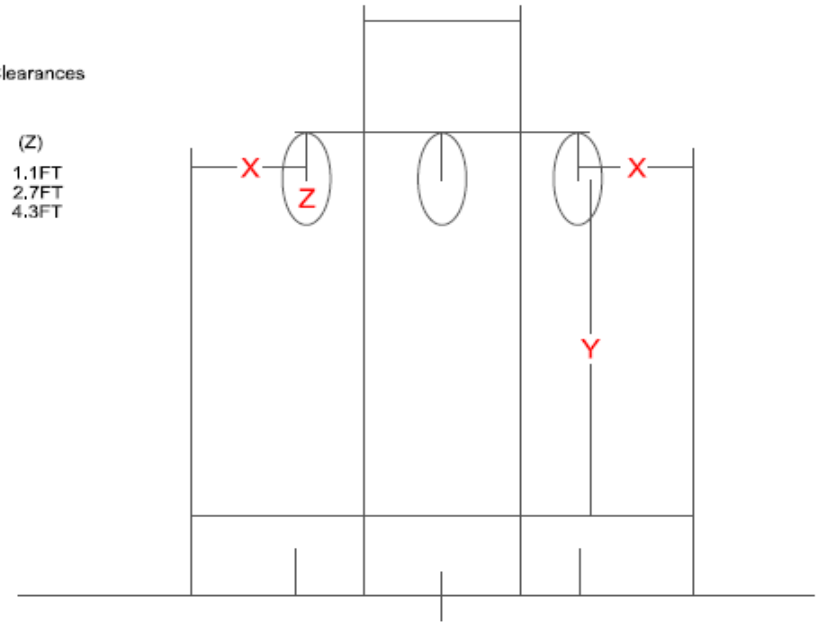
TVMP - Illustration

Trimming Clearances

kV	(X) - Beside Line	(Y) - Under Line
69	32FT	25FT
138 & 161	36FT	25FT
345	40FT	30FT

Minimum Clearances

kV	(Z)
69	1.1FT
138 & 161	2.7FT
345	4.3FT



Appendix B:

Danger/Hazard Tree(s) Form

Line Section: _____

Line Structures: From: _____ **To:** _____

ROW Type (Yard, Crop, etc.) _____

Property Owner's Name: _____

Property Owner's Address: _____

_____

Property Owner's Phone: (___) _____

Date of Refusal: ___/___/___

Inspector's Name: _____

Approx. Clearance (ft-in): _____

Priority (1-10): _____

Tree Species (Oak, Maple, etc.) _____

Refusal Comments: _____

_____

_____

Date Submitted (Engineering): _____

Supervisor of Lines & ROW: _____

Manager of Transmission System: _____

Date Resolved: _____/_____/_____

Attachment 1: TV Work Methods
TRANSMISSION VEGETATION WORK METHODS

Methods of Herbicide Application

A. Herbicides may be applied by aerial or ground-foliage spraying, or basal treatment. Contractor shall select herbicides with Big Rivers written approval required. Aerial or ground foliage spraying shall be performed when brush is in full foliage. All spraying and chemical application must be performed according to manufacturer's recommendations for seasonal changes.

B. Only aquatic chemicals are to be used in and around sensitive water areas.

C. Trees and brush growing in fencerows, around poles and guys shall be treated with basal or foliage herbicides where no chemical restrictions apply.

D. All basal treatment of stumps shall have permanent colored dye mixed with the chemical.

E. Any changes in applied chemicals shall be approved in written form by Big Rivers before their use.

F. A list of chemicals applied on each property owner for herbicide application will be supplied to Big Rivers one week following application to the line. Additionally, the list will show totals of various chemicals applied to each line.

G. All chemicals shall be applied according to manufacturer's recommendations and in accordance with Kentucky Pesticide regulations.

H. Contractor must submit an invoice, documentation of chemicals applied, and daily log sheets to receive payment. The daily log sheet form must be pre-approved by Big Rivers prior to work commencing.

Hand Cutting

A. In areas where chemical treatment is restricted, the trees and brush on the right-of-way shall be hand cut or bush-hogged. Brush in fence rows, around guys and poles, in and around cultivated fields shall be disposed of not to interfere with cultivating, tending of fields, and roadways. To reduce tire puncture incidences, stumps must be cut parallel to ground and less than (2) two inches tall.

B. Vegetation on creeks, ditch banks, and wet areas will be hand cut with stumps chemically treated as necessary to avoid the ATC of 15', depending upon species and topography.

C. All trees/brush will be cut or treated in accordance with specific clearances in the contract documents. Where no chemical restrictions apply, the stumps will be ground line treated with stump treatment.

D. Contractor is responsible for notifying Big Rivers on a daily basis of vegetation with less than (10) ten feet of power line conductor to vegetation clearance.

E. Any trimming or cutting of a tree that is within (10) feet of the power line conductors or could hit the line when cut requires Big Rivers notification. Big Rivers personnel will coordinate that effort to eliminate or reduce outages to customers.

General Provisions

A. Contractor's employees are required to follow regulations and licensing provisions of Kentucky Department of Agriculture Division of Pesticides.

B. Contractor shall provide, operate, and maintain all equipment required to meet the requirements of these specifications.

C. Contractor will be provided a list of property owners and easements restrictions.

D. Contractor shall be responsible for maintaining good public relations with property owners or tenants before and during performance of the work. Contractor shall be responsible for maintaining livestock security during the course of performing work. If a fence is to be cut, property owner or tenant shall be advised of the location of the cut and contractor shall repair fences as promptly as possible.

E. Contractor shall give immediate attention to and resolve all property owner complaints and settling of chemical damage claims off rights-of-way or restricted areas. A written list of complaints and settlements will be supplied to Big Rivers on a weekly basis.

F. Contractor shall be responsible for repairing, to property owners' satisfaction, any damages caused by contractor to property owners' property including, but not limited to, crop damage, fence damage, ruts in terrain, damage to farm roads, etc.

G. Contractor shall perform all work required by these specifications with the electric circuits energized or de-energized and in normal operation. All work shall be performed in a manner such that normal electric line operation will not be disturbed. Contractor will be informed of an absolute no contact policy for cutting or trimming trees on an energized transmission/distribution line. The contractor will be held responsible for damage claims of customers connected to such utility lines resulting from the actions of contractor.

H. Contractor shall install and maintain all necessary guards, signs, and protective devices required by Federal, State, and Local laws and ordinances.

I. Contractor will provide Big Rivers with telephone number and name of individual that is to be contacted in the event property owner complaints are received.

J. Contractor is responsible for notifying property owners, state, and federal offices in advance of spraying as required by law.

K. Contractor shall use only reliable, serviceable equipment. Ground-use equipment shall be no more than seven (7) years old.

L. All cut or sprayed wild cherry trees accessible to livestock must be removed from the property

M. All foliar spraying must be completed during the months of June, July, and August.

N. Contractor is required to adhere to all OSHA safety rules and enforce the use of proper personal protective equipment (PPE) at all times.

Environmental Considerations

A. Contractor agrees to perform all work to the complete satisfaction of Big Rivers and in accordance with all federal, state, county, municipal, and other local environmental laws, ordinances, and regulations.

B. Big Rivers will rigidly enforce ecologically sound construction practices by the contractor to ensure both public acceptance and minimal environmental degradation. Any environmental degradation deemed unnecessary by Big Rivers shall be noted and rectified at the contractor's expense, to the satisfaction of Big Rivers.

