FEDERATED RURAL ELECTRIC INSURANCE EXCHANGE

A reciprocal exchange managed by Federated Rural Electric Management Corp.

A Touchstone Energy® Cooperative

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Dear Safety Professional:

Federated's Near-Miss Program is designed to identify and communicate incidents and hazards experienced by cooperatives nationwide. The data collected can be used by your system to develop training programs designed to eliminate future accidents. This report is provided to you as a training tool to review with employees in an effort to eliminate future incidents.

Corrective Action is the action taken by the group reporting the incident.

**Possible Corrective Action** is provided as another possible action that could be taken based on the limited information available.

#### **Task Performed**

Equipment Installation

#### **Incident Summary**

Revised report. The recloser was installed with a bypass in place. Recloser display remained asleep with bypass closed. The engineer onsite called the manufacturer's support line and discussed using the AC adapter to connect to the 9V contacts on the recloser. The manufacturer said that would be fine, provided there was adequate space for the recloser to drop open. Members of the crew onsite expressed concerns about connecting to the device and running a wire to the ground. When the engineer attempted to plug in AC Adapter a flash was caused.

Safety Equipment in Use - No Job Briefing Conducted - No

### **Corrective Action Taken**

In the future, if a manufacturer's instructions conflict with linemen's best practices the job will be stopped until further discussion is held.

Power cords (conductors) brought down from energized spaces will be treated as energized. Manufacturers will provide onsite training for new devices installed in energized spaces.

# **Possible Corrective Action**

N/A

Slip, Trip & Fall

### **Incident Summary**

After talking to member, I turned to go down steps on front deck of trailer house and I slipped and slid down 6 steps. Landed on right side of body (arm, shoulder, hip and ribs). Member's decker was old, moldy and slippery and had no hand rails.

Safety Equipment in Use - No

Job Briefing Conducted - No

**Corrective Action Taken** N/A

**Possible Corrective Action** 

Use multiple points of contact when using stairs.

# Task Performed

Substation Maintenance

### **Incident Summary**

While pulling a communication cable into a 69KV bus differential relay panel, a technician lost his balance while stretching to reach the cable. His hand landed on a current transformer test switch for a voltage differential circuit. This generated 140 volts AC in the circuit as current was shorted from his hand to his elbow, which was grounded. He received a minor burn to his finger and experienced a shock similar to a standard AC outlet. While the technician had no lasting effects from the shock, the relay declared this as a fault and tripped all of the breakers feed from this bus. Fourteen distribution substations experienced an outage due to this event.

Safety Equipment in Use - No Job Briefing Conducted - Yes

# **Corrective Action Taken**

Awareness training is scheduled and was passed on to slow down and make sure your footing is stable before reaching out.

**Possible Corrective Action** N/A

Material Handling

### **Incident Summary**

The crew was loading a spool of 500mcm underground wire for a job, after swinging over the truck, the winch cable broke and dropped the spool onto the truck. The spool weighed 2,900lbs, while the cable was rated for over 6,000lbs. The cable had passed mechanical inspections 4 months earlier and showed no obvious signs of prior damage. The interior cable snapped first, which caused the outer part of the cable to fail after.

Safety Equipment in Use - No Job Briefing Conducted - Yes

# **Corrective Action Taken**

Review with employees any work habits that could cause damage to winch cables (i.e. pulling poles) and use proper equipment in those cases. Also create a more thorough inspection for winch cables and a more stringent replacement policy.

### **Possible Corrective Action**

Always stay clear of suspended loads.

# **Task Performed**

Driving

### **Incident Summary**

Crew was placing URD cable reels, to be buried, per the staking sheet. Digger derrick became stuck pulling a trailer with six full reels. The crew tried, first attempt, at pulling the digger out by short pull with a four inch by 30 ft. recovery strap. The pulling truck became stuck also. They called another crew member to come pull him out. The second attempt occurred when the truck moved out to the side and further away for better traction. They hooked up the same recovery strap and placed a metal clevis to another four inch by 30 ft recovery strap. On the second attempt, they gave it a three ft. run, this also did not move the digger. They tried it for a third time with a little more of a run. This time the strap hooked to the pulling truck broke in the middle, which sent the half of the strap and the clevis along with the other strap into the bottom of the windshield and through the dash, then out the back window of the digger, just inches from the driver of the digger.

