



IBEW Construction
Council of Ontario

A submission to the Expert Advisory Panel on Occupational Health and Safety in Ontario

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- Electrical injuries increased by 45% from 1998 to 2006 *
- 50% of all death and injury by electrical contact is caused by ‘working live’ **
- 42% of all LTI’s are due to musculoskeletal injuries (C .Tiano)
- LTI’s are misleading given employers have received \$ 1 billion in rebates over the past 10 years

* MOL WESC Report 2007

** MOL 2008

WHY IS THIS SO?

In spite of the best intentions of MOL WSIB and HSA's, and for a variety of causes there still exists a systemic attitude of disposable worker, leading to a cultural norm in the ICI sector particularly as it relates to C of Q electricians and the work they do for contractors. These injured workers can be replenished through union hiring halls in which the practice has pejoratively been referred to as 'weed and feed'

The following 9 points outlines IBEW's concerns and issue with respect to the mandate and broad range of topics examined by the Expert Panel during this review and consultation process

IBEW Concerns

- 1) Workplace safety Practices and entry level training
- 2) The Impact of the Underground Economy
- 3) Legislation and how this impacts electrician safety
- 4) Workplace Electrical Injury: single episode and cumulative trauma injury

IBEW Concerns cont'd

- 5) Unrealistic Productivity Benchmarks per labour unit hour which creates circumstances for electrical worker injuries and this contributes to electrician injury
- 6) Electrical Safety Training in Ontario
- 7) The Need for one stand alone Health and Safety Organization housing all Safety Associations
- 8) WSIB Experience Rating is not working
- 9) Technological Change – New Smart Grid Risks

Workplace Safety Practices and Entry-Level Training

The literature and statistics agree: the age group most at risk in occupational settings are young male workers – they have the least training and are the most likely to take risks of any worker.

Workplace Safety Practices and Entry-Level Training (cont'd)

IBEW proposes a mandatory safety, training, and certification programs for ALL young workers who are exposed to construction workplaces and electrical systems contact, regardless of trade, in addition to the current programs.

Workplace Safety Practices and Entry-Level Training (cont'd)

Maintain and Enforce apprentice ratio's of one per every three licensed C of Q electricians ensuring that these young workers learn on the job safety and not on the job risk!

As we know the literature is quite clear, it takes 10 years to become an expert at any trade or craft including safety practices: electricians are no different

The Impact of the Underground Economy of Electrical Safety

The greatest threats to electrician safety posed by the Underground Economy are as follows:

- worker safety risks
- off-loading of insurance premiums and taxes from 'engagers' to workers
- taking advantage of immigrant, vulnerable and non English speaking workers
- engaging workers with no unions rights or representation, typically with perfunctory compliance with health & safety laws

The Impact of the Underground Economy of Electrical Safety (cont'd)

- These workers have ZERO possibility of saying NO when their employers ask them to work in a risky situation representing a form of Exploitation by Invitation
- The underground economy delivers no social justice to the workers trapped in it
- Clearly the Internal Social Responsibility (IRS) has never entered this unregulated domain nor do the workplace dynamics foster a level playing field between the workplace parties

The Impact of the Underground Economy of Electrical Safety (cont'd)

IBEW proposes that new legislation be tabled making the 'Enabler', those who hire or pay the wage of these underground workers be responsible for WSIB premiums and payments in case of an injury or claim, and if caught, prosecuted. Enforcement is very important because self-insurance has proven to be unworkable in creating a health & safety culture shift, and in fact, is part of the systemic problem.