C. Maintenance of equipment fluids shall not be drained onto the right-of-way.

D. Contractor agrees to secure all permits necessary to apply herbicides.

Attachment 2: TV Annual Work Plan 2020

INTRODUCTION

Vegetation management work scheduled to be completed by Big Rivers for 2020 is documented below. All work will be completed according to work methods described in ***Attachment 1: TV Work Methods***. While Big Rivers intends to complete the work as planned, the schedule may need to be altered due to severe weather, emergency conditions, or other unforeseen situations. Any schedule changes must be approved by the Manager, Transmission System with written documentation attached to this work plan. This schedule is intended to be consistent with the overall Transmission Vegetation Management Program adopted by Big Rivers and outlined in this document as a whole**.** Anticipated vegetation growth in the western Kentucky region was considered in the development of the Big Rivers TVMP and the 2020 work schedule. The schedule and vegetation management cycle is intended to allow proper clearances to be maintained given the anticipated vegetation growth.

345 kV Transmission System

Scheduled Inspections – Entire 345 kV system - At minimum, either an aerial inspection or ground inspection of all 345 kV ROW is scheduled for 2020. While not specifically required by the NERC standard or by the Big Rivers TVMP, the performance of both an aerial inspection and a ground inspection will be completed in 2020 if working conditions and manpower resources allow. At minimum, one annual inspection will be completed during a period with foliage present. Additionally, one or more inspectors shall be focused exclusively on vegetation when performing aerial inspections.

Scheduled Herbicide Application

– Follow-up re-spray will be performed on all areas identified from the follow-up inspection.

Scheduled Tree Cutting/Trimming on and off ROW

– All on ROW danger and hazard trees, and all off ROW P1 and P2 hazard trees identified from inspections will be removed or trimmed.

161 kV, 138 kV, and 69 kV Transmission System

Scheduled Inspections:

– Entire 161 kV, 138 kV, and 69 kV system - Aerial patrol will be completed once in the 2020 calendar year. A second aerial patrol will be completed if working conditions and manpower resources allow.

– Selected 161 kV, 138 kV, and 69kV lines - If working conditions and manpower resources allow, one ground patrol inspection will be completed during the 2020 calendar year. Also follow up inspection for effectiveness of 2019 Herbicide application to identify areas requiring re-treat. – See attached Table 1 for complete listing of lines.

Scheduled 2020 Herbicide Application:

– Re-treat by ground and/or aerial application those areas identified on follow up inspection of 2019 work on attached Table 1.

– Ground application (and aerial application where feasible) of lines listed on attached Table 2.

Scheduled Tree Cutting/Trimming on and off ROW:

- Right-of-way widening/reclaiming and removal of hazard trees and brush on the following 69 kV lines:
- 4-A Reid – Hanson
- 4-J Onton Tap
- 5-D Hopkins Co – Hanson
- 18-A S. Hanson Tap
- 4-M Sacramento - Hanson
- Cutting/trimming yard trees, hot spot areas, hazard trees, and emergency areas system- wide on various lines as needed.

Attachment 2: TV Annual Work Plan 2020
Table 1: 161, 138, and 69kV System Follow –Up inspection of 2019 Phase I Spray Work

Line #	Line From	Line To	Line Length (Miles)	Line Volt(kV)	ROW Width (ft)	Approx. Acres
2-A	Reid	Guffie	13.18	69	100	12.8
2-B	Glenville	Utica Jct.	6.26	69	100	3.7
2-C	Pleasant Ridge Jct.	Beda	9.12	69	100	46.9
2-D	Pleasant Ridge Jct.	Whitesville	7.66	69	100	31.3
2-E	Reid	Stanley Jct.	21.19	69	100	24.3
2-F	Masonville	Thruston	9.88	69	100	22.0
2-H	Stanley	West Owensboro	6.42	69	100	3.3
2-I	Pettit Jct.	West Owensboro	5.18	69	100	0.1
2-J	Rome Jct. (Dav. Co.)	Utica	6.24	69	100	2.2
2-K	Utica Jct.	Pleasant Ridge Jct.	6.16	69	100	28.9
2-L	Utica Jct.	Utica	1.01	69	100	3.6
2-M	Rome Jct.	Masonville	3.19	69	100	2.4
2-O	Glenville	Guffie	4.03	69	100	5.3
2-P	Daviess Co. (Rome Jct.)	Pettit	3.11	69	100	2.9
2-Q	St. Joe Tap		0.63	69	100	2.6
2-S	Dermont Tap		0.38	69	100	0.1
2-T	Nuckols Tap		2.51	69	100	5.0
2-U	Pyramid Tap		3.93	69	100	6.7
2-V	Horse Fork Tap		1.2	69	100	0.0
2-W	Bon Harbor Tap		2.51	69	100	2.4
4-A	Reid	Hanson (Onton Jct.)	18.77	69	100	63.6
4-E	Reid	Anthoston Jct.	10.6	69	100	30.4
4-J	Onton Jct.	Onton	1.35	69	100	4.6
4-M	Hanson	Sacramento	7.53	69	100	12.1
4-P	Green River Coal Tap		4.19	69	100	4.5
6-A	Reid	Hancock	48.62	161	125	164.3
6-C	Daviess Co.	Scott Paper	15.71	161	125	11.0
7-B	New Hardinsburg	Paradise	46.64	161	125	294.0
8-D	Fordsville	Whitesville	10.5	69	100	70.0
9-A	Zion	Henderson	2.33	69	100	1.4
9-B	Weaverton (Anthoston Jct.)	Zion	8.27	69	100	1.8
9-C	Henderson Co. Tap		1.59	69	100	0.4
9-D	Henderson Co.	HMP&L	0.81	69	100	0.0
9-F	Race Creek Tap		3.51	69	100	2.4
9-G	Green Coal Tap Line		1.5	69	100	3.6
9-I	Wolf Hill Tap		1.84	69	100	6.4
13-E	GR Steel Jct.(ThrustonJct)	Lewisport	12.26	69	100	22.3
13-J	Thruston	Thruston Jct.	1.03	69	100	1.8
13-K	Maceo Tap		0.37	69	100	0.2
15-B	Reid	Anaconda Standby	1.16	161	125	0.8
15-C	Reid	Anaconda #1	1.03	161	125	0.9
15-D	Reid	Anaconda #2	1.1	161	125	0.2
15-E	Reid	Anaconda #3	1.1	161	125	0.3
15-F	Reid EHV #1	Reid	0.29	161	125	0.6

Line #	Line From	Line To	Line Length (Miles)	Line Volt(kV)	ROW Width (ft)	Approx. Acres
15-G	Reid EHV #2	Reid	0.3	161	125	0.6
16-A	Reid	Henderson Co.	14.69	161	125	23.1
16-B	Henderson Co.	Sigeco (Ohio River)	6.56	138	125	15.6
18-C	South Owensboro Tap		2.3	69	100	3.3
18-D	Beda	Centertown	5.1	69	100	9.9
18-F	South Owensboro	South Dermont	6.15	69	50	5.3
18-G	South Dermont	Green River Steel Jct.	5.14	69	50 & 100	7.3
18-H	Philpot Tap		1.64	69	100	4.5
18-M	Daviess Co.	Horsefork Jct.	3.12	69	100	2.0
18-O	Centertown	K.U. Tie	1.86	69	100	2.1
18-P	East Owensboro Tap		0.11	69	100	0.2
18-S	Midway Tap		2.08	69	100	10.6
18-T	Wilson	Centertown	6.1	69	100	9.4
19-F	Wilson	Paradise Switch	13.4	161	125	131.0
TOTAL			**384.44**			**1128.6**

Aerial spray acreage is estimated at 150 - 200 acres of the total acres to be sprayed.

