Looking into the Future: Expert Panel Report and Bill 160

UAC-ESA
October 4, 2011
Introduction


As a key step to implementing the recommendations, Bill 160 was introduced March 3, 2011. The bill was passed May 18 and amended the *Occupational Health and Safety Act* (OHSA) and the *Workplace Safety and Insurance Act, 1997*, (WSIA).

Various sections are expected to be proclaimed at different times. The bill provides for all sections to be proclaimed by April 1, 2012 if not proclaimed sooner.

The Bill establishes a broad framework to allow for the implementation of key recommendations.

Many of the Panel’s recommendations will be phased in over time to allow for further consultation on detailed proposals and for workplace parties to become familiar and prepared for new duties and responsibilities as required.

This work will proceed in consultation with the Interim Prevention Council/Prevention Council, prevention system partners and stakeholders.
Key Features of Bill 160

Prevention mandate is transferred from the WSIB to the MOL.

Minister is required to establish a multi-stakeholder Prevention Council. Council to include representatives of unions, employers, non-unionized workers, WSIB, and people with OHS expertise.

Minister appoint a Chief Prevention Officer to:
- develop a provincial occupational health and safety strategy, including goals and performance measures for OHS system partners;
- prepare an annual report, including assessment of progress made towards achieving goals in strategy;
- advise the Minister on:
  - prevention of work-related injuries and illnesses;
  - any proposed changes to the funding and delivery of prevention services;
  - the setting of standards for designated entities;
- carry out duties related to training and certification;

The CPO would be required to consult the Prevention Council and consider its advice in developing the provincial strategy and the Annual Report.

The CPO would collaborate with the Deputy Minister of Labour when developing the provincial strategy to align prevention and enforcement activity.
Health and Safety Associations

The Ministry of Labour would have oversight responsibility for Health and Safety Assoc. (HSAs)

HSAs would continue to be funded from WSIB premiums

The Minister has responsibility in OHSA similar to previous language in WSIA to:
  — designate an entity as a safe workplace association, medical clinic or a training centre (and revoke designation);
  — set standards HSAs must meet to be eligible for designation;
  — give directions to an HSA, including to comply with government directives;
  — Etc.

Minister would be required to seek advice from CPO before proposing any change to the funding and delivery of prevention services that the Minister considers significant

The CPO would be required to:
  — monitor the operation of HSAs, and could make inquiries, and obtain information and records from them;
  — report to the Minister on compliance of the HSAs; and may give advice on any action the Minister may take if an HSA is non-compliant.
  — determine if the Prevention Council endorses any proposed significant change to the funding and delivery of services, and include that advice to the Minister

The Minister may delegate powers related to the HSAs only to the CPO.
Key Areas of Recommendations

**Training**
- Mandatory H&S awareness training for all workers and frontline supervisors
- Mandatory high quality training for high risk sectors and activities
  - Standardized curriculum by accredited trainers
  - Initial focus on mandatory entry level for construction and for workers working at height
- Mandatory training for H&S Reps
  - Standardized curriculum available in multiple delivery formats

**Protection for Vulnerable Workers (VW)**
- Creation of a standing committee to advise Minister on VW issues
- Enforcement targeted to sectors and employers where vulnerable workers exist
- Improved protections from reprisals
  - Expedited process where workers are fired
  - Role for MOL inspectors in gathering information to be used in resolution of complaints
  - Support mechanisms for workers and small employers
Key Areas of Recommendations (cont’d)

Support for Small Business
• Creation of a standing committee to advise Minister on small business issues
• Enforcement staff provide support to small business
• Health and safety prevention and enforcement staff dedicated to small business
  – expected to result in a better understanding of their needs and provide a consistent approach

Other
• Greater incorporation of health and safety topics into all levels of the educational system
• Wider array of enforcement tools where workers are placed at great risk of injury
• Develop monetary and non-monetary incentives to motivate superior H&S performance
• Target employers that operate in the underground economy
Next Steps

Transition team/process established to work with MOL, WSIB, HSAs and an Interim Prevention Council in the creation of new Prevention Organization.

Recruitment of George Gritziotis as first Chief Prevention Officer announced Aug. 30.

Interim Prevention Council meets regularly; primary focus has been Bill 160, recruitment of CPO and implementation of priority recommendations.

Work has begun on priority recommendations in the areas of training, vulnerable workers and support for small business.
Utility Advisory Council
Terms of Reference Review
October 2011
Objectives

• Streamline/clarify terms of reference. Ensure mandate is clear and well understood by new members.