Legislation and how this impacts electrical worker safety

- The Experience Rating (ER) system has failed to foster the anticipated Health & Safety culture shift it was designed to facilitate, and in a perverse way, failed workers, cost billions, and must be changed
- from 2005 to 2007, 73 companies collected WSIB rebates, yet in the previous year were fined, or convicted under WSIA and/or OHSIA regulations

Legislation and how this impacts electrical worker safety (cont'd)

- ER is a trailing indicator encouraging the practice of underreporting in order to misrepresent the actual compensable injuries and LTI's, in order to obtain ER & SIEF rebates from WSIB
- electrical injuries increased 45% from 1998 to 2006 – the system, as we know it is not working to reduce injuries the leading indicator of death by electrical contact

Legislation and how this impacts electrical worker safety (cont'd)

- ER is an incentive system that creates financial rewards that suppresses incident reporting, including under reporting of injuries. However, there also exists complicit worker behaviours that represent industry cultural norms in spite of employer government programs to work safe

IBEW recommends that the CEO, CFO, or a Senior Director sign the annual declaration of compliance

Workplace Electrical Injury: Single Episode and Cumulative Trauma Injury

- 50% of all death and injury by occupational contact with electricity result from working live
- 79% of all electrical deaths and injuries happen to those who are not electricians
- If an LTI is caused by electrical contact, the person injured is 100 x more likely to die from this LTI as compared to ALL other types of LTI's combined

Workplace Electrical Injury: Single Episode and Cumulative Trauma Injury (cont'd)

- 42 % of all other injuries are repetitive strain type
- This tells us that there is little in the way of RESPECT for the highly skilled, expert work electricians provide and demonstrates that electricians and other trades are being asked far too often to work live for others profit. The risk behaviours of electrical workers also need to be addressed through continual education to reinforce behaviour modifications. Finally, customer service (less disruption to client) must not trump safety considerations

Piece Work and How This Contributes to Electrician Injury

The phrase Industrial Athlete has been used to describe the heavy physical work electricians frequently perform doing highly repetitive tasks for extended periods. Often times outside of the safe ergonomic working zone. And in situations where there is still a chance, circuits are still live. These repetitive strain injuries or cumulative trauma can and do cause significant proportion of LTI's (42%).

Piece Work and How This Contributes to Electrician Injury (cont'd)

We cannot have mentally and physically exhausted electricians then working on or near energized electrical systems where electricity' is analogous to toxic or hazardous materials in the industrial setting.

Piece Work and How this Contributes to Electrician Injury (cont'd)

The frequent criticism from electrical workers 'is you don't drown in a 6 inch fitters pipe' but what flows in an electrical conduit is however, lethal. The notion that these men and women are running a race where jobs are bid and priced at x number of dollars per labour unit, forces employers to beat the labour specs, and in turn, workers take risks to meet budget & completion deadlines. This economic model leads to systemic risk behaviour by field personnel, supervisory and workers.

Piece Work and How this Contributes to Electrician Injury (cont'd)

The IBEW asks the McGuinity government, clients and industry to treat these highly skilled and well trained experts with the respect they would for any other person, so that jobs are not priced using unrealistic labour productivity benchmarks that force our members to work too fast, thus compromising safety – this is how our members get killed and maimed.

Piece Work and How this Contributes to Electrician Injury (cont'd)

Foster an environment where 'a fair days work for a fair days pay' becomes the electrical industry standard. This not only makes sense but saves money: a safe, quality, job reduces accident claims and injuries.

Electrical Safety Training in Ontario

If 79% of all death and injury due to occupational electrical contact is being suffered by non electricians and electrical injuries increased by 45% from 1998 to 2006

What does this say our training regime for those who are not C of Q electricians?

Electrical Safety Training in Ontario (cont'd)

Training of electricians in Ontario for the most part is very good, however the non-electricians are dying and getting maimed at three time the rate on electricians because 50% of the time they are **WORKING LIVE!**
Training alone will not improve OHS outcomes

Electrical Safety Training in Ontario (cont'd)

What lacks in our training, legislation and enforcement that allows non- experts to think they can ‘safely’ handle the invisible, highly dangerous and lethal energy called electricity, when the trained experts tread carefully when near energized circuits and equipment is puzzling?