Note: The approximate acreage is based on aerial photos. If 0 acreage is listed then either no maintenance was required or the line shares common right of way with another line section and the acreage is listed as total acreage with common line.

Attachment 2: TV Annual Work Plan 2020
Table 2: 161 and 69kV System 2020 Phase 1 Spray Work (Proposed)

Line Number	Line From	Line To	Line Length (Miles)	Line Voltage (KV)	ROW Width (ft)	Approximate (ACRES)
1-A	Sebree	Reid	4.99	69	100	23.9
3-A	Reid	Barkley	60.23	161	125	299.0
4-B	Sebree	Yuba Jct.	12.85	69	100	40.5
4-C	Yuba Jct.	Morganfield	8.57	69	100	25.6
4-D	Riverport Tap		0.88	69	100	0.1
4-F	Geneva	Weaverton	8.2	69	100	7.4
4-G	Morganfield	Sullivan Jct.	13.76	69	100	17.8
4-H	Geneva Jct.	Morganfield	23.13	69	100	33.2
4-I	Morganfield	Shawnee Town	11.84	69	100	20.5
4-K	Hopkins County	Providence Mine	0.92	69	100	0.0
4-L	Morganfield Jct.	Hamilton Mine 2	1.95	69	100	2.2
4-R	P & M Tap Line & Sextet Line		3.96	69	100	11.5
5-A	Lyon Co.	Barkley	3.92	69	100	2.8
5-B	Marion Jct.	Lyon Co.	19.48	69	100	59.1
5-C	Marion Jct.	Marion	0.88	69	100	2.4
5-D	Providence Mine	Hanson	21.25	69	100	80.9
5-E	Sullivan Jct.	Marion Jct.	11.71	69	100	39.9
5-F	Hopkins County	Sullivan Jct.	13.37	69	100	55.3
5-G	Smith Coal Tap		2.42	69	100	15.3
5-H	Sextet Tap		2.62	69	100	3.8
5-I	Caldwell Springs Tap		1.66	69	100	6.1
5-J	Caldwell County	Crossroads	0.1	69	100	0.0
5-K	Providence Tap		0.16	69	100	0.0
5-L	Madisonville Tap		5.61	69	100	43.5
10-A	Barkley	SIPC (RENSHAW)	24.09	161	125	120.4
14-B	Reid	Corydon	13.95	69	100	26.2
14-C	KBI Tap		1.21	69	100	0.6
14-D	Hudson Tap		1.01	69	100	2.1
14-E	Hudson Tap # 2	Reid- Niagara Line	0.5	69	100	0.1
18-A	South Hanson Tap		2.75	69	100	9.3
18-B	Dixon Tap		3.5	69	100	10.0
18-E	Green Plant Start-Up		0.09	69	100	0.0
18-I	Lodestar Main Tap Line		3.29	69	100	11.6
18-L	Lodestar Hyw. 1063 Fan		1.46	69	100	1.8
18-N	Lodestar Mooney Tap		1.15	69	100	0.7
20-W	Cumberland	Caldwell Springs Tap	8.1	69	100	28.0
TOTAL			**295.56**			**1001.6**

Aerial spray acreage is estimated at 150 - 200 acres of the total acres to be sprayed.
Note: The approximate acreage is based on aerial photos. If 0 acreage is listed than either no maintenance was required if the line shares common right-of-way with another line section and the average is listed as total acreage with the common line.

Electrical Service

Emergency Restoration Plan

Big Rivers Corporate Approvals		
Prepared By:	**Jeff Fulkerson**	**Signature**
Approval – Dept. Director	Tim Tapp	
Approval – Vice President	Mike Chambliss	
Approval – President and CEO	Robert W. Berry	

Big Rivers ELECTRIC CORPORATION
Your Touchstone Energy® Cooperative

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ELECTRICAL SERVICE EMERGENCY RESTORATION PLAN

During an electric operations emergency, Big Rivers Electric Corporation will:

- Centrally provide outage information to management and supervision necessary to ensure public safety and quickly and efficiently restore the electric system to a safe and reliable condition.
- Provide the training, materials, equipment, information and communication systems essential for prompt and effective emergency response and service restoration.
- Support regional emergency operations with the respective emergency management organizations and to provide communications and logistical networks necessary to ensure that the public realizes the maximum benefit in the shortest possible time.

INTRODUCTION

The procedures as outlined in this plan are intended to standardize the methods, forms, and procedures utilized by all departments during emergency operations.

Purpose

Ice, snowstorms, thunderstorms, floods, lightning, wind, tornadoes, earthquakes, terrorist acts, equipment failure, and other events may cause major or prolonged outages. In these types of situations, it is Big Rivers' goal to restore service as quickly as possible while providing for the safety of employees, customers, and the public. This plan was developed to help us meet that goal by addressing the following objectives:

- Guide operating personnel in cases of major and prolonged outages affecting significant numbers of customers.
- Outline the duties of each employee to be utilized during such an emergency.
- Provide easy access to information necessary to carry out the process of restoring service as quickly and efficiently as possible.

Plan Contents

This plan contains procedures and resource information to help employees prepare for contingent events and to mount a coordinated response to a disaster. The plan deals primarily with preparation and response to damage caused by major storms. However, it is designed to be used in any disaster or emergency situation that impacts the electrical system.

Revisions to the Plan

The plan will be reviewed annually by the Vice President System Operations with input from the Director Transmission System. Improvements to the plan will be presented to the Senior Management Team for approval and copies of the revised plan distributed to each department.

Using the Plan

The President & Chief Executive Officer (CEO) will determine when an event, of any type, will trigger the execution of this plan. A copy of the plan will be maintained by the President & CEO, the CFO, the Vice Presidents, and the Director Transmission System for easy access should a situation arise and the plan is

implemented. It is each individual's responsibility to insure that all personnel are familiar with the plan and understand their responsibility in emergency situations so the plan may be implemented with a minimum of delay and confusion when needed. The plan should be reviewed with all employees involved in implementing the plan on at least an annual basis.

Business Continuity Plan

This plan is intended to be utilized in conjunction with the Big Rivers Business Continuity Plan that describes the process to maintain business operations following events which disrupt the company's business systems.

For this plan, severity has been divided into three levels, which are defined as follows:

Level I Event

Short duration with restoration of service completed in less than 12 hours, affecting isolated areas that can be handled by the normal work force of the organization. An early determination of a Level I Disaster would reflect less than or equal to 10 member cooperative distribution substations out of service.

Level II Event

Moderate damage that can be repaired and all service restored in 12 to 36 hours. Some emergency operating procedures will go into effect. The Vice President System Operations will direct the overall emergency operations organization and the Director Transmission System will direct the physical restoration process. Personnel from other departments will be required. Also, outside crews may be required. An early determination of a Level II or Level III Event would reflect greater than 10 member cooperative distribution substations out of service.