• Review membership to ensure that it aligns with the ESA’s strategic direction

• Align with Singer and Watts Recommendation 7: It is recommended that ESA adopt a simplified terms of reference for each of the Advisory Councils that is better aligned with best practices e.g., terms, chair training.

• UAC meetings are candid and constructive and UAC is able to provide constructive advice to the CEO and senior management.
ESA’s Strategy

2012 Annual Goals

Harm Reduction Priorities

- **Power Line Safety**: Reduce power line contacts among non-electrical workers and the public.
- **Worker Safety**: Reduce worker incidents related to unsafe work practices with or near electrical equipment (other than power lines).
- **Product Safety**: Reduce fires and safety incidents related to electrical products.
- **Aging Infrastructure**: Reduce electrical contact and fire incidents related to street lighting and existing residential building installations.
- **New Wiring**: Align more ESA resources to highest priority harm reduction initiatives.

**Stakeholdering Communications Partnerships**
- Collaborative relationships with electrical safety system stakeholders
- Shared commitment and responsibility with safety partners
- Proactive communication and media relations

**Operations & Processes**
- Safety Management Framework
- Customer service effectiveness
- Safety risk processes

**People & Growth**
- Engaged and aligned workplace safety culture
- Employee development opportunities

**Financial & Funding**
- Funding principles and model aligned with safety harms
- Stable financial framework

**Electrical Safety 5 Year Goal**
A 30% Reduction of electrical deaths
UAC Terms of Reference: Old vs. Proposed New Sections
Next Steps

• Update based on feedback from today

• Circulate for review

• Further discussion may be required for membership and terms discussion.

• Is a sub-committee needed?

• Bring back to a future UAC
Mandate and Role:

This Utility Advisory Council is mandated to provide views and advice the Chief Executive Officer (CEO) and ESA senior management on matters specific to the electrical distribution sector.

The Utility Advisory Council (“UAC”) will act as an advisory body to provide advice and input to ensure the identification, monitoring and reduction of electrical safety incidents and fatalities in Ontario specific to the Electrical Distribution System. The mandate includes recommendations on new proposals or revisions to the Electrical Distribution Safety Regulation and the associated guideline as well as to provide advice on the impact of the administration of the regulation.

Objectives:

- Review, refine and clarify the safety objectives identified in the Electrical Distribution Safety Regulation.
- Review, refine and clarify the Electrical Distribution Safety Regulation guidelines.
- Consideration of all proposals or requests for revision to the Electrical Distribution Safety Regulation.
- Advise and assist ESA in its efforts to communicate with members of the Electrical Distribution sector and the public.
- Provide advice on safety polices proposed by the ESA (e.g. Safety Bulletins).
- Provide advice on ways ESA can improve its business services (plan approval, inspection, etc.).
- Identify Ontario Electrical Safety Code or technical issues or concerns for referral to the Ontario Provincial Code Council or other ESA advisory councils for consideration.

Council Structure:

- The Utility Advisory Council will be comprised of a minimum of 18 members and maximum of 26 members offering expert opinions.
- It is the intent of ESA to ensure that the UAC be comprised of a balanced representation of industry stakeholders.
- Approximately one-half of the UAC will be parties representing local distribution companies with the balance representing various general interests (regulatory/governmental agencies) according to the following matrix:

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<tr>
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<td>Licensed Distribution Companies/Owner/ Operator</td>
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<td>8</td>
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<tr>
<td>Government, Regulatory</td>
<td>3</td>
<td>5</td>
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Member Appointments and Terms:

- The term for Council members is (X) years. Members may be eligible for reappointment for an additional X terms. Reappointment should be based on member attendance, participation, and continued relevance of the subject area of the member’s expertise.

- As the UAC functions as an advisory body, it is important that members be drawn from among the appropriate distribution industry segments. Candidates should possess a strong grasp of the electricity distribution sector and be well regarded within the industry. People holding senior positions in organizations, associations or firms are considered the preferred candidates.

- Nominations for appointments will generally be obtained through the various organizations or associations that represent the viewpoints of parties affected by the Electrical Distribution Safety Regulations and those interested in promoting safety in the electrical distribution sector.

- General interest members will be selected based on their ability to represent broad constituencies to support ESA’s strategic direction.

- Regular participation in UAC meetings is encouraged, however, alternates are acceptable.

Appointment of the Chair and Vice-Chair:

- The Council Chair will be selected through a Council voting process. In addition to the election of a Chair, a Vice-Chair will also be elected by the members. Both the Chair and the Vice-Chair must be elected from the membership.

- The Term for the Chair position is X years with the option for ESA to renew the position for an additional X-year term. There is no term limit on the Vice-Chair position.