# Safety Equipment in Use - No Job Briefing Conducted - Yes

# **Corrective Action Taken**

The crew did not estimate the weight of the stuck truck and trailer. The crew did not take shock loading into account, nor had they been trained on shock loading of a strap. They used recovery straps that were underrated for the weight and not designed to be shock loaded.

# **Possible Corrective Action**

Use properly rated equipment for task.

**URD** Construction

### **Incident Summary**

The job was to intercept 3 phase wire and set 3 phase jct. 3 runs of conduit were in the trench, the one we were after should have been on the north, but the conduit crossed over the middle conduit about 20' further than where we exposed the 3 conduits. The inability to verify underground wire when you have multiple phases in the trench and assuming the conduits don't cross over each other contributed to this near miss.

Safety Equipment in Use - Yes Job Briefing Conducted - Yes

# **Corrective Action Taken**

Dig until you know...don't assume. Training of employees on this issue.

# **Possible Corrective Action**

Use identtification tool, ground on both ends of cable and spike all URD primary before cutting cable.

# Task Performed

Line/Substation Switching

# **Incident Summary**

Crew was switching line in order to open a section and replace pole. The lineman opened one end, didn't wait for the other truck to open the other end and grounded out a hot line that was not on one shot. In the same switching process the foremen closed in one end of the tie line and not the other. The end result was two outages and a lot of confusion.

Safety Equipment in Use - No Job Briefing Conducted - No

**Corrective Action Taken** 

Switching Policy

# **Possible Corrective Action**

Switching orders should be written, reviewed and understood prior to commencing switching. There should be 1 employee responsible for execution of the switching order and communicating with all affected employees.

Equipment Installation

### **Incident Summary**

While installing a NOVA breaker, the crew went to put the breaker online. They pushed close on the panel and heard a "clunk" and thought the breaker closed in, but it did not. The lineman in the bucket opened the first bypass, breaking full load and causing a phase to phase arc knocking out the high side fuses.

Safety Equipment in Use - No Job Briefing Conducted - No

# **Corrective Action Taken**

More training on breakers and panels. Make sure the breaker is closed before opening bypass.

### **Possible Corrective Action**

When opening line bypass switches, consider using a load break device.

# Task Performed

Meter Maintenance

# **Incident Summary**

While attempting to re-attach meterbase to wall of members house, the conductor came loose from the meter lug and made contact with the meter base, resulting in a flash.

Safety Equipment in Use - No Job Briefing Conducted - Yes

### **Corrective Action Taken**

The proper PPE and IPE shall be worn while working inside an energized meter base. Remind workers to de-energize the meterbase whenever possible to prevent this from happening in the future.

Possible Corrective Action

N/A

URD Outage

### **Incident Summary**

Crew was responding to a part power call. They pulled the meter to check the line voltage and discovered that one leg of the underground was bad. The account had an automatic generator. They checked the load side of the meter base and discovered backfeed from the generator.

Safety Equipment in Use - No Job Briefing Conducted - No

# **Corrective Action Taken**

Always check the line and the load side for hazards anytime in a meterbase.

**Possible Corrective Action** N/A

**Task Performed** OHD Maintenance

### **Incident Summary**

Crew was upgrading transformer at existing grain bin site. Parallel secondaries were not marked, nor was it noted on staking sheet. Member had inherited farm and had no idea if paralleled secondaries Crew refused and fuse blew.

Safety Equipment in Use - No Job Briefing Conducted - No

# **Corrective Action Taken**

If existing service, properly identify and mark secondaries. If new service, do not assume that secondaries have been landed correctly, always call and confirm. Review of procedure and SWP have been updated.

# **Possible Corrective Action**

N/A

**OHD** Maintenance

### **Incident Summary**

Employee on ground was handing employee aloft on till of bucket truck with a chain hoist. As employee aloft pulled chain hoist up, hook caught on till door and pulled hoist out of employee's hand striking employee on top of the head.