Level III Event

Severe damage that will require over 36 hours to restore all electric service. The Vice President System Operations will direct the emergency operations organization and the Director Transmission System will direct the physical restoration process. Outside crews and other department's personnel will be required. An early determination of a Level II or Level III Event would reflect greater than 15 member cooperative distribution substations out of service.

This Emergency Operating Procedure is intended for use with Level II and III Events. Organization and procedures will be the same but staffing levels will vary depending on the severity of the storm damage. The severity determination procedure is discussed in the Analysis and Assessment paragraphs. Big Rivers personnel are pre-assigned to emergency job positions and training is given to acquaint them with the job duties. Emergency personnel assignments may change depending on the area needing assistance.

READINESS AND PREPARATIONS

Whenever possible, Big Rivers will take steps to anticipate and prepare for the impact of a major storm within the service area. These preparations include but are not limited to the following areas:

- Energy Control will monitor Big Rivers' electric system and report any significant changes in the system or in the weather conditions to the Director Transmission System and/or Vice President System Operations. The Manager Energy Control will notify Dispatch Support Staff of the pending weather conditions.
- If time permits, Director Transmission System may contact neighboring utilities to determine the extent of damage they have sustained from the weather conditions.
- Director Energy Control and Compliance will notify the appropriate employees of potential problems and begin to organize response teams.
- The DRO will review priorities for restoring power with assistance from Energy Control and ETS.
- Director Transmission System will assign areas of responsibility to crew leaders.
- Employees will be responsible for the following areas:
    - Check generators.
    - Fuel and restock trucks.
    - Check equipment, supplies, and materials.

RESPONSE LEVELS

Big Rivers maintains a schedule of on-call personnel to respond to outages and service requests that occur after normal business hours. In the event a large number of outages occur, additional personnel may be called in to help the scheduled on-call personnel respond to these calls. The Energy Control Center maintains a list of personnel to be contacted in these types of situations and will call in the personnel needed at the direction of the Manager or on-call Supervisor.

Below are the staffing guidelines for various levels of response that may be needed:

Level I Event:

On-call personnel (crew or crews) are dispatched to make repairs and restore service.

Level II Event:

Utilize on-call personnel plus additional off-duty employees as directed by the Manager or Supervisors. Depending on circumstances, outside crews/contractors may be used.

Level III Event:

Utilize on-call personnel and additional employees as directed by the Managers. Obtain additional crews from other cooperatives and/or contractors. The Emergency Restoration Plan is implemented by the Disaster Resource Officer (DRO defined in EOCT Section).

ORGANIZATION OF EMERGENCY RESTORATION PLAN

Emergency Operations Control Team (EOCT)

An Emergency Operations Control Team (EOCT) will be formed for the purpose of carrying out the job necessary to meet emergencies and restore service. The Control Team will consist of the President & CEO, Chief Financial Officer, Vice President System Operations, Vice President Energy Services, Vice President Production, Vice President Administrative Services, Director Communications & Community Relations, Director Engineering, Director Transmission System, Director Energy Control & Compliance and will be responsible for the development of the overall plan for coping with the emergency. The President and CEO will designate the Disaster Restoration Officer (DRO) and will have the authority to declare an emergency, calling a meeting of the EOCT, and placing the Emergency Restoration Plan into action. In the absence of the CEO, the Vice President System Operations will act as Disaster Restoration Officer (DRO).

After the first 16 hours, the DRO will appoint a relief Control Team to allow for a rest period. Teams will alternate as necessary until the end of the emergency.

Emergency Operations Control Center (EOCC)

At the discretion of the CEO, an Emergency Operations Control Center (EOCC) may be established to direct the emergency restoration. The EOCC shall be the central point of authority and coordination for all aspects of the disaster response.

The Corporate Headquarters is designated as the Emergency Operations Control Center except when that facility is adversely affected by the disaster. The Disaster Recovery Center (DRC) is designated as the alternate location for the EOCC.

Emergency Generator and UPS for Key Locations

Both locations for the EOCC have permanently installed emergency generators and UPS systems that can be utilized in the case of the primary power failure. These generators are tested weekly to verify their operation. Other key locations commutation sites and Transmission Operations Center (ET&S) also have emergency generators and UPS systems, which are also tested periodical.

The extent of damage will be determined by the DRO and the Director Transmission System.

Priority will be given to re-establishing office facilities as soon as feasible after an emergency. In the event the headquarters location is damaged and not viable, the DRC will be the first alternative, and Sebree Power Plant will be the second alternative EOCC. If Sebree is not available, Wilson Power Plant will be the third alternative EOCC.

Emergency Operation Control Center (EOCC) Setup

Upon notification for a meeting of the Emergency Operations Control Team (EOCT), the following individuals will report to the Headquarters board room:

- President & CEO
- Chief Financial Officer (CFO)
- Vice President System Operations
- Vice President Energy Services
- Vice President Production
- Vice President Administrative Services
- Director Communications & Community Relations
- Director Energy Control & Compliance
- Director Engineering
- Executive Administrative Assistant
- Director of the Supply Chain
- Director Information Systems

The Director Information Systems/Manager Information Technology and Director of the Supply Chain will see that the EOCC is equipped with resources necessary to manage the emergency. This may include additional computers, telephones, radios, cell phones (various carriers), food, lodging, cleaning services/supplies, office supplies, safety supplies, and other supplies that may be needed by team members during the recovery process.

Administration

When management personnel have manned the EOCC, they will make contact with key personnel assigned in each of their areas of control to assume their assigned roles and carry out the responsibilities outlined in the Roles and Responsibilities section. Regular reporting schedules shall be established. As reports come in to the EOCC room for disposition, they will be channeled through the DRO to the appropriate section or Department Manager for disposition.

Until an overall assessment has been made of the damage sustained and the status of the electric system, resources will remain in their normal staging areas except as necessary to resolve known emergencies or life-threatening conditions. This is necessary to guard against committing too many resources until an overall restoration plan has been established and individual objectives have been defined. The Damage Assessment section of this plan outlines assessment and damage survey procedures.

The DRO will be responsible for coordinating all aspects of the Emergency Restoration Plan. He will work with the other team members to provide the resources necessary to meet the needs of the various departments throughout the recovery effort. Once the need to execute the plan is established, the team members will assume the roles and carry out their assigned responsibilities.

The DRO will be responsible for scheduling of needed resources with other agencies to solicit or provide support as needed. Listings for community leaders, service agencies, and support services are summarized in *Community Leaders Contact List and Support Services Contact List*.

Return to Normal Operations

The CEO will determine when operations shall return to normal and cancel recovery operations. Employees working storm duty will be released from duty by an assigned supervisor or coordinator following word that storm restoration operations have been canceled. In some cases, employees may be asked to continue work until a point is reached where the regular staff can assume all duties. When released from duty, personnel should return to their regular work place and notify their supervisor that they have been released from storm duty.

ROLES AND RESPONSIBILITIES

This section outlines roles and responsibilities that are critical to effectively carrying out the Emergency Restoration Plan. A listing of personnel assignments is contained in the Table labeled "LISTING OF ASSIGNMENTS." Detailed responsibilities and checklists are stored in the shared "Emergency Restoration Drive" on the corporate server, and a printed copy shall be maintained by each assigned employee.

Communications Coordinator

During crisis situations, it is important to keep members, cooperative managers, employees, and employee family members informed of the status of the crisis and respond to requests from media sources.