- The members should consider the following criteria when electing the Chair and Vice-Chair:
  - Governance experience
  - Experience leading teams through decision making processes
  - Council or Committee experience
  - Proven commitment to positioning societal perspectives
  - Experience applying Robert’s Rules
  - Ability to manage and engage others
  - Time availability to support Council activities

Voting and Quorum:

- Generally, the UAC will operate on a consensus-based process. In some circumstances recommendations may be made by a vote of the Council membership.

- Each member of the Council shall be entitled to one vote. Voting by proxy will be permitted provided that written notice relative to the proxy has been filed with the Chair prior to the meeting. The Chair will only vote in the case of a tie.

- A quorum is required to vote, however it is not required to proceed with the meeting. A quorum shall consist of two-thirds of the voting membership.
UAC Technical Sub-Committees:

- The UAC may wish to establish “technical subcommittees” to explore and make recommendations on technical issues that arise. The sub-committee acts only in an advisory capacity to the UAC. The Chairman of the Subcommittee shall be a member of the Council, but the membership of the Subcommittee may include non-members of the Council.

Utility Council Member Expectations:

- Active participation and willingness to work on a Council
- It is expected that the various associations, through their member(s) on the Council, will use the UAC as a forum for proposing changes and revisions to satisfy the needs of the segment of the industry that they are representing and to improve safety.
- Engage members of the electrical distribution industry in the delivery of public electrical safety in Ontario.
- Identify and make recommendations to ESA on ways to improve electrical safety.
- Ability to attend 4 meetings per year. Additional time for conference calls, material review, and participation/integration with other ESA Councils may be required.
- Ability to work in a multi-stakeholder environment.
- Council members will be independent of ESA, and will identify any real or potential conflicts to the chair of the Utility Advisory Council

ESA Support to Utility Council Members:

- Quarterly summary of Council activities to Regulatory Affairs Committee
- ESA Advisory Council Orientation Package
- Additional staff support and training if needed.
- Financial support for out-of-pocket travel expenses to attend committee meetings
- Council members whose costs are not covered by their employers are eligible to receive a meeting fee of $250 and the Chair is eligible to receive a $500 meeting fee
- Governance training for the incoming Chair
- Networking support with other members
- Access to relevant research materials and reports e.g. Ontario Electrical Safety Report and industry research

Meetings:

- The Council meets at least three times per year. Additional meetings may be called at the request of the Chair.
- Meeting agendas and supporting material will be sent to each member one week in advance of the meeting date.
- Draft minutes will be distributed approximately two weeks after the meeting and members will have two weeks to propose changes to the draft minutes. The draft minutes (with revisions) will be posted to the ESA website within 30 days of the meeting.

Council Reporting:

- As the Council provides advice to the CEO and Executive Management Team, the Council may provide the CEO with an annual report to communicate:
  1. Key accomplishments
  2. Emerging issues
3. Performance against annual objectives for the fiscal year.

- This report will ensure full disclosure and reinforce ESA’s commitment to transparency and public accountability and should also inform on ESA’s ability to support the activities of the Council.

Utility Advisory Council Review:
- The UAC will undertake annual peer evaluations of its members.
- The Council will be also evaluated annually on meeting its objectives.
# Utility Advisory Council (UAC) Terms of Reference: Before and After

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<thead>
<tr>
<th>Section</th>
<th>Old</th>
<th>Proposed New</th>
<th>Comments/rationale</th>
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<tr>
<td>Mandate</td>
<td>It is important for any business to obtain input from the customers and stakeholders it serves. The electrical distribution industry represents a key stakeholder and customer group that ESA serves. The mandate for the Council is very different from a Board of Directors’ governance role. This council is mandated to provide views and advice specific to the electrical distribution sector to the Chief Executive Officer (CEO) and ESA division leaders. The Utility Advisory Council (“UAC”) will act as an advisory body in making recommendations to ESA, and for providing comment from the electrical distribution industry and other stakeholders on new proposals or revisions to the Electrical Distribution Safety Regulation. The UAC is to make recommendations related to the implementation, administration, development and amendment to the Electrical Distribution Safety Regulation.</td>
<td>This Utility Advisory Council (UAC) is mandated to provide views and advice the Chief Executive Officer (CEO) and ESA senior management on matters specific to the electrical distribution sector. The Utility Advisory Council will act as an advisory body to provide advice and input to ensure the identification, monitoring and reduction of electrical safety incidents and fatalities in Ontario specific to the Electrical Distribution Safety System. The mandate includes recommendations on new proposals or revisions to the Electrical Distribution Safety Regulation and the associated guideline as well as to provide advice on the impact of the administration of the regulation.</td>
<td>Remove the history and streamlined the mandate.</td>
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### Objectives

- Initially, the UAC will consider the framework for implementation of the Electrical Distribution Safety Regulation. Several areas of specific and immediate concern have been identified by stakeholders, as possibly deserving the attention of the UAC over the first 15-month period of its existence.