Safety Equipment in Use - No Job Briefing Conducted - No

# **Corrective Action Taken**

Discussed the importance of wearing a hardhat. Use handline if possible. Have employee going in air come down to lower level to get equipment.

**Possible Corrective Action** N/A

# **Task Performed**

URD Outage

### **Incident Summary**

Crew was called out to repair faulted primary URD on feed-through transformer. Piggyback bushing was making noise and bushing insert came out when employees initially pulled Piggyback bushing. Employees isolated faulted URD load(parked and grounded) and left transformer engergized for four members. After fixing fault employee was bonding concentric on previous faulted primary URD. Arc occurred throwing employee roughly 10ft and burning hair on arms. Bushing failed that previously had been making noise at same time employee was bonding.

Safety Equipment in Use - No Job Briefing Conducted - No

# **Corrective Action Taken**

Gloves, Sleeves, and Roll Down Sleeves when working in MAD. If any equipment fails-replace. With aging equipment always use caution and de-energize, test, and ground.

**Possible Corrective Action** N/A

**OHD** Maintenance

### **Incident Summary**

Putting a half sleeve on 6A after I had a couple crimps on, the wire broke and fell. The feed side ran a little and bumped the neutral. Line fuse blew.

Safety Equipment in Use - Yes Job Briefing Conducted - No

**Corrective Action Taken** N/A

# **Possible Corrective Action**

Insure employees are clear when working on OHD wire.

### Task Performed

OHD Outage

### **Incident Summary**

Crew was responding to an outage during the regular work day since it was only 3-4 spans from their first assigned job. They checked secondary voltage on an overhead transformer out of the bucket (0 Volts) and then proceeded to remove the hot line clamp from the primary conductor with a shotgun stick. When the lineman began loosening the clamp, the jumper came out of a wildlife protector on the primary bushing and struck the top of the transformer creating an arc and blowing the tap fuse. The jumper had come out of the bushing and was being held in place by the wildlife protector. Lineman was using his PPE and was not injured. I thought I would share so that you could warn your lineman to be aware of this possibility.

Safety Equipment in Use - Yes Job Briefing Conducted - No

# **Corrective Action Taken**

Check transformer riser or stinger at primary bushing before attempting to remove the hot line clamp, especially if wildlife protector is installed on bushing.Reminded everyone in Safety Meeting to be on the look out for this situation and posted Near Miss report here and at Statewide Level to share this situation with others.

#### **Possible Corrective Action** N/A

**Public Liability** 

# **Incident Summary**

Transmission pole struck and broken by vehicle. Generation and transmission provider isolated their transmission line that was downed and re energized member cooperative's substation. Area Serviceman was at the scene of the accident watching traffic and pedestrians so he had not been able to isolate the member cooperative's three phase under build. When G&T provider energized the substation it energized the downed wire at the accident scene.

Safety Equipment in Use - No Job Briefing Conducted - No

# **Corrective Action Taken**

This probably falls under "If it's not grounded, it's not dead".

# **Possible Corrective Action**

Improve communication with G&T during outage or switching situations.

# **Task Performed**

Public Liability

# **Incident Summary**

Farmer cutting corn caught low neutral with combine. It pulled A5 anchor but didn't break the pole. Neither wire broke but both phase and neutral where touching combine in different locations. The line never kicked off or showed any sign of operations on the Form 6 at the substation, which would of been the upstream OCR. When crew arrived they found the driver had already exited the combine without injury. Crew had no reports of outages so they went straight to take off to disconnect tap and ground line. The control and OCR at the sub had just been tested 9/19/18. Crew could only come up with where phase was laying on combine was insulated enough and ground was dry enough to not cause a fault. Crew was not sure if anchor was pulled before combine snagged line or not.

Safety Equipment in Use - No Job Briefing Conducted - Yes

# **Corrective Action Taken**

Shot new anchor and pulled line up for clearance

# **Possible Corrective Action**

Continue public education and focus on "Look up and Live"