Improving Electrical Safety for Ontario Workers

Are you willing to take the RISK?

Improper procedure is associated with over 60% of electrical worker incidents.

Inside:

Reversing the increasing rate of injury in electrical trades

Reporting high risk for electrical repair and maintenance work

Understanding the role of business owners and supervisors

Working safely near powerlines
High Risk Repair & Maintenance Work

Electrical repair and maintenance presents the GREATEST RISK of electrical injury and 40% of electricians frequently or almost always conduct electrical maintenance work.

Emergency Visits
In 2009, there were 1,674 emergency department visits for electrical injuries in Ontario. More than 78% of those visits were for the most severe types of injuries, including those requiring resuscitation. And almost half of these visits were for work-related injuries.

High Voltage Injuries
High voltage injuries expose workers to lethal amounts of electricity and can cause severe burns, partial amputation of limbs, and/or death.

Low Voltage Injuries
There are hidden dangers associated with low voltage contact. Many electrical workers consider low voltage contact to be just part of the job. But research from Sunnybrook’s Ross Tilley Burn Centre and St. John’s Rehab finds that seemingly harmless low voltage issues may take months to detect and can include irregular heartbeat, speech impairment, difficulty walking, numbness, nightmares, memory loss and weakness. All electrical contact should be reported. For more information on the impact of low voltage shocks contact Sunnybrook’s Ross Tilley Burn Centre.

STAY SAFE!
Both the Ontario Electrical Safety Code and the Occupational Health and Safety Act define requirements to keep workers safe when they undertake electrical repair and maintenance work.

1. Ensure that warning labels are placed on electrical equipment to warn workers of potential shock and arc hazards.
2. Don’t work live. Electrical equipment should be disconnected from the power supply, locked out and tagged out when doing electrical repair and maintenance.

What should have been a routine job, turned your world upside down.
The Role of Business Owners & Supervisors

To protect workers (including contract workers), owners and supervisors should:

1. Develop safe work practices and policies for electrical work.
2. Ensure workers follow safe work practices.
3. Provide workers with training and Personal Protective Equipment.
4. Conduct a regular hazard analysis to identify and address potential hazards.
5. Adhere warning labels to electrical equipment that caution workers of potential shock and fire hazards.
6. Review and adopt recommendations defined in the CSA Z462 safe work practices guidelines.

Who’s responsible?

The majority of electrical incidents result from improper procedures. Worker incidents (including those involving contract workers) where safety procedures have not been followed can result in charges to supervisors, managers, owner/operators and co-workers by the Ministry of Labour, and/or criminal charges under Bill C45.

What are YOU doing to protect your workers and contractors?

Occupational Fatalities

Occupational fatalities from electrocution are a significant problem. Studies show that the highest proportion of electrocution deaths is among electricians and electrical helpers, utility workers, and those undertaking repair and maintenance work in construction and manufacturing industries.

Causal Factors

A review of causal factors associated with electrical workplace incidents identified that these occur when safety requirements and considerations break down.

BE SURE TO REVIEW both the Ontario Electrical Safety Code and the Occupational Health and Safety Act. They define the requirements to keep workers safe when they undertake electrical repair and maintenance work.

Who’s responsible?

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Why are these incidents happening?

Improper procedure is associated with over 60% of electrical worker incidents.

Probable Cause of Occupational Electrocutions in Ontario, 2001–2010

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Source: ESA and Coroner’s records

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Operating Safely Near Powerlines

Prior to starting work:

1. Perform a complete hazard assessment of the working area and surroundings.
2. Look up and look out for overhead conductors.
3. Confirm voltage of overhead powerlines and equipment. Supervisors and owners must confirm voltage for overhead powerlines and equipment to ensure compliance with the Occupational Health and Safety Act (OH&S Act) “Limits of Approach”.
4. Adhere to Limits of Approach identified in the OH&S Act.
5. Request that lines be de-energized by the Local Distribution Company if you need to work within the Limits.
6. Ensure signage exists to warn workers of potential hazards due to overhead powerlines (as stipulated by OH&S Act).
7. Ensure spotters are used (as required by OH&S Act).

Know Your Limits

Ontario’s Occupational Health and Safety Act (OH&S Act), General Construction (O. Reg. 213/91) Section 186 specifies the ‘Limits of Approach’ for working near overhead powerlines as follows:

<table>
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<th>Nominal phase-to-phase voltage rating</th>
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<td>Up to 150,000 volts</td>
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Always use the most current OH&S Act to understand the rights and duties of all parties in the workplace.

LIMITS OF APPROACH

Locate overhead powerlines, confirm voltage, and follow OH&S Act guidelines.
We can help...

The Electrical Safety Authority is committed to reducing rates of electrical injury and fatalities across Ontario. We work closely with safety and industry stakeholders to increase awareness and influence change. Our Continuous Safety Services program and training programs can help improve worker safety in your facility.

WHO WE ARE ....

The Electrical Safety Authority has been given the mandate for public electrical safety by the Ontario government.

To meet our safety goals we:

• identify and target electrical risk priorities;
• investigate electrical fatalities, injuries and fire;
• educate on electrical safety regulations, the safe use of electricity, and the dangers of unsafe practices, products and installations;
• advance the safety system by influencing safety standards development in conjunction with other safety organizations; and
• enforce a set of regulations related to electrical safety.

For more information:
visit www.ESASAFE.com or call 1-877-372-7233