- Administration, Development and Amendment of the Electrical Distribution Safety Regulation.
- Facilitating Communications.
- Advise ESA on Regulatory and Service Delivery Matters.
- Identify Opportunities to Improve Electrical Safety.
- Review, refine and clarify the safety objectives identified in the Electrical Distribution Safety Regulation and the Electrical Distribution Safety Regulation Guidelines.
- Consideration of all proposals or requests for revision to the Electrical Distribution Safety Regulation.
- Advise and assist ESA in its efforts to communicate with members of the Electrical Distribution sector and the public.
- Provide advice on safety policies proposed by the ESA (e.g. Safety Bulletins).
- Provide advice on ways ESA can improve its business services (plan approval, inspection, etc.).
- Identify Ontario Electrical Safety Code or technical issues or concerns for referral to the Ontario Provincial Code Council or other ESA advisory councils for consideration.

Many of the objectives were focused on implementation. No longer required now that implementation has been completed.

Discussion: are there other objectives?

We probably have a good enough understanding now that we do not need lists of examples.

### Council Structure/Members

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<thead>
<tr>
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No change proposed.

Questions for discussions:

Is the membership list still appropriate based on ESA’s Strategic Plan?

Are there other stakeholders we should be inviting to the table?

### Membership Term

UAC members will be selected to serve two-year repeatable terms.

Questions for discussion:

How would this impact the Council?

How would the nominating organizations manage this?

What would be the best way to transition this? Timing?

S & W recommended that ESA adopt a three-year membership term for its Councils with the option to serve for a total of up to two consecutive terms.
<table>
<thead>
<tr>
<th><strong>Chair and Vice-Chair</strong></th>
<th>The Chairmanship term will be limited to two years, with the Vice-Chair succeeding to Chair at the end of the term; therefore, with the exception of the first election, the only elections required by the Council are to fill the Vice-Chair position every two years.</th>
<th>Suggestion: The Term for the Chair position is two years with the option for ESA to renew the position for one additional two-year term.</th>
<th>• Extend option for reappointment of the Chair. • Increase flexibility for succession planning.</th>
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<td><strong>Chair and Vice-Chair Criteria</strong></td>
<td>The role of the Chair is to preside over Council meetings, coordinate the agenda (with support from the Council Secretary, liaise with the ESA CEO and division leaders on agenda items, and ensure support communication among council members.</td>
<td>• The members should consider the following criteria when electing the Chair and Vice-Chair: o Governance experience o Experience leading teams through decision making processes o Council or Committee experience o Proven commitment to positioning societal perspectives o Experience applying Robert’s Rules o Ability to manage and engage others o Time availability to support Council activities</td>
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<td><strong>Meeting Frequency</strong></td>
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<td><strong>Meeting Minutes</strong></td>
<td>Two sets of minutes will be distributed: a summary of minutes that can be distributed to and discussed among Association constituencies will be generated within one month of the meeting, and detailed minutes intended for Council members only will be generated one month prior to the next meeting.</td>
<td>• Meeting agendas and supporting material will be sent to each member one week in advance of the meeting date. • Draft minutes will be distributed approximately two weeks after the meeting and members will have two weeks to propose changes to the draft minutes. The draft minutes (with revisions) will be posted to the ESA website within 30 days of the meeting.</td>
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| Voting and Quorum | • Generally, the UAC will operate on a consensus-based process. In some circumstances recommendations may be made by a vote of the Council membership.  
• Each member of the Council shall be entitled to one vote. Voting by proxy will be permitted provided that written notice relative to the proxy has been filed with the Chair prior to the meeting. The Chair will only vote in the case of a tie.  
• A quorum is required to vote, however it is not required to proceed with the meeting. A quorum shall consist of two-thirds of the voting membership. | Clarifies process and voting rules and defines quorum. |
| New: ESA Support to Utility Council Members: | • Quarterly summary of Council activities to Regulatory Affairs Committee  
• ESA Advisory Council Orientation Package  
• Additional staff support and training if needed.  
• Financial support for out-of-pocket travel expenses to attend committee meetings  
• Council members whose costs are not covered by their employers are eligible to receive a meeting fee of $250 and the Chair is eligible to receive a $500 meeting fee  
• Governance training for the incoming Chair  
• Networking support with other members  
• Access to relevant research materials and reports e.g. Ontario Electrical Safety Report and industry research | Many of these concepts were scattered throughout the document – they have just been bundled here. |
| New: Utility Council Member Expectations | • Active participation and willingness to work on a Council  
• It is expected that the various associations, through their member(s) on the Council, will use the UAC as a forum for proposing changes and revisions to satisfy the needs of the segment of the industry that they are representing and to improve safety.  
• Engage members of the electrical distribution industry in the delivery of public electrical safety in Ontario.  
• Identify and make recommendations to ESA on ways to improve electrical safety.  
• Additional time for conference calls, material review, and participation/integration with other ESA Councils may be required.  
• Ability to work in a multi-stakeholder environment.  
• Council members will be independent of ESA, and will identify any real or potential conflicts |
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<td>3. Performance against annual objectives for the fiscal year.</td>
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Utility Advisory Council Presentation
Municipal Engagement Strategy
Background