The Communications Coordinator will be responsible for coordinating the flow of prompt, accurate information during an emergency. The Communications Coordinator, or their alternate, will be the spokesperson for the Cooperative to the news media. These individuals will be available for all meetings of the Control Team and remain accessible to the media.

The DRO and Communications Coordinator will control the information given to members, family members, and the media. Vice President System Operations will review and approve information concerning restoration before it is released.

In the event of a crisis or impending situation the Communication Coordinator will report immediately to the EOCC and begin preparations for coordinating responses. He/she is responsible for contacting and informing the news media about the emergency. He/she will also keep a current list of names and telephone numbers to contact and will decide which should be contacted. These are summarized in *Media Contacts*.

No other employee is authorized to disseminate any information concerning the cooperative or the crisis situation to the general public or media. All inquiries concerning the crisis will be referred to the Communications Coordinator.

Employee Assistance Coordinator

The Employee Assistance Coordinator is responsible for accounting of all employees and keeping family members informed. This person will relay messages to and from family members and answer requests for assistance to family members during the emergency. The Employee Assistance Coordinator will coordinate with the Procurement Coordinator for laundry services for working personnel to provide clean, dry clothing during extended work requirements. Laundry will be collected daily before dispatching crews for the day.

Food and Lodging Coordinator

The Food and Lodging Coordinator will coordinate with the Procurement Coordinator and be responsible for making arrangements for food and lodging for employees, contractors, and visiting crews. Restaurants and food stores will be designated which will allow working personnel and visiting crews to charge food and drinks. These are summarized in *Lodging & Restaurant Facilities*.

Procurement Coordinator

The Procurement Coordinator is responsible for obtaining services, equipment, supplies and materials needed to respond to the crisis. He will make the arrangements necessary to have the materials delivered to the staging areas that have been established. The Director Transmission System will notify the Procurement Coordinator when additional materials are needed. Warehouse Storekeeper will be notified and he will coordinate the deliveries from the warehouse. These are summarized in *Vendor Contact List.*

Facilities Management Coordinator

In the event of extensive damage or destruction of one or more office facilities, it will be necessary to utilize an alternate site as a temporary office and Dispatching Center. The Facilities Management Coordinator will be responsible for setting up these locations.

Record/Timekeeper

The DRO will appoint a Record/Timekeeper to track workers on and off duty and compile the time sheets for each worker. The Director Transmission System will designate an employee to maintain records on work assignments and schedules for employees and outside personnel and forward this information to the Record/Timekeeper. The Record/Timekeeper will be responsible for seeing that appropriate records are kept of all activities related to the crisis situation. He/she will coordinate activities with the designated employees in each office or operating center.

Technical Services Coordinator

The Technical Services Coordinator will insure that technical services and communications are functioning properly at all locations. In the event that offices are destroyed, he/she will be responsible for coordinating installation of radios, telephone equipment, and computer operations at the alternate EOCC site or temporary office location.

Employees

It will be the responsibility of each non-bargaining unit employee not on duty to report either by telephone or in person to their Department Manager for instructions whenever, in his/her opinion, an emergency has arisen or is very likely to arise within the near future.

If the emergency occurs during working hours, all crews and employees with two-way radios will maintain contact with Dispatchers for instructions. All employees will report to their supervisors for assignments. If additional personnel are required, the Vice President System Operations may direct that other employees be contacted to assist.

A. Dispatchers and Dispatch Support Personnel

The Dispatchers will work under the supervision of the DRO or his designee. Their primary responsibilities will include:

- Keeping sufficient records of the jobs to be completed and the jobs that have been completed.
- Monitoring the system using SCADA Systems and relaying information to the Director Transmission System.
- Working with the Director Transmission System to direct personnel in the field with supervision from the DRO or his/her designee.
- Oversee/Supervise all transmission switching.

Dispatch Support Personnel will be called in as needed to assist the Dispatcher with answering phone calls, and collecting information.

B. Telephone Support

The Department Managers will maintain a roster of personnel who can be called upon to answer telephone calls and provide information to the Dispatchers during normal business hours. In the event of a major disaster after normal office hours when office personnel are called in to work, the same procedure will be followed and other personnel assigned as needed. Depending on the magnitude of the event, 24X7 coverage may be necessary.

C. Crew Leaders

An employee of Big Rivers will be assigned to each visiting crew as the Crew Leader and will be responsible for:

- Directing the visiting crews to their work assignments, overseeing the work they perform and communicating with dispatchers.
- Completing time sheets for each employee on the crew and forwarding them to the Record/Timekeeper.
- Maintaining an accurate record of materials and supplies used by the crew.
- Making necessary arrangements for providing meals for the crew and assisting in fuel purchase. (Crew leader working with Food and Lodging Coordinator.)
- Reporting immediately any accidents, injuries, equipment failure/damage, or property damage involving their crew.

D. Crew Leaders Qualifications

- Safety rules.
- Testing and grounding procedures.
- Ability to use GIS system.
- Switching and tagging procedures.

LISTING OF ASSIGNMENTS

Disaster Restoration Officer (DRO)	Mike Chambliss
Communications Coordinator	Jennifer Keach/Stephanie McCombs
Employee Assistance Coordinator for ET&S	ET&S Secretary
Food and Lodging Coordinator for ET&S	ET&S Secretary
Employee Assistance Coordinator for HQ	Brian Mattingly
Food and Lodging Coordinator for HQ	Brian Mattingly
Procurement Coordinator	Rob Toerne/Dana Frederick
Facilities Management Coordinator	Brian Mattingly
Record/Timekeeper	Julie Scott
Technical Services Coordinator	Jennifer Bennett/Bob Moss
Dispatchers and Dispatch Support Personnel	Kevin Johnson
Switchboard Telephone Support	Christa Gibson
Crew Leaders	Tommy Howard/Kenny Adkisson
Listing of Personnel Assignments	Tim Tapp
Damage Assessment	Brandon Osborne
Determine Manpower and Material Needs	Tim Tapp
Outline Restoration Priorities	Kevin Johnson
Medical Equipment & Critical Needs Substation Priorities	Kevin Johnson
Assemble Necessary Manpower	Brandon Osborne
Organization of Crews	Brandon Osborne
Set up Staging and Assembly Areas	Glenn Laird
Establish Internal Communications Network	Chuck Tucker
Initiate External Communications	Jennifer Keach /Stephanie McCombs
Arrangements for Support Services	ET&S Secretary
Receiving Visiting Crews	Brandon Osborne
Safety Administrator	Troy Stovall
FEMA or other Designated Agencies	Cindy Duckworth/Brandon Osborne
Warehouse Storekeeper	Glenn Laird
Environmental Administrator	Mark Bertram
Line Patrol – Ariel and Ground	Randy Hutchison

EMERGENCY TELEPHONE NUMBERS

Telephone contact information for all key Big Rivers Employees is maintained and updated by the Human Resources Department and is accessible from the Company's business system (Oracle).

DAMAGE ASSESMENT

Proper assessment of the situation must be completed before placing teams into action and declaring a crisis situation. Damage assessment will follow any major storm or natural disaster. The Vice President System Operations will be responsible for the coordination and completion of the damage assessment. He is designated to assemble information and data for evaluation purposes and may place the Emergency Operations Control Team and or service crews on standby until a determination is made on the severity of the crisis and support needed. He may call on other EOCC Team members, employees, outside agencies, and support organizations for help in evaluating the situation.

Initial Assessment of Damage

The purpose of this assessment is to provide a general overview as to the extent of damage and assist the Emergency Operations Control Team in determining the manpower, material, and equipment needed for the recovery plan.

Line personnel and Engineering personnel will be used to perform this initial assessment. These employees are designated as bird dogs and field generals summarized in the *Employee Contact List.*

They will report their findings to the Director Transmission System who will relay the information to the Vice President System Operations. The initial assessment report will include the following areas:

- The nature of the emergency situation.
- Approximate number of members involved.
- Number of circuits involved and any critical circuits.
- Number of poles down.
- Any other information relative to the extent of damage to the system.

A form for gathering information relative to the initial damage assessment is contained in *Assignment Checklist "Initial Damage Assessment Report".*

In the event of a severe natural disaster, it may be necessary to survey damage to power lines and substations from the air. Helicopters obtained by the Right of Way Supervisor will assist the team in obtaining these services if needed. This is summarized in *Vendor Contact List.*

Determine and Assemble Manpower and Material Needs

The Director Transmission System will advise the DRO of the extent of damage and the need for additional personnel. The DRO will initiate a plan for obligating these resources.

The DRO will be responsible for coordinating with other agencies to solicit or provide support as needed. A roster of community leaders, service agencies, police and fire departments, MISO, and KAEC operations personnel are summarized in *Emergency Contact Information.*

The materials and special equipment needed to restore service will be determined by the Director Transmission System. He will advise the Procurement Coordinator of any needs and Procurement Coordinator will be responsible for ordering materials and making appropriate delivery arrangements. Warehouse Keeper will be responsible for delivery arrangements.

Medical Equipment and Critical Needs Priorities

Certain substations of the Member Cooperatives have critical needs during power interruptions. These include, but are not limited to, customers with medical life support equipment. In the event of a power outage, priority will be given to restoring power to these locations.

A list of substations with Hospitals, medical life support equipment, and other priority needs are all found under the Big Rivers Energy Control Information System(ECIS) *Critical Load List.* This Critical Loads List also includes facilities that serve water departments, sewage lift stations, and fire and police department. These lists will be reviewed and updated annually by the Vice President System Operations or his designee.

Big Rivers Personnel

The Director Transmission System will contact employees and direct them to report to the areas where they are needed. Personnel in the Energy Control Center may be used to contact employees and direct them to the areas where they are needed. Transmission department maintains a telephone contact listing for all the transmission employees. This contact list is updated and distributed by the Department Secretary.

Contractors

The Right of Way Supervisor will be responsible for determining the need for the construction and right of way contractors when additional crews are needed. He will communicate the needs to the Procurement Coordinator.

Crews from Other Utilities

The Disaster Restoration Officer (DRO) will be responsible for designating someone to contact KAEC when crews from other utilities are needed to assist in the recovery effort. He/she will also be responsible for coordinating with other agencies to solicit or provide outside support as needed. When requesting assistance from KAEC or other agencies use the "REQUESTING EMERGENCY ASSISTANCE" form included in the *KAEC BEST PRACTICES.*

Contact numbers for KAEC personnel are summarized in the *Emergency Response KAEC Info* folder found in the Emergency Restoration shared drive.

Other outside Assistance

If special equipment such as bulldozers and backhoes are needed, the Manager will contact individuals in their areas to provide these services. A list of providers is also summarized in *Vendor Contact List.*

Organization of Crews

It will be the responsibility of the Director Transmission System to organize all work crews, determine work schedules, and make work assignments. Depending on the number of outside crews, it may be necessary to stagger the crews start/stop times to minimize congestion and provide resources to manage the workload during a 24-hour period. A schedule of 16 hours on and 8 hours off will be the guideline used for work assignments.

The Director Transmission System will work with the Vice President System Operations in determining restoration priorities and determining the work schedules. The assignments made by the Director Transmission System will be reported to the Record/Timekeeper.

The Record/Timekeeper will coordinate work schedules with the Director Transmission System and keep a detailed log on all visiting crews. These records will include name, contact information, supervisor, date and time of arrival and departure, work assignment area, and place of lodging.

All Line Supervisors and Crew Leaders will report to the Director Transmission System when work assignments are completed for additional instructions.

Set Up Staging and Assembly Areas

During extreme emergencies it may be necessary to stage equipment and assemble in a central location. The following areas have been designated for this purpose:

Kmart Parking Lot-Henderson, KY
Dave Nelson-270-826-0595
All Big Rivers Plants have a Contractors Parking Lot that can be utilized if necessary.

For additional location, refer to "Emergency Restoration" folder of the under Emergency Contact Information-Contacts for Staging.

Crews, contractors, and visiting crews will meet at these locations for the purpose of loading materials, dispatching repairs to multiple locations, and mobile fueling of vehicles, if necessary. The contracted ET&S Mechanic will be assigned responsibility for making arrangements for the mobile fueling of vehicles if needed. Suppliers of this service are summarized in *Fuel and Garage Services*.

Establish Internal Communications Network

This network will provide up-to-date information to the employees manning the telephones in the Emergency Operations Center and throughout the cooperative to keep them informed of the status of the recovery efforts.

The Employee Assistance Coordinator will be responsible for furnishing employees with information regarding emergency shelter locations, electricians available for work, crew locations, and restored service areas and will be responsible for facilitating communications with employees and family members.

Initiate External Communications

The DRO will be responsible for communicating with KAEC about the status of the recovery efforts and any specific needs of the cooperative relative to manpower. The Director Transmission System will be responsible for contacting the Kentucky Department of Homeland Security or the Regional Emergency Management Agency Officials and keeping them appraised of the status of the recovery efforts and any special needs that may arise.
The Director Communications & Community Relations will be responsible for communicating with government and law enforcement officials, and the media. The Director Transmission System will report progress to the DRO each day. The DRO will be responsible for working with the Director Communications

& Community Relations to prepare press releases to keep the public informed of the status of the recovery efforts. The press releases will be sent to the Director Transmission System for review before they are released. Copies of the press releases will be disseminated to employees at the same time they are released to the media.

Arrange For Support Services for Employees and Visiting Personnel

The Employee Assistance Coordinator will be responsible for facilitating communications between employees and their family members. They will be responsible for relaying messages and helping family members obtain assistance in resolving problems that may arise during a crisis situation. Provisions will also be made for laundry services for employees and visiting crews. Big Rivers will provide meals and lodging for visiting and contractor crews while they are assisting during a crisis. The Food and Lodging Coordinator will be responsible for seeing that arrangements are made for these services for all visiting crews and contractors. Lodging arrangements will be communicated to the Director Transmission System, or his designees, and to the Record/Timekeeper. The Director Transmission System, or his designee, will be responsible for issuing ID cards to all visiting crews to use for obtaining food and lodging services.
It is important both physically and mentally for personnel working to have meal breaks. Every effort will be made to assure that company personnel, contractors, and visiting crews who are working are fed three meals each day, or abide by labor agreements concerning meal requirements. The type of food provided for these personnel will depend on the extent of the emergency conditions. If possible, one hot meal should be provided each day of the emergency.

