

MORA-SAN MIGUEL ELECTRIC COOPERATIVE, INC.

INTERRUPTION REPORTING POLICY

BOARD POLICY NO. 222

DEFENITIONS:

INTERRUPTION – Loss of electricity for any period longer than 5 minutes.

OUTAGE – State of a component when it is not available to perform its intended function as a result of an event directly associated with that component. Outage can cause an interruption of service to customers, depending on system configuration.

POWER SUPPLY – Interruption originating from transmission system, distribution, or substation.

PLANNED – Interruption scheduled to conduct maintenance.

ALL OTHER INTERRUPTIONS - All interruptions excluding power supply, major event and those planned.

MAJOR EVENT – Interruption or group of interruptions caused by conditions that exceed the design and operational limits of a system.

CAUSE CODE & EQUIPMENT CODES – **Cause Codes** indicates the initiating condition which would include decay, animals, lightning, trees limbs, etc. while **Equipment Codes** indicate what equipment was involved, such as broken insulator, conductor, poles, etc. (Table- 2) Attached

SPECIAL EQUIPMENT CODES – indicates no failure of equipment or material defect occurred i.e. when a protective device such as a fuse operates (as designed) to disconnect a faulted conductor, no equipment has failed or been damaged. (Table 3.) Attached

Weather Condition Codes – indicate the conditions that existed when the interruption occurred. Not to be confused with Cause Codes. (Table 4) Attached

Voltage Level Codes – can be used to identify system behavior that is a function of the operating voltage on the damaged components at the time of the interruption. (Table 5) Attached

RUS Form 7 Part G Column - Code to be included on reporting Form 7. (Table 2) Attached

1. **PURPOSE AND SCOPE**

This policy provides guidance on recording and reporting interruptions and outages within the MSMEC service territory. This policy promotes consistent reporting, response and documentation for record keeping and reporting purposes. Consistency in outage recordkeeping will provide MSEMEC opportunities for performance benchmarking. In addition, to help electric systems collect useful and consistent data on outages to improve reliability.

2. **INTERRUPTION REPORTING**

TROUBLE TICKET – The generation of a Trouble Ticket is the first step in interruption reporting. (Trouble Ticket) Attached.

Obtain information requested on the Trouble Ticket regarding the reported interruption, then forward Trouble Ticket to the field persons who are to respond.

Trouble Ticket is traditionally results from a telephone call from a consumer reporting service problems or interruption. Interruption calls during the work week are taken by those employees answering phones. Interruption calls after hours and weekends are taken by dispatch services.

Information regarding the interruption, location and individual contact information is collected and documented on the Trouble Ticket.

The Trouble Ticket and or information regarding the interruption is provided to the Linemen who will respond to the Interruption.

INTERRUPTION REPORT- documents the work performed by Lineman required to restore power.

Typically, an Interruption Report is completed each time a sectionalizing device opens permanently for the purpose of clearing a fault or de-energizing a section of line for construction or maintenance (Interruption Report) Attached.

The Interruption Report shall provide enough information to comply with RUS and PRC reporting requirements for service reliability and continuity. The Information required on the form shall be captured to insure MSMEC may calculate industry standard reliability indices, to include the effectiveness of various maintenance activities performed by the borrower.

Interruption Reports shall be provided to the Operations Manager responsible for the service territory upon which the interruption occurred. Operations Manager shall retain all Interruption reports reported/provided to them in their office files.

Operations Managers shall review all Interruption Reports for the purpose of determining the system maintenance and or equipment replacement required to minimize interruptions.

Interruption Reports shall be provided to HR as back up documentation for claims filed by consumers resulting from interruptions when requested by HR.

3. REPORTS TO BOARD OF DIRECTORS AND RUS

MSMEC Monthly Interruption Report shall be provided to the Board of Directors each Month (Monthly Interruption Report) Attached.

The Monthly Interruption Report shall be utilized to complete the Annual Reports required of RUS for outages during a certain time period. System Average Interruption Duration Index, (SAIDI). SAIDI is usually calculated for a calendar year or year to date, but for major events calculations, daily SAIDI values should be recorded.