• In 2008, the development of the Ontario Power line Safety Strategy was coordinated by the Electrical Safety Authority under the Utility Advisory Council.

• The Strategy’s goal was to reduce the five year rolling average of power line related fatalities by 30%.

• Stakeholder engagement was identified as the cornerstone of the strategy, which involved the development of a shared and unified strategic approach to power line safety with partners from many different sectors of the electrical distribution industry.

• Municipalities were identified as one of the key stakeholder partners to successfully deliver on this strategy.
5-Yr. Goal: Decrease the number of worker & non-worker power line related contact incidents from 160 to 113

2012 Goal: Engage municipalities to address at risk activities

Municipal Stakeholder Engagement
Power line Safety Five-Year Average

Goal: 30% reduction in five-year average for occupational and non-occupational overhead power line contacts

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<td>113</td>
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Construction sector – primary driver of incidents and therefore a priority focus

Public – secondary driver and key focus for success

Forecasted target
Objectives

- Identify safety issues that intersect with the municipalities and identify desired change and goals.

- Identify appropriate stakeholders to target

- Explore communication opportunities and identify target audiences e.g., Municipal Works Departments, Landscape Ontario

- Identify and develop other tactics e.g., development of best practices

- Measure how these activities have supported ESA’s Harm Reduction Strategies and annual goals by reducing incidents.
Challenges

• ESA has existing touch points with certain municipalities for various reason e.g.. CSS Program, pilots, inspector relationships etc.

• Other municipalities may not be as aware of ESA

• ESA has a limited relationship with municipal associations

• Municipalities may have competing priorities and budget constraints

• We must be able to clearly articulate the issues and the impact that they have on municipalities.
Issue # 1

Powerline Clearance: Municipal Site Plan Approvals

Safety Issue:

• Municipal Building departments are approving site plans sites near existing power lines that do not meet the minimum clearance standards.

• No standard practice for coordination between utilities and municipalities when site plans are approved.

• Municipalities may not be aware of existing power line locations when approving site plans.
Key Stakeholders:
Ontario Chief Building Officials Association (OBOA), Association of Municipalities (AMO), Ministry of Municipal Affairs and Housing (MMAH), Municipalities, LDCs

Opportunities:
• Educate and leverage municipal associations on power line clearance issues:
  – Presentations at association meetings/advertising
  – Build database for targeted communication to the municipality’s key staff, e.g., building officials, inspectors, planners.
  – Work with MMAH on joint communication activities

• Establish best practices for coordination of plan review between municipalities and LDCS
  – Collect best practices documents and develop models for other municipalities
  – Community Safety Powerline Alliance
Zero Setbacks

Safety Issue:

• City Planners and Architects are approving/designing zones for zero setbacks (high density)

• Increased contact with power line contact of maintenance workers after installation (e.g. roofer)

• Could also increase potential for working live during installation.
Issue # 2
Zero Setbacks

Stakeholders:
• Municipal Planning and Zoning Staff (zero setbacks is determined by a municipality's Planning and Zoning Dept)
• Ministry of Municipal Affairs and Housing
• Architecture Association of Ontario -(AAO)

Opportunities:
• Influence and educate the municipal planning community on the risks associated with designing and approving zero setbacks plans.
• Develop best practice re: hazard barriers
• Work with MMAH identify joint opportunities to promote municipal planning best practices on approaches for zero setbacks.
• Influence further upstream e.g. Architecture Association
Issue # 3

Municipal Contractors Contacting Powerlines

Issue:
Municipal contractors contacting (overhead) power lines when excavating

Stakeholders:
• Municipal Works Departments
• Ontario Regional Common Ground Alliance (ORCGA)
• Road Builder Associations (RBA) represents road building contractors who build and maintain majority of the provincial highway system and Ontario's municipal roads.