The Crew Leaders will assure that field personnel are fed and take regular meal breaks. Available personnel will be assigned by the Food and Lodging Coordinator to deliver food to the work areas, if necessary. Provisions for these services will be communicated to the Director Transmission System or his designee. This is summarized in *Lodging and Restaurant Facilities.*

Receiving Visiting Crews

When visiting crews arrive at their designated locations, they will participate in an orientation process before beginning their work schedule. It is the responsibility of the Director Transmission System to see that this orientation is conducted with each incoming crew and that they complete the *Safety Orientation Checklist and Visiting Crew Member Information Sheet summarized in Forms.* During this process, they will be informed of the safety practices and requirements of Big Rivers along with the general information about the system. The arrangements made for food, lodging, and laundry services will also be reviewed at this time.

The Safety Orientation Checklist will be retained by the Director Transmission System and the completed Visiting Crew Member Information Sheet will be forwarded to the Record/Timekeeper.

An employee of Big Rivers will be assigned to each visiting crew as the Crew Leader. The Crew Leader will be responsible for:

- Directing the crew to their work assignment, overseeing the work they perform and communicating with dispatchers.
- Completing and approving time sheets for each employee and forwarding them to the Record/Time Keeper.
- Maintaining an accurate record of materials and supplies used by the crew.

- Making necessary arrangements for providing meals for the crew and assisting in fuel purchase.
- Reporting immediately any accidents, injuries, or property damage involving their crew.

Safety

It is the intent of Big Rivers to provide a safe working environment for all employees and visiting crews.

As part of the orientation process, all employees will participate in a Safety Orientation as outlined on the *Safety Orientation Checklist summarized in Forms*. Consistent with the requirements specified in the previous section, the Director Transmission System is responsible for ensuring orientation is conducted with each visiting crew. A copy of the Safety Orientation Checklist will be maintained by Director Transmission System or his designee.

All accidents and injuries will be reported to the Safety Administrator and the DRO. It will be the responsibility of the Safety Administrator to notify the appropriate agencies of any reportable accidents and/or injuries and see that all required reports are completed and filed.

ENVIRONMENTAL

Reportable Oil Spills should be immediately reported to the Director Transmission System or his designee. The appropriate headquarters personnel should be notified immediately by the Director Transmission System or his designee:

- Mark Bertram, Manager Environmental Services office: 270-844-5708 cell: 270-869-7815

The Environmental staff will determine whether any spill requires further notification of regulatory agencies listed below and will make the appropriate contact;

- National Response Center 1-800-424-8802
- Kentucky Environmental Protection Cabinet 1-800-928-2380

Should the Director Transmission System fail to establish contact with environmental personnel, then he or his designee is required to make calls to the appropriate regulatory agencies listed above.

Reportable Spills include

- Spills of 25 gallons or more of petroleum products; or
- Spills of 75 gallons or more of diesel fuel; or
- *If spill reaches surface or ground water (storm and sanitary drains included).

* Per 40 CFR 110.3 (b), oil spills which "cause a *film* or sheen *upon or* discoloration of *the* surface of the water..., or cause a *sludge or emulsion to* be deposited beneath *the* surface of *the water*" must be reported immediately to federal, state and local authorities.

The person making the calls should be prepared to provide the following information:

- Name, address and phone number of the company
- Date and time of the spill

- Location of the spill
- Source and cause of the spill
- Type and amount of material spilled
- Damages or injuries
- Danger posed by the spill

The person placing the calls should carefully record the time and date that each call was made. The person placing the calls should also record the name of the person contacted at each agency and record the spill report confirmation number given by the state and/or N.R.C. It should be noted that all spills, regardless if they are reportable or not, are required to be cleaned up in accordance with Kentucky statute.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Storms that result in significant damage to public property are often declared federal disasters and can qualify for public relief. To qualify for this public assistance, the scope of damage usually extends well beyond the electrical facilities of Big Rivers. Examples include damaged roads and bridges resulting from flooding, removal of debris from public roads after an ice storm, and damage to public buildings and equipment, perhaps from hail. To qualify for relief, the county must be declared a 'disaster area' by the Governor. This declaration is made on a county by county basis. Once this declaration is made, the County Judge Executives are tasked with the challenge of estimating the damage that occurred within their counties. If the total damage of the storm exceeds a certain threshold, FEMA submits a recommendation to the President who either accepts or rejects the claim. This process usually takes between two to four weeks.

Because the Cooperatives storm related recovery is usually completed within 24 to 48 hours, managers need to make a judgment of the severity of the storm. If the scope of the damage is wide spread, it is likely that the storm recovery will qualify for public assistance. To be eligible for this assistance, the following information, tabulated on a county by county basis, will need to be collected and submitted to FEMA:

Time sheets for all hourly employees involved in the disaster recovery List of all vehicles and major equipment (trailers, etc.) used during the recovery List of materials used during the restoration (typically quantified on work orders submitted after the fact)

- List of contractors (including crews from other Cooperatives) assisting with the recovery effort and the invoices covering their work
- Invoices for meals, lodging and other miscellaneous expenses that were incurred as a direct result of the recovery effort
- List of capitalized equipment that was damaged (transformers, regulators, etc.)

This information should be forwarded to Big Rivers Designated Agent (Cindy Duckworth/Brandon Osborne) if the storm results in a disaster declaration. The Designated Agent will assist with the collection of this information and will prepare the forms necessary to submit a claim to FEMA.

GOVERNMENT AGENCIES REPORTING PROCEDURE

Kentucky Public Service Commission (KPSC)

The Commission's regulation 807 KAR 5:006, Section 26, requires each utility to notify the Commission of any utility related accident which results in serious injury or under other specified circumstances. Notice of reportable accidents must be provided to the Commission within **two (2) hours** of discovery by the utility. A summary written report on all reportable accidents shall be submitted to and received by the Commission within seven (7) calendar days of the date of the accident. A copy of the subject regulation is attached for your convenience.

The following list of names, e-mail addresses, and telephone numbers replaces an earlier listing of Commission personnel and telephone numbers. Reporting will be the responsibility of the VP Administrative Services or the Safety Administrator.

PSC Primary Contact	Business Number	Cell Number
Steve Kingsolver (steve.kingsolver@ky.gov)	(502) 564-3940 Ext. 423	(502) 229-0035
Jeff Moore (jeffreyc.moore@ky.gov)	(502) 564-3940 Ext 246	(502) 352-0767
Eric Bowman, Manager (ericc.bowman@ky.gov)	(502) 564-3940 Ext. 440	(502) 545-2848

Inspectors in the Engineering Division have been assigned as contact persons for all electric utilities. Please report any utility related accidents and/or outages to the assigned investigator listed below. In the event your assigned investigator is not available, please contact the alternate investigator.

OUTAGE AND INCIDENT REPORTING LIST

Steve Kingsolver	Jeff Moore
Blue Grass Energy Cooperative Corporation	Big Sandy RECC
Clark Energy Cooperative	Cumberland Valley Electric
Fleming-Mason Energy	Farmers RECC
Jackson Energy Cooperative	Grayson RECC
Jackson Purchase Energy Corporation	Inter-County Energy Cooperative
Kentucky Utilities	Kenergy Corporation
Licking Valley RECC	Kentucky Power (AEP)
Louisville Gas & Electric	Nolin RECC
Meade County RECC	Shelby Energy Cooperative
Owen Electric Cooperative	South Kentucky RECC
Salt River Electric	Taylor County RECC
East Kentucky Power Cooperative	Duke Energy Kentucky
	Big Rivers Electric Corporation

Kentucky State Emergency Management Office and Energy Cabinet.

The state can provide critical services during an emergency (housing for crews, fuel availability information, road status, etc.).

Steve Brukwicki, Operations and Planning Chief
Commonwealth of Kentucky Department of Military Affairs
Kentucky Emergency Management
Boone National Guard Center
110 Minuteman Parkway, Suite 210A
Frankfort, KY 40601
Steven.e.brukwicki.nfg@mail.cmil
502-607-5759 (O)
503-330-3407 (C)

Kenya Stump
Assistant Director
Office of Energy Policy
Kentucky Energy and Environment Cabinet
300 Sower Blvd., Frankfort, KY 40601
Office: 502-782-7083

807 KAR 5:006. General Rules.

Section 26. Reporting of Accidents, Property Damage or Loss of Service.

(1) Within two (2) hours following discovery each utility, other than a natural gas utility, shall notify the commission by telephone or electronic mail of any utility related accident which results in:

(a) Death; or shock or burn requiring medical treatment at a hospital or similar medical facility, or any accident requiring in-patient overnight hospitalization;
(b) Actual or potential property damage of $25,000 or more; or
(c) Loss of service for four (4) or more hours to ten (10) percent or five hundred (500) or more of the utility's customers, whichever is less.

(2) A summary written report shall be submitted by the utility to the commission within seven (7) calendar days of the utility related accident.

Communications to the KPSC will be made by the VP of Administrative Services, the Safety Administrator, or his/her designee.

DEPARTMENT OF ENERGY REQUIREMENTS

The Department of Energy (DOE), under its relevant authorities, has established mandatory reporting requirements for electric emergency incidents and disturbances in the United States. DOE collects this information from the electric power industry on Form OE-417 to meet its overall national security and Federal Emergency Management Agency's National Response Framework responsibilities. DOE will use the data from this form to obtain current information regarding emergency situations on U.S. electric

energy supply systems. DOE's Energy Information Administration (EIA) will use the data for reporting on electric power emergency incidents and disturbances in monthly EIA reports. The data also may be used to develop legislative recommendations, reports to the Congress and as a basis for DOE investigations following severe, prolonged, or repeated electric power reliability problems.

WHEN TO SUBMIT

Form OE-417 is considered an emergency form. Schedule 1 of the form must be submitted to the DOE Operations Center that operates on a 24-hour basis, 7 days a week only when at least one of the twelve criteria on page one of the form is met. Depending on the nature of the situation, the Schedule 1 of the Form OE-417 must be filed either within one hour or six hours if one or more of the twelve criteria apply.

Criteria for Filing:

Within One Hour: Schedule 1 must be filed if one or more of the following criteria apply.

1. Actual physical attack that causes major interruptions or impacts to critical infrastructure facilities or to operations.
2. Actual cyber or communications attack that causes major interruptions of electrical system operations.
3. Complete operational failure or shut-down of the transmission and/or distribution electrical system.
4. Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system.
5. Uncontrolled loss of 300 Megawatts (MW) or more of firm system loads for more than 15 minutes from a single incident.
6. Load shedding of 100 MW or more implemented under emergency operational policy.
7. System-wide voltage reductions of 3 percent or more.
8. Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system.

Note: If the incident or disturbance is having a critical impact on operational events, respondents must balance their operational requirements with this mandatory reporting requirement. In such instances, telephone notification to the DOE Operations Center (202-586-8100) is acceptable, pending a written submission of the completed form.

Within Six Hours: Schedule 1 must be filed if one or more of the following criteria apply and none of the eight criteria above apply.

1. Suspected physical attacks that could impact electric power system adequacy or reliability; or vandalism which targets components of any security systems.
2. Suspected cyber or communications attacks that could impact electric power system adequacy or vulnerability.
3. Loss of electric service to more than 50,000 customers for 1 hour or more.
4. Fuel supply emergencies that could impact electric power system adequacy or reliability.

Update Report – Schedule 1 should be re-submitted if significant information (or changes) regarding a reported incident or disturbance becomes available after the initial Emergency Alert or Normal Alert Report was submitted. Add the new information and/or changes to the original submission and resubmit the form, checking Update as the Alert Status on line 1 of the form.

Within 48 hours a ***Final Report*** must be filed. An updated Form OE-417 Schedule 1 and a Schedule 2 are both due within 48 hours of the event to provide complete disruption information.

NOTE: Complete and revise Schedule 1 as necessary and check ***Final*** as Alert Status on line 1.
On Schedule 2 provide a narrative description of the event and actions taken to resolve the incident. There are several specific subject blocks of space shown on the Schedules that are provided to gather the specific information. Include, as appropriate, the cause of the incident or disturbance, the equipment damaged, critical infrastructures interrupted, and effect on other electrical systems. Equivalent documents containing this information can be supplied to meet this requirement; this includes the NERC Interconnection Reliability Operating Limit and Preliminary Disturbance Report.

Big Rivers Reporting Process
In the event one of these emergencies occurs, Energy Control will coordinate the reporting to the DOE, Emergency Operations Center. The applicable instructions and forms for the DOE Form OE-417 can be accessed via the DOE or SERC Website:

http://www.oe.netl.doe.gov/oe417.aspx
www.serc1.org

How to Submit: Instructions on how to report via e-mail, facsimile, or telephone are printed on Schedule 1 of Form OE-417.

E-mail: Submit your form via e-mail as an attachment to doehqeoc@hq.doe.gov. This is the preferred delivery method.

Fax: You may fax the form to the following facsimile number. 202-586-8485. Please use this method only if e-mail is not available.

Telephone: If you are unable to e-mail or fax the form, please call and report the information to the following telephone number: (202) 586-8100.

MISO

For any capacity or energy emergencies or major system disturbances, the Energy Control Dispatcher shall notify the MISO Reliability Coordinator at (317) 249-5516 and communicate current and future system conditions. The NERC Reliability Standard EOP-002 requires that a Deficient Control Area or Load Serving Entity declaring an Energy Emergency Alert 3 complete the report in Section C of EOP-002 – Energy Emergency Alert 3 Report. This report is to be sent to the MISO Reliability Coordinator for review within two business days of the incident.

NERC/SERC

During any capacity or energy emergencies or major system disturbances (any abnormal conditions, which jeopardize reliable Interconnection operation), the NERC Reliability Standards EOP-002 and EOP-004 (see Appendix I- Reference Documents) should be referenced and procedures followed accordingly. In the event of an Energy Emergency Alert (Load Serving Entity has exhausted all other options and can no longer provide its customers' expected energy requirements), the NERC Reliability Standard Attachment 1-EOP-002 should be referenced and procedures followed (see Appendix I – Reference Documents.)
Disturbances or unusual occurrences that jeopardize the operation of the Bulk Electric System should be reported to NERC, SERC, and/or the Department of Energy (DOE), utilizing the procedures outlined in NERC EOP-004. Attachment 1-EOP-004 should be referenced and followed when reporting disturbances to NERC and SERC. Attachment 2-EOP-004 should be referenced and followed when reporting disturbances to the DOE. The preliminary disturbance report(s) should be submitted within 24 hours of the disturbance event. A final disturbance report may also be required by SERC within 60 days of the occurrence.

How to Submit: When submitting the Form OE-417 to the Department of Energy via e-mail, NERC and SERC should be notified by using the following e-mail addresses.

esisac@nerc.com
reporting_line_sit@list-serc1.org

Director Energy Control and Compliance is responsible for submitting the reports to NERC and SERC.