Presented to Board: October 24, 2019

Final Approval: November 22, 2019

Effective: November 22, 2019

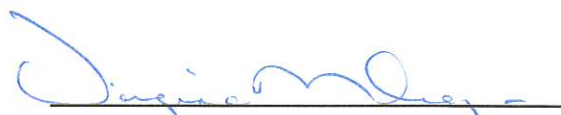

Virginia Mondragon, Secretary

Table 2 represent an important development. Cause codes have been adapted to align with both RUS and IEEE approaches. Note that the codes recommended in Column 1 of Table 2 link RUS's codes that borrowers are accustomed to seeing with the codes prescribed by IEEE. Borrowers are encouraged to use the numbering system outlined in the first column to categorize outages. The numbering system is flexible so that borrowers can add their own cause codes within each subcategory. Subcategory coding can be used to isolate problems with specific types or brands of equipment on the system and to monitor their performance.

Table 2. Cause Codes			
Cause Code	RUS Form 7, Part G, Column	IEEE Code	Description
Power Supply¹			
000	A	4	Power supply
Planned Outage			
100	C	3	Construction
110	C	3	Maintenance
190	C	3	Other planned
Equipment or Installation/Design			
300	D	1	Material or equipment fault/failure
310	D	10	Installation fault
320	D	10	Conductor sag or inadequate clearance
340	D	10	Overload
350	D	10	Miscoordination of protection devices
360	D	10	Other equipment installation/design
Maintenance			
400	D	1	Decay/age of material/equipment
410	D	1	Corrosion/abrasion of material/equipment
420	D	6	Tree growth
430	D	6	Tree failure from overhang or dead tree without ice/snow
440	D	6	Trees with ice/snow
450	D	1	Contamination (leakage/external)
460	D	1	Moisture
470	D	6	Borrower crew cuts tree
490	D	10	Maintenance, other
Weather			
500	D	2	Lightning

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160	Metering equipment
190	Distribution substation, other
	Poles and Fixtures, Distribution
200	Pole
210	Crossarm or crossarm brace
220	Anchor or guy
290	Poles and fixtures, other
	Overhead Line Conductors and Devices, Distribution
300	Line conductor
310	Connector or clamp
320	Splice or dead end
330	Jumper
340	Insulator
350	Lightning arrester line
360	Fuse cutout (damaged, malfunction, maintenance)
370	Recloser or sectionalizer (damaged, malfunction, maintenance)
390	Overhead line conductors and devices, distribution, other
	Underground Line Conductors and Devices, Distribution
400	Primary cable
410	Splice or fitting
420	Switch
430	Elbow arrester
440	Secondary cable or fittings
450	Elbow
460	Pothead or terminator
490	Underground, other
	Line Transformer
500	Transformer bad
510	Transformer fuse or breaker
520	Transformer arrester
590	Line transformer, other
	Secondaries and Services
600	Secondary or service conductor
610	Metering equipment
620	Security or street light
690	Secondary and service, other
	No Equipment Damaged
999	No Equipment failure

Table 4. Weather Condition Codes

TROUBLE REPORT

Acct. No. Security Light Type

Date Time A.M. P.M.

Name

Address

Nature trouble reported

.....

.....

..... (person reporting)

Location: Block No. Meter No.

Time Lineman Notified A.M. P.M.

Report taken by

LINEMAN'S REPORT

Time Lineman Returned A.M. P.M.

Time Lineman left on Call A.M. P.M.

Time Service Restored Date.....

Total Miles Driven

(if Transformer) No. Size

Cause Trouble Found

.....

.....

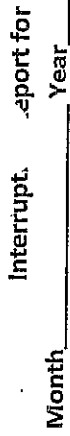
Total Members or Line Affected

Signed

INTERRUPTION REPORT

INTERRUPTION REPORT				REPORT NO.	
DATE	TIME	RECEIVED BY			
LOCATION OR SWITCH NO.		REPORTED BY		TIME POWER WENT OFF	
SUBSTATION					
FEEDER		CAUSE			
DISTRICT		LOCATION OF CAUSE			
		ASSIGNED TO	TIME	TRUCK NO.	
ACTION TAKEN					
RESTORED SERVICE TO		DATE	TIME	NO. CUSTOMERS	CUSTOMER-MINUTES
RESTORED SERVICE TO		DATE	TIME	NO. CUSTOMERS	CUSTOMER-MINUTES
RESTORED SERVICE TO		DATE	TIME	NO. CUSTOMERS	CUSTOMER-MINUTES
				TOTAL CUSTOMERS	TOTAL CUSTOMER-MINUTES
MATERIAL OR EQUIPMENT				CODES	
				CAUSE	EQUIP
				WEATHER	RUS FORM 7
REVIEWED BY					
Dispatcher		Superintendent		Engineer	

meter ?

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