Opportunities:
• Reduce incidents of power line contact when construction crews are working on municipal infrastructure by educating municipal works departments and partnering with RBA and ORCGA.
Issue # 4

Tree Trimming/Tree Planting

Issue:
Non-utility arborists are contacting powerlines.

Stakeholders:
- Municipalities
- LDCs
- Ontario Chapter of the International Society of Arboriculture
- Landscape Ontario
- Public

Opportunities:
- Release of Tree Trimming and Tree Planting communication document in early 2012
- Work with municipalities and Arborist Associations and municipalities to target promotion of materials.
- Partnership with Landscape Ontario and municipalities re: tree planting
Issue #  5

Aging Infrastructure

Issue:
Increase in incidents related to contacts with municipal infrastructure (streetlights)

Stakeholders:
- Municipalities /AMO
- LDCs
- Public

Opportunities:
- Develop guideline for Streetlight Assets (completed)
- Host Symposium to communicate guideline to LDCs and municipalities
Other Opportunities

- Leverage municipal building departments to educate the public and general contractors on the benefits/requirements of using Licensed Electrical Contractor.

- Proactive communication with MMAH and on High Profile disconnects.
Questions for Discussion

• Are there any other safety issues that have a municipal dimension that are not identified here?

• Are we targeting the correct stakeholder groups? Are there others?

• What should be our first priority?
Next Steps

• Update strategy based on feedback/decisions

• Prioritize activities

• Develop work plans for individual initiatives

• Report back at upcoming UAC meetings
OVERVIEW OF ANNUAL REPORT
In FY2011 ESA placed an increased focus on building and leveraging stakeholder relationships. To this end, the theme of the FY2011 Annual Report is ‘The Power of Working Together’.

This message:

- is reflected in dedicated sections that speak to the transition of ESA’s five year Harm Reduction Strategy
- reinforces our safety business focus and priorities, and
- highlights accomplishments that have evolved our business and safety
EDUCATING, TOGETHER.

MANUEL MOREIRA
Truck Driver
Brantco Construction

SAMMY GO
Safety Supervisor
Cambridge and North Dumfries Hydro

"As a Safety Supervisor with Cambridge and North Dumfries Hydro I work with ESA to remind the construction industry of the importance of safe limits of approach to reduce the risk associated with overhead powerline contact."

SAMMY GO
PARTNERING, ON AWARENESS.

Brookfield Office Properties is committed to providing a safe and healthy work environment for their employees. A long-time ESA Continuous Safety Services customer, Brookfield has identified and responded to electrical safety opportunities. ESA’s worker safety and standards training has elevated Brookfield’s operations staff on safe work practices. The introduction of a No Live Work Policy has strengthened worker awareness and education by ensuring hazard level ratings and personal protective equipment requirements are adhered to throughout their facilities.
COLLABORATING, ON HIGH STANDARDS.

"A collaborative relationship between the Canadian Standards Association and the Electrical Safety Authority has assisted in harmonizing electrical product standards beyond the provincial level to national and international levels. Our joint involvement as Canadian Chairs has influenced the development of a number of ISO product safety standards in the past year."

ASH SAHI
President & CEO, CSA Group
BUILDING BETTER, TOGETHER.

ESA's pursuit of a collaborative approach to respond to concerns associated with low-voltage electrical contact incidents and streetlights resulted in the creation of an industry-led working group and the development of a best-practice guideline for streetlight asset owners. The cooperative effort of all stakeholder members on the street lighting asset committee has the potential to effect a significant positive safety change across the province.
JOINING FORCES, REDUCING RISK.

"I've worked with ESA to support provincial licensing and inspection programs. As a member of the Contractor Advisory Council I believe we all benefit by joining forces to contribute to enhancing public electrical safety."

SANDY RAGNO

FRANK MARTINO
Solo Electric

SANDY RAGNO
President, Solo Electric
Utility Advisory Council

Feedback on Automatic Splices

October 6, 2011
Recently Veridian had an incident where an automatic splice failed resulting in the conductor falling to the ground.

Members of the UAC were asked for any feedback on this type of splice based on their experiences.
Automatic Splice – Feedback from UAC members

It appears that the automatic splice connection overheated and melted the conductor.

The correct automatic splice was used for the conductor type and size.

After cutting the splice open, it also appears that the conductor was fully inserted.
Automatic Splice – Feedback from UAC members

- 9 LDCs provided input.
- Additional 3 LDCs input outside UAC or indirect was received.
- Most use and have had no issues with automatic splices.
- Ease of installation is preferred by field staff.

Some feedback from those who do not use automatic splices:
- Requires tension to remain intact, so car hitting a pole may cause the splice to come apart.
- Better reliability of compression splices.
- Corrosion impact, especially with exposure to salt spray or where water can collect in the splice.
- Useful life of splice is significantly less than the conductor (ref: T&D world article “Forensic Analysis of Automatic Splices Leads to Change” 20 years vs. 40 years).
Automatic Splice – Feedback from UAC members

Potential Takeaways for Veridian:
• Majority of utilities are using this splice with no issues.
• Do not tension lines with automatic splices installed.
• Suggested that compression splices be used for new conductor.
• Use infrared for inspections on automatic splices.
• Ensure manufacturers installation instructions are followed.
• Do not use automatic splices for railway crossings, highway crossings, water crossings, or slack spans.

Thank you UAC members for taking the time to provide this valuable input.
UAC meeting
October 6 2011
Serious Incidents
Agenda

• Crane Contact incident
• Slip forming incident
• Embedded Generation incident
• Serious incident climbing pole
• Communication installer incidents
Boom Truck Contact

- Boom truck parked under the powerlines
- Operated controls on the truck, positioned the boom arm in very close proximity to the 16,000V conductor
- Operator left the truck to secure the trusses and hooked the chain to the boom cable-one end of the chain in contact with the earth
- Pulled the boom cable towards the powerline-contact made
Boom Truck Contact

- Downstream fuse operated
- Operator dropped to the ground, conscious, bleeding from the mouth, burn on forearm
Slip Forming Incident

• Forming Contractor was moving a metal slip form from one floor to the next.

• Operator misjudged distance of line and contacted a 27.6kV powerline.

• Operator was aware of the limits of approach
Embedded Generation

- Scheduled shutdown
- LDC de-energized pad mounted transformer from the primary side
- Electrician opened the incoming building main breaker in the electrical room
Embedded Generation

- LDC did a potential check @ the transformer secondary terminals
- Line to line voltage-83V
- Both LDC and electrician unaware of existing PV panels on the roof
- Existing connection on line side of service
Embedded Generation

- “Anti-islanding” feature failure to fully disconnect when loss of utility power was detected
- Firmware problem has been addressed by manufacturer
DISTRIBUTION COMPANY AWARENESS:

Recently a shutdown was scheduled for preventative maintenance of a 600 Volt service switchboard. The LDC was required to be on site to isolate and de-energize the pad mounted transformer and secondary cables. The Service Contractor turned off the main breaker and the LDC isolated the primary at the pad mounted transformer. The crew conducted a voltage check and measured potential at the secondary terminals of the transformer. The crew and service contractor were unaware there was an embedded photovoltaic (PV) system in place connected to the line side of the main service.

The Ontario Electrical Safety Code (OESC) rule 84-008 requires a distributed generation system to automatically disconnect electric power production sources when there is a loss of power from the supply authority. In the case of this near miss incident, the solar inverter’s “anti-islanding” feature failed to fully disconnect the energy produced from the PV system.

SAFETY AWARENESS:

Prior to work on equipment, crews should be made aware of embedded generators at customer facilities. The utility disconnect switch required by the LDC should be used as the disconnecting means. PV system outputs may become energized at anytime with changing sunlight conditions.

ESA RECOMMENDS:

LDC’s review operating procedures and identify their customers who have embedded generation system.

ADDITIONAL INFORMATION:

Information requests and follow-up may be directed to ESA at Utility_Regulations@ElectricalSafety.on.ca. For questions on this bulletin please be prepared to quote Bulletin “DSB-07/11”. 
Pole Climbing Incident

- Member of the public climbed pole via ground operated switch handle
- Attempting to use the conductor to swing across the road
- Local witnesses indicated he was known to previously swing across on the neutral wire
- Ground operated switch handle is bonded and grounded
Pole Climbing Incident

- Contacted a live 2,400V conductor at the underground to overhead transition
- Received shock and burns, fell to the ground and landed on his head.
- 3rd and 4th degree burns to the arms
- Broken ribs and pelvis
Pole Climbing Incident

Contact area
Pole Climbing Incident
Communication Installer

- Communication installer drilling hole from the interior of the building hit a 600V service conduit
- Arc flash exited the service mast and inside the building.
- Damage main switch and meterbase
Communication Installer

• Communication installer with the use of a hammer drill beside the service entrance hit the incoming Teck service cable.

• Arc flash caused damage to the main breaker
• A non-fatal incident occurred as a result of a communication worker pushing a ¼ inch fish tape through a wall opening into an energized high voltage vault and contacting a live bus. Fortunately for the worker, the other end of the fish tape was in contact with a copper water pipe.
• System voltage is 13.2kV (approx. 7.8 kV to ground)
• Had the end of the fish tape not been in contact with the copper pipe at the time of the electrical contact this would have been a fatal incident
Communication Flash Notice

• As a result of recent incidents within a short time frame, a Flash Notice has been drafted and will be available.
• The flash notice is targeting Communication Company installers and sub contractors.
• Highlighting the risks involved with drilling into an energized conductor; not only causes property damage but a risk to shock or arc flash burns to the installer.
QUESTIONS
Grounding at the Pole - customer owned service box
Request for WG – Changing Relay Settings
GROUNDING AT THE POLE - CUSTOMER OWNED SERVICE BOX
9.1.14.2 Grounding of consumer service and equipment on joint-use structures

Where outdoor electrical equipment that is approved in accordance with the Canadian Electrical Code, Part I, manufactured in accordance with applicable Standards of the Canadian Electrical Code, Part II, and connected to a consumer’s service at 750 V or less, is installed ........, the attachments and service shall meet the requirements of the Canadian Electrical Code, Part I. ........
OESC Rule 10-204 Grounding connections for alternating-current systems (see Appendix B)

(1) When a consumer’s service is supplied by an alternating-current system that is required to be grounded in accordance with Rule 10-106(1), the system shall

(b) be connected to a grounding conductor at each individual service, with the connection made on the supply side of the service disconnecting means either in the service box or in other service equipment; and

grade.
Grounding at the Pole
customer owned service box

OESC Rule 10-700 Grounding electrodes

Manufactured grounding electrodes shall
(a) in the case of a rod grounding electrode, consist of 2 rod electrodes spaced no less than 3 m apart,
   (i) bonded together with a grounding conductor sized in accordance with Table 17; and
   (ii) driven to the full length of the rod; or
(b) in the case of a plate electrode, be
   (i) in direct contact with exterior soil at no less than 600 mm below grade level; or
   (ii) encased within the bottom 50 mm of a concrete foundation footing in direct contact with the earth at not less than 600 mm below finished grade.
Grounding at the Pole
customer owned service box

Utility (multi-grounded) neutral

Rule 10-106 and 10-204

Grounding conductor
Rule 10-812 (Copper #6)

Grounding electrode
Rule 10-700
Grounding at the Pole

customer owned service box

Supply conductors

Service box

Grounding conductor
Rule 10-812

Grounding electrode
10-700

Utility electrode,
Not at the same pole
Grounding at the Pole

customer owned service box

- Supply conductors
- Service box
- Grounding conductor Rule 10-812
- Grounding electrode 10-700
- Bonding conductor interconnecting grounding electrodes Rule 10-702 (b), not smaller than No. 6 AWG Recommended
- Utility electrode, At the same pole
- Feeders to consumer equipment
Grounding at the Pole
customer owned service box

Where required by the LDC to connect to their grounding electrode:

- Electrode, grounding conductor size and connections shall comply with OESC.
- Contractor and LDC shall be required to verify that installation is compliant to OESC
- LDC shall assume responsibility to maintain the service grounding
REQUEST FOR WG – CHANGING RELAY SETTINGS
REQUEST FOR WG – CHANGING RELAY SETTINGS

ESA Regulatory Department is calling for volunteers for a technical working group to discuss the below topic.

**Topic**
Changing the setting on a breaker “relay” in a substation where the substation is part of a licensed distributor’s system and falls under O.Reg 22/04.

What is the process required from the O.Reg 22/04 perspective.

**Goal**
Draft a bulletin to licensed distributors providing options/clarifications on how to be compliant with the Regulation when performing such work.

If interested please send contact info to Utility Regulations Utility.Regulations@ElectricalSafety.on.ca
Thank You
Request for Working Group – Changing Relay Settings

ESA Regulatory Department is calling for volunteers for a technical working group to discuss the below topic.

**Topic**

Changing the setting on a breaker “relay” in a substation where the substation is part of a licensed distributor’s system, and operates below 50,000 volts and the distribution system is being designed after the day Regulation 22/04 is filed.

If a LDC employee goes to the substation and changes the setting on the “relay” in a substation what is the process required from the Regulation perspective.

**Issues**

- Relay Settings is the brain for protection and control within a distribution system
- There are no standards for setting a relay that are included in LDCs Standard Design Drawings.
- It is unknown the frequency of relay setting alterations for the typical LDC, but customer growth (or reduction) would be the likely cause for altering the relay settings.

**Goal**

Draft a bulletin to licensed distributors providing options/clarifications on how to be compliant with the Regulation when performing such work.