

Minutes of Meeting June 8, 2023 10:00am – 3:00pm

**Electrical Distribution Safety** 

**Utility Advisory Council Members** 

LDC/Owner-Operator	
Alectra Utilities	Dan Driegen
Elexicon Energy Incorporated	Faisal Habibullah
Enova Power Corporation	
Festival Hydro	Proxy to Elexicon Energy
Hydro One - Distribution	Peter Petriw
Hydro One - Transmission	Ajay Garg
Hydro Ottawa	Edward Donkersteeg
InnPower Corporation	Adam Casciato
London Hydro	Scott Glazer
Newmarket-Tay Power Distribution Ltd.	
Toronto Hydro	Sushma Narisetty
General Interest	
Bell Canada/Telecom Industry	Tony Pereira
Consumer Advisory Council	Sandy Manners
CSA Group	
IHSA	
Power Workers Union	Patrick Fee

Quorum 2/3 of voting members (11/16)

### **Other Attendees**

Brittany Ashby (EDA), Helen Guo (OEB), Yaqiong (Kim) Liu (Bell Canada)

### **ESA Attendees**

Nansy Hanna, Ray Yousef, Jason Hrycyshyn, Patrick Falzon, Sean Burger, Mel Pace, Claire Loucks, Declan Doyle, Freda Lam, Anna Turkalj

### Third Party Attachment Guideline Review - Online Participants

Adela Wan (MOI), Gelber Vargas, Megan Lawton, Neal Hougham



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**Electrical Distribution Safety** 

### 1 Notice & Quorum

- The meeting had quorum

### 2 Minutes of UAC Meeting

The following motion was carried:

Motion: To accept the minutes of the February 16, 2023 meeting

Motioned by: Peter Petriw

Second: Ajay Garg Motion carried.

### 3 Review of Open Action Items

- The action items list have a few items that have been on the list for a long time
  - Some items will be addressed on the agenda today and some are still valid to retain
- Vegetation Management (Action Item 2022-03-04)
  - ESA was asked about the vegetation management bulletin being published and if the feedback provided was addressed
  - The UAC as an advisory councils gets the opportunity to review some bulletins, as needed. Bulletins are not typically circulated for review multiple rounds
  - ESA reviews and dispositions all comments
  - A recent powerline contact that resulted in a fatality highlighted the need to publish this bulletin immediately
  - The numbers referred to in the open action item are published in ESAs safety report
- There was discussion around responding to ESA requests for feedback and if the response should be sent to ESA or if 'Reply All' would be more appropriate
  - It was decided that a 'Reply All' would be more beneficial so other Council members can see the feedback
  - When using the 'Reply All' ESA asked that one response per member is provided so the volume of emails do not become unmanageable
  - It was also reiterated that when feedback is requested all Council members should respond. If a Council member does not have any feedback the response should indicate this.



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### 4 Member Term Renewals

- The membership renewal groups was shown
- ESA will send letters out to the group 2 members asking if they would like to renew their term on the Council
- Renewals will be confirmed at the October 2023 meting
- ESA was asked how an attendee is replaced on the Council
  - The seat on the UAC is given to a company and that company can designate who they would like to represent them on the Council
  - Greg Sheil has retired so Scott Glazer will be London Hydro's new representative

### 5 Chair / Vice-Chair Positions - UAC

- With the retirement of Greg Sheil the position of UAC Chair is open
- Peter Petriw has put his name forward to be UAC Chair

The following voted on by Council member is attendance and by proxy:

Motion: Voting to elect Peter Petriw as Chair of the UAC

In Favour: 12 Opposed: 0

Peter Petriw is the Chair of the UAC as of June 8, 2023

Sushma Narisetty has put her name forward to be UAC Vice-Chair

The following voted on by Council member is attendance and by proxy: **Motion: Voting to elect Sushma Narisetty as Vice-Chair of the UAC** 

In Favour: 12 Opposed: 0

Sushma Narisetty is the Vice-Chair of the UAC as of June 8, 2023

### 6 OEB Timelines for Disconnect and Reconnect

- ESA received feedback from some LECs over concerns about the timeline for disconnects and reconnects.
- ESA met with the OEB and this was one of the topics discussed
  - ESA advised the OEB, from a safety perspective, if LECs aren't getting disconnect or reconnects in a timely manner then they may choose to work live



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- The OEB has a general inbox that any person can send feedback on LDCs for any topic. This feedback would help the OEB when they meet with LDCs
- OEB indicated that the feedback is anonymous
- ESAs Contractor Advisory Council (CoAC) is meeting today and they are receiving this same update so LECs are also aware of this message from the OEB

### 7 Year End Regulation 22/04 Compliance Update

- ESA will provide the UAC with a compliance update every couple of years
- The Council identified a mistake with the SEIR chart, the chart was updated during the meeting with the corrected values.
- If there is anything the Council would like to see in a future compliance update submit the request to Utility Regulations
  - Can ESA provide the average number of PSCs issued across LDCs?

### 8 Priorities for Guidelines to Revise

- The UAC was provided some options for Guidelines to revise
- It was decided to start the Section 7 & 8 Guideline revision next
- The Proximity to Distribution lines and Reporting of Serious Electrical Incidents Guidelines will be the next to review
- ESA was asked if it would be too aggressive of a timeline to complete a Guideline review between council meetings

Action Item 2023-02-01: ESA will send an email for volunteers and start working on proposals to revise the Section 7 & 8 Guideline. - Jason Hrycyshyn (ESA)

### 9 ESA to propose a draft work plan for the UAC and bring it to the next meeting for discussion (Action Item 2023-01-01)

- A draft workplan was presented to the UAC for feedback
- ESA was asked to have a general item for Guideline revisions so this remains at the front of the Council's list
- ESA was asked to add a section for specific items that are being worked on
  - Section 7 & 8 Guideline revision
  - Proximity to Distribution Lines Guideline
  - Reporting of Serious Electrical Incidents Guideline
- ESA will add a spot for specific items and will have this ready to send to the UAC



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**Electrical Distribution Safety** 

Action Item 2023-02-02: Update Workplan with a section for specific items being worked on

Update the Workplan to include a specific section for items that are currently being worked on as well as upcoming items that have been agreed to (Updating Section 7 & 8 Guideline, Updating of the Proximity to Distribution lines and Reporting of Serious Electrical Incidents guidelines). – Claire Loucks (ESA)

### 10 3-Phase 3-Wire Solidly-Grounded Wye Customer Services

- An update on the status was provided to the Council
- Most of the easy sites have been completed and we are now at a stage where the sites are becoming more of a challenge.
- If an LDC has a site like this then ESA is available to discuss any of the issues or timelines

### 11 Hydro Vac 2nd fatality Coroners inquest

- The Coroners recommendations were reviewed

### 12 Public Powerline Awareness Survey Results

- An overview of the results from the powerline awareness survey
- ESA will look into what can be shared from this survey results with the UAC
- Is the call before you dig issue the same as the disconnect/reconnect issue where contractors don't want to wait for the locate and they just dig without knowing?
  - o Did the survey ask why a call wasn't made for a locate?
  - Underground contacts are still frequent even with locate being done
    - Maybe education on how to read and use locates would be beneficial

Action Item 2023-02-05: What results of the Public Powerline Awareness Survey can be shared with the UAC. ESA will look into what results from the Public Powerline Awareness Survey are able to be shared with the UAC. – Claire Loucks (ESA)

### 13 Third Party Guideline

- This portion of the meeting was available through Zoom to all LDCs to understand what the changes an updates to the Third Party Guideline were.
- ESA provided a list and explanation of the various changes that were made to the Third Party Guideline
- ESA is looking for endorsement of this Guideline from the UAC



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### **Electrical Distribution Safety**

- ESA will be accepting comments up to June 15, 2023
- The Council endorses the Guideline as it was presented to the UAC
- If only minor comments are received by June 15<sup>th</sup> then ESA can publish the guideline after those comments have been reviewed
- If comments are received that would constitute a significant change then ESA would bring the guideline back to the UAC for endorsement
  - ESA can get endorsement through email so we are not waiting until October UAC meeting and delaying publishing the Guideline

### 14 Experience Using the Incident Portal

- ESA asked the Council for feedback on the online form and how to increase adoption of the online form
- Larger LDCs that already have a process in place expressed concerns on how updating their processes to use the online form could negatively impact the reporting of incidents to ESA

### 15 GIS equipment-OESC bulletin

- ESA provided the details of OESC Bulletin 36-15-12
- There were many questions about this bulletin and the LDCs asked for more time to review the information
- ESA was asked to share bulletin 36-15-12 with LDCs

### 16 Disconnect Switch Ahead of Service Entrance Equipment

- LDC's has been requesting customer owned switches ahead of the service equipment
- ESA asked if any LDCs had insight on why some LDCs were asking customers to install customer owned switches ahead of the service equipment

Action Item 2023-02-03: ESA will send an email out to UAC members/attendees looking for feedback from LDC's on their requirements and rationale for customer owned disconnect switch to be located before the customer's service equipment. - Patrick Falzon (ESA)

### 17 Primary Metering Unit

 HV service layouts provided by the LDC's shows the PME beyond the ownership demarcation point ahead of the customer's service equipment resulting in an installation that is not code compliant



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- ESA for feedback from LDC's on their requirements and rationale for PME to be located before the customer's service equipment.
  - Because the PME was LDC owned there is a need for visible isolation on either side of the PME
- ESA will send an email out to all LDC main contacts and UAC members/attendees.
   ESA will be issuing a bulletin and requesting feedback before a distribution bulletin is issued

Action Item 2023-02-04: ESA will send an email out to UAC members/attendees looking for feedback from LDC's on their requirements and rationale for PME to be located before the customer's service equipment. - Patrick Falzon (ESA)

### 18 New Business

- LDCs on the Council would like to discuss the vegetation management bulletin at the October 2023 meeting
- Meetings
  - The Council Chair asked members what is the preference for meetings? In Person or Virtual
  - October 2023 will be virtual
  - ESA was asked if the Council can have 2 meetings in person next year ideally not in the winter. Hybrid arrangement should also be considered.
    - ESA will look into this

**Motion:** To adjourn the meeting

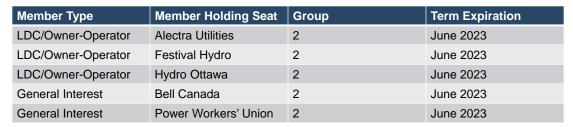
Motioned by: Peter Petriw

Second: Edward Donkersteeg





### Members: Group 2



- Next Steps
  - Members Holding Seats will receive a letter asking for a response indicating their interest in renewing their membership on UAC
  - Renewals will be confirmed at October 2023 meeting

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UAC Membership Renewal | June 2023





# UAC Chair and Vice Chair Elections

June 2023



### **UAC Chair and Vice Chair**



- Both positions must be elected from UAC membership
- Both positions are elected for a two-year term, with the option for UAC to renew for an additional two-year term

### **Position Expectations**

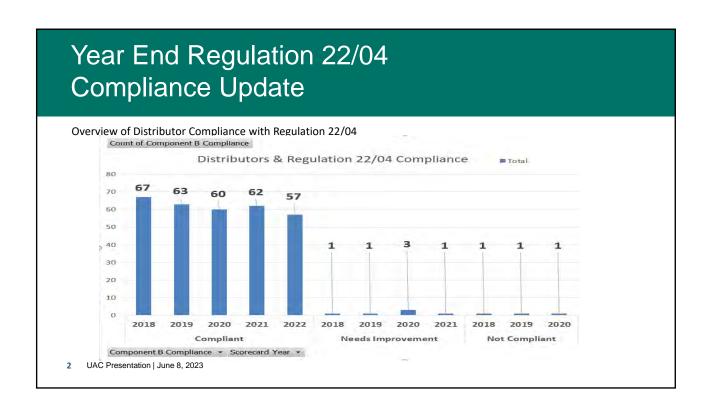
- Governance experience
- Experience applying Robert's Rules
- Council or committee experience
- Experience leading teams through decision making
- Ability to manage and engage others
- Commitment to positioning societal perspectives
- Time availability to support UAC activities

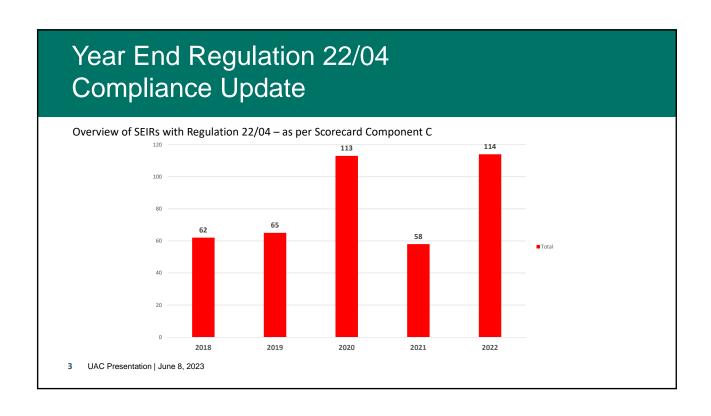
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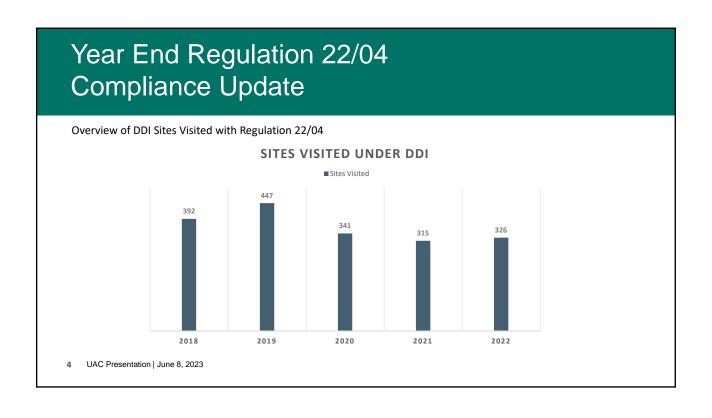
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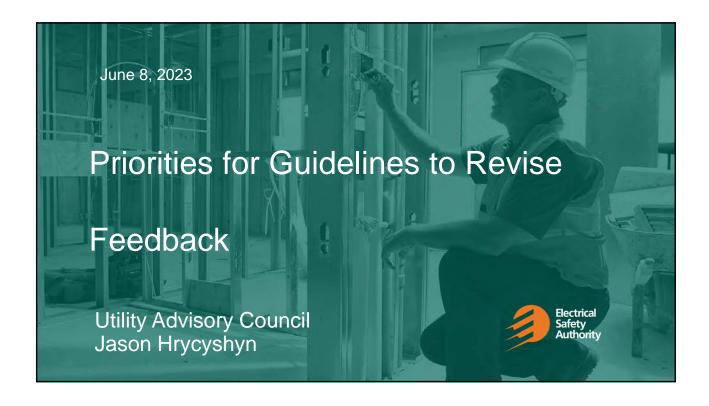
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### Priorities for Guidelines to Revise

### **Presentation Highlights**

### Oldest Guidelines (2005)

- Guideline for Disconnecting Unused Lines
- Guideline for Proximity to Distribution Lines
- Technical Guideline for Section 7 Approval of Designs
- Technical Guideline for Section 8 Inspection and Approval of Construction

### Notes for Council Consideration

- Section 7 & 8 Guidelines Third Party Attachments Guideline has many similarities. Examples: Software-Based Engineering Tools, CVP Refresher Training and incorporation of Bulletins.
- Proximity to Distribution Lines Can address processes when these occur.
- Annual Audit Guideline Can address standardization of the Audit Reports
- Reporting SEIR Guideline Can address the direction and examples to ensure additional clarity for personnel
  responsible for reporting and the inclusion of the online process.
- 2 UAC Presentation | June 8, 2023

### Priorities for Guidelines to Revise

### **Presentation Highlights**

### **Newest Guidelines Reviewed**

- Guideline for Distributed Energy Resources (2023)
- Guideline for Third Party Attachments (2023)\* (\* Denotes currently under review for adoption)
- Guideline for Excavating Proximity of Underground Distribution Lines (2022)
- Guideline for Declaration of Compliance (2021)

Council feedback regarding next Guideline to review

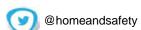
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# 3-Phase 3-Wire Solidly-Grounded Wye Customer Services

lumber of Possible Configuration of Concerns Nur	nber of Possible Configuration of Concerns	Number of Possible Configuration of Concerns	Number of Descible Configuration of Consessed
		realiser of a dissible comigaration of concerns	Number of Possible Configuration of Concerns
~15,000	~5,416	~2,983	2,169
Number of LDCs without a Possible Configuration of Concern	Number of LDCs without a Possible Configuration of Concern	Number of LDCs without a Possible Configuration of Concern	Number of LDCs without a Possible Configuration of Concern
12	35	41	42



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# Coroners Inquest-Information • Hydro vac provider was sub contracted to excavate holes for new poles under 27.6 kV powerlines • Boom's arm made contact with the powerlines while setting up the equipment • They were instructed not to perform digging locate paperwork was not on site at the time • Boom hose caught fire • 2 trucks, 2 man crew/truck • One worker was electrocuted

- Victim holding pressure hose attached to the spool of the truck-passenger side of truck
- Operator holding remote unit reached to get dig tube from the storage rack underside of truck-driver side
- Toggle switch from unit unknowingly was bumped which caused the boom to contact the overhead powerlines





POWERLINE SAFETY IN ONTARIO

3

### **Coroners Inquest-Information**

- Based on the fatality of a hydro vac worker which occurred in 2015, the Office of the Chief Coroner (OCC) for Ontario performed an inquest
  - 24 years old
- Contractor fined \$160k and sub-contractor fined \$125k
- OCC posted verdicts and 10 recommendations in the case of the deceased
- 2<sup>nd</sup> inquest-previous hydro vac operator fatality occurred in 2012
  - Discussed in June 9, 2022 UAC meeting



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### Infrastructure Health and Safety Association

- 1. We recommend that an industry wide Hazard Alert be published, alerting end-users, and manufacturers of remote-control devices for booms and cranes, to the risk of inadvertent boom or crane movement associated to the OMNEX T300 Wireless Remote Control, or any similarly designed remote control used for boom or crane operation.
- 2. We recommend that all construction projects that utilize booms or cranes in proximity to overhead power lines, be required to make a written request to the Owner of the power lines, to facilitate compliance with sections 187 and 188 of Regulation 213/91 for Construction Projects.
- 3. We recommend that locates in the vicinity of power lines should include underground, on grade, and above grade utilities or hazards, as well as current, voltage and distance from grade to the high-power line.



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### **Coroners Inquest-Information**



Ministry of Labour, Immigration, Training and Skills Development (MLITSD) and Infrastructure Health and Safety Association (IHSA) and Provincial Labour-Management Health and Safety Committee for Construction (PLMHSC)

4. We recommend that the Provincial Labour-Management Health and Safety Committee for Construction (PLMHSC), study, examine, and report on the feasibility of amending the Act to require that all remote controls used to operate booms or cranes in the proximity of overhead power lines have a 3-position switch ("Deadman switch") or other approved failsafe mechanism to prevent unexpected movement of the boom or crane.



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Cont'd- Ministry of Labour, Immigration, Training and Skills Development (MLITSD) and Infrastructure Health and Safety Association (IHSA) and Provincial Labour-Management Health and Safety Committee for Construction (PLMHSC)

- 5. We recommend that where a construction project involves work in proximity to overhead power lines and equipment that has the potential to contact overhead power lines such as a boom or a crane is being operated, the Provincial Labour-Management Health and Safety Committee for Construction (PLMHSC), study, examine, and report on the feasibility of amending the *Act* to require the use of any, or all, of the following protective measures:
  - a. emerging technologies, like an Electro Magnetic Sensor to prevent a boom or crane from entering the prohibited zone (disabling controls).
  - b. mechanical devices, such as a pin, that can be inserted into a boom or crane to prevent movement into the prohibited zone.
  - c. Insulated booms and cranes.
  - d. Signaller be equipped with a remote E-stop.



7

### **Coroners Inquest-Information**



Ministry of Labour, Immigration, Training and Skills Development (MLITSD) and Infrastructure Health and Safety Association (IHSA)

6. We recommend that a public awareness campaign be developed that highlights the dangers of working in proximity to overhead power lines and provides information on how members of the public can report seemingly unsafe or non-compliant practices.

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### Ministry of Labour, Immigration, Training and Skills Development (MLITSD)

- 7. We recommend that Occupational Health and Safety be amended to allow Health and Safety representatives and Joint Health and Safety (JH&S) committees authority to keep confidential the name of any workers who report unsafe conditions
- 8. We recommend that the frequency of required refresher courses/training for Constructors, Employers, Supervisors, and Workers, who work in proximity to overhead power lines and operate equipment that has the potential to contact overhead power lines, be increased to once a year. Topics covered in the refresher should include, among other things:
  - a. The dangers of working in proximity to overhead powerlines, even when no work on overhead power lines is intended
  - b. The requirements for compliance with OHSA and Sections 187 and 188 of Regulation 213/91 for Construction Projects, and resources to assist with compliance.
  - c. The Internal Responsibility System, with an emphasis on the importance of promoting a no-blame workplace safety culture that encourages an open relationship to discuss workplace safety.
  - d. Tailboard meetings/forms must be completed prior to setup or starting any work.



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### **Coroners Inquest-Information**



### Cont'd- Ministry of Labour, Immigration, Training and Skills Development (MLITSD)

- 9. We recommend that significant and automatic fines should be levied against any company/constructor that fails to ensure that a dedicated Signaller be assigned to Hydro-vac crews and/or any crane operation when working in the vicinity of overhead powerlines.
- 10. We recommend that tailboard documents should be standardized, regulated, and include a section that addresses possible encroachment of overhead powerlines of the minimum distance permitted under Section 188 (2) of Regulation 213/91 for Construction Projects.

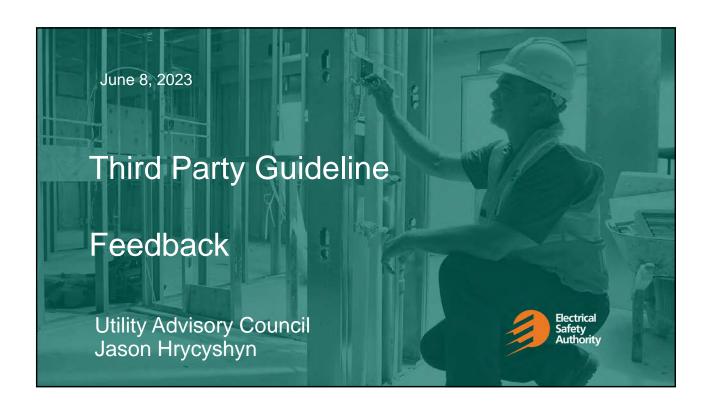
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### **Presentation Highlights**

High-Level - Slides 3 - 4
 Significant Revisions - Slides 5 - 7
 Minor Revisions - Slides 8 - 9
 Insignificant Revisions - Slide 10

- Word versions were provided ahead of this UAC
- Working Group has concluded work
- 6 Meetings were held
- 3 Communications Reps, 8 Electrical Distributor Reps, 0 G.I.

Rogers	Hydro One Networks Inc
Bell Canada	Oakville Hydro Electricity Distribution Inc
Xplore Inc.	Synergy North Corp
	Elexicon Energy Inc
	Toronto Hydro – Electrical Systems Limited
	Entegrus Powerlines Inc
	Hydro Ottawa Limited
	Alectra Utilities Corp

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### Third Party Guideline

### Guideline V2.0 Highlights

- Material was reviewed and edited for accuracy, clarity and relevance
- Bulletins relevant to Third Party Attachments were included into the Guideline
  - Bulletins will be reviewed for edits if changes adopted in the Guideline
  - If the Bulletin contained a(n):
    - **Definition** (e.g. "review"), it was included in the Guideline's <u>definitions</u>
    - Guidance (e.g. direction or recommendations), it was included in the Guideline's body.
      - Recommendations from the bulletin use "should", "can" or "may" in the Guideline
    - Example, it was included in new Guideline appendices
- Software-Based Engineering Tools New, high-level guidance was provided
  - Concerns regarding Non-Linear Analysis were addressed
  - Reference to the PEO Guideline was included
- Appendix A Minimum Review Document Requirements for Proposed Attachments on Distributor Structures
  - Software usage was addressed
  - Information regarding attachment enhanced
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### Significant Revisions List (Part 1 of 3)

Bulletins were moved into this Guideline. Guidance in the definitions & body. Examples moved to the Appendices

- 1. Working with Previous Editions of the Overhead and Underground Standards
- 2. Materially Insignificant Work
  - Align information with practices. Moved to using "certificates of approval" instead of "certificates of deviation".
  - The example (Appendix C). Removed an example of "overlash" and replaced with "power supplies or cable dips".
- 3. Make-Ready Work (delayed or not preformed)
  - References both "certificates of approval" and "certificates of deviation". The Distributor to determine appropriate documentation.
- 4. Recognized Uses of Certