

Electricity is a strong invisible force that gives power to machinery, lights, appliances and many other forms of equipment. As beneficial as electricity is, it can be extremely dangerous too! It is vital to remember that working with and around electricity requires your full attention and respect. MEMA

## **Electrical Safety Statistics**

Why spotlight Electrical Safety in the Workplace?

- According to the Electrical Safety Foundation International, Contact with electricity is one of the leading causes of fatalities in the workplace
- 74% of workplace electrical fatalities occurred in non-electrical occupations •
- From 2011-2023, an average of 150 electrical fatalities occurred every year in the workplace
- Electrical Fatality rates have remained consistent year over year

## **Electrical Fatality Causes:**

- 42.8% Overhead Power Line Contact
- 19.3% Unexpected Contact with Electricity •
- 12.7% Nearby Energized Equipment Contact
- 4% Ground Faults

## **Types of Electrical Hazards**

Working with or around electricity presents a number of unique hazards which employees should be aware of:

- Electrical Shock—Occurs when electrical current passes through the body, disrupting the body's normal electrical signals. Severity depends on the current's strength, path through the body, duration, and individual factors.
- Electrical Burn-Occurs when the electrical current passing through the body generates heat. Typically worse than thermal burns due to the electrical current passing *through* the body rather than over the surface.
- Electrical Fire—Occurs when faulty electrical systems create excessive heat, often due to arcing, short circuits, or overloaded circuits, this heat ignites nearby combustible materials.

The following conditions/scenarios increase risk of mishaps or injuries occurring:

- Working on energized (hot) circuits •
- Loose Connections
- Fraved or missing insulation
- Missing ground prongs on plugs

- Water and electricity
- Damaged power tools
- Ungrounded equipment
- Improper use of extension cords

## **General Electrical Safety Precautions**

When working with or around electricity, employees should:

- Wear the appropriate PPE—Insulated Gloves and long sleeves will reduce unexpected contact with energized cir-• cuits
- Inspect tools and equipment-Report and turn-in any equipment with worn insulating materials
- Replace damaged or frayed electrical cords
- Turn power off at the breaker—Utilize lock out/tag out procedures to prevent equipment or circuits from being reenergized while maintenance is being conducted
- Avoid overloading electrical outlets-plug only one high-wattage appliance into each receptacle at a time. Do not "daisy chain" power strips or extension cords