Electrical Safety Training in Ontario (cont'd)

Today's apprentice ratios are crucial to insuring the complete safety training of tomorrow's electricians. This is vital when one considers the industry faces an unusually high retirement rate over the next few years

The Need for a Stand Alone Electrical Health and Safety Association

The MOL stated in Dec 10/2009 that the IBEW/ECAO sponsored worker safety intervention aimed at electrical workers called the ‘Just Don’t Ask’ campaign played a key role as ‘major intervention in helping to eliminate electrical incidents’.

The Need for a Stand Alone Electrical Health and Safety Association (cont'd)

Central to this campaign was the Just Don't Ask Authorization Form, where should a client asks the electrician to needlessly work live her/she can present the form asking the client to state the reasons why this is necessary, the safety measures in place and to sign this form...we can tell you very few forms have been signed and handed in.

The Need for a Stand Alone Electrical Health and Safety Association (cont'd)

Electrical harms and risks are like no other construction risk, and safety interventions like this might not be needed if one Health and Safety Agency were dedicated exclusively to the health and safety of those who work on or near energized electrical equipment and all other ICI workers.

The Need for a Stand Alone Electrical Health and Safety Association (cont'd)

The IBEW believes that due to the unique character of electrical harm, one stand alone HSA must be reconstituted to deal exclusively with the unique risks associated with electrical work, and all hazardous ICI work.

Experience Rating (ER) is not working

As noted previously this model is flawed and is a trialing indicator of health and safety. It is flawed because the incentives built into this system reward the wrong organizational behaviors:

- pressuring staff to not report and injury,
- hiding the true nature of an injury,
- going to extreme lengths to hide incidents and reports of injury,
- rewarding those who cheat the system

Experience Rating (ER) is not working (cont'd)

IBEW believes that the ER systems model must change by adding a best practices formula

Technological Change and its Impact on Electrical Safety

The advent of the Smart Electrical Grid brings new and unforeseen safety risks to electricians and to other trade workers. Arc flash incidents are surprisingly high in wind turbine operations and the connection of DC powered solar panels in sunny weather could present very dangerous situations for millwrights and other trades who are not trained in these new exotic types of electrical devices, and yet who are installing them.

Technological Change and its Impact on Electrical Safety (cont'd)

Think back to that ration of 79% non-electricians getting killed and injured, and 50% of the time working live.

Fast-forward a few years and the Premier's vision of a robust electric vehicle fleet operating in Toronto. Who is going to install those high voltage-charging stations? Surely only C of Q electricians, as these units can charge an electric vehicle at 400 volts.

Technological Change and its Impact on Electrical Safety (cont'd)

IBEW ask the province now, to strike legislation stating that only C of Q electricians can work on these, and future types of high energy smart grid devices



Campaign created for the Electrical Safety Coalition of Ontario,
this campaign was based on key learning's arising from
research on risk/safety advertising.

QUESTION:

Asking your contractor to work on LIVE electrical equipment is:

1. Risky
2. Not a time saver
3. Unfair
4. Against the law

ANSWER:

All of the above.



WORKING LIVE CAN KILL. JUST DON'T ASK.

Plan Ahead • De-Energize • Shut Down

Working live is illegal except for specific circumstances, and even then there needs to be special safety controls in place. Otherwise, workers could be killed and you could be charged. Don't ask people to risk their lives.

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**Don't expect your contractor to
do live electrical work.**



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IAPA
It's About Making A Difference.





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**Save a buck or save a life?
Deadlines are secondary.
Safety comes first.**



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**DON'T ASK ME
TO WORK LIVE**

BUT IF YOU DO...

AUTHORIZATION

Request for Live Work on Electrical Circuits

Section, 217.1 of the Criminal Code states:

217.1 Everyone who undertakes, or has the authority, to direct how another person does work or performs a task is required to take reasonable steps to prevent bodily harm to that person, or any other person, arising from that work or task.

Your organization is requesting our firm to work on a live electrical system. Working live without locking out should only be done in exceptional circumstances, when it is not feasible to de-energize the equipment. Before we consider your request, your organization must :

- Confirm that you are aware of your obligations under the *Occupational Health & Safety Act*, and that you have an existing, written electrical safety program.
- Provide written confirmation from the manufacturer that work on the equipment can be performed safely without disconnecting it.
- Confirm that you have conducted a hazard analysis with respect to the proposed work and provide us with a copy of it. (NFPA 70E or CSA Z462)
- Confirm that the equipment has been properly maintained according to the manufacturer's specifications since the date of original installation and provide us with a copy of those maintenance records.
- Confirm in writing the reasons why you are requesting our firm to work live, keeping in mind the hazards associated with working live.
- Acknowledge in writing that your organization will assume all risks of property damage associated with this request to work live, in the event of an inadvertent shutdown.

Date work to be performed: _____ Location: _____

Reason work must be done live:

Name of Company making request: _____

Name of Company's Senior Officer making the request: _____

Signature of Company's Senior Officer: _____

Everyone takes a risk when asking someone to work live and anyone considering such a request is required to independently assess and confirm that the request can be complied with safely.

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EUSA



SUMMARY

The IBEW CCO has condensed our recommendations into three broad areas: Training, Electrical Injury and Legislation, and respectfully recommend to the MOL, and the Expert Panel on Occupational Health and Safety, the following actions be taken:

Summary

Training:

1a) Develop safety interventions, education, training, and communications programs for the management ranks in client companies reminding them of the dangers of asking others to take risks, while reinforcing respect for skilled electricians.

Summary

1b) Create a more rigorous and mandatory Health & Safety training program for new electrical workers and adopt compulsory certification and electrical safety training for all trades. Consider utilizing an identity card for all workers attesting to safety training with stickers affixed proving annual updates.

Summary

1c) Adopt and support proven interventions such as the ‘Just Don’t Ask Form’ which empowers workers and electricians to say no when asked to undertake dangerous work by those who know better, and by those who are ignorant of the risks.

Summary

Electrical Injury:

2a) Establish a population based database of all occupational and residential electrical contacts to foster a workplace environment where it is the ‘right thing to do’ by reporting all electrical contacts.

2b) Develop a complete list of the leading indicators of electrical injury by developing a workplace culture where contractors report all incidents of electrical shock, with no penalty whatsoever for reporting same.

Summary

2c) Develop a program to raise awareness of the multiple negative impacts on worker safety through repetitive injury and strain regardless of a workers' Athleticism, because the endemic physical demands habitually recruited of electricians poses positional risk of injury

Summary

2d) Many ‘Smart Grid’ devices operate on very high voltages, and high amperage (such as DC powered solar panels), and in order to reduce electrical injury, create legislation stating only C of Q electricians should be allowed to connect and repair such devices.

Summary

Legislation:

3a) Retain the current ratio of 3 journeymen to 1 apprentice in the electrical trade to insure complete and lifelong safety learning of all electrical hazards by our most vulnerable workers: our youth.

3b) Adopt legislation whereby ‘The Enabler’ any person who hires or pays for an underground worker, is held fully liable for all WSIB premiums, health care costs, and property damage costs should an accident occur.

Summary

3c) Recreate the Internal Responsibility System (IRS) system with mandatory reporting of all worker injuries providing real empowerment for workers to say no to risky work place requests, while providing justice for vulnerable workers such as non-English speaking, and immigrant workers.

Summary

3d) Overhaul the WSIB Experience Rating (ER) system to eliminate the current incentives for underreporting incidents, to one that creates real transformational change in the area of workplace Health & Safety.

3e) Insist that the CEO, CFO or another senior Director sign off on the Annual Declaration of Compliance, and on Recency of Updates and Further Training by H&S representatives.

Summary

3f) Outlaw the practice of any trades other than C of Q electricians working on, or near energized equipment or machinery on pain of a severe financial penalty for the worker and the employer, as well as a negative ER rating.

3g) Create one overarching Health and Safety Agency that houses all the current Safety Associations responsible for all aspects of worker safety, education, and training here in Ontario.

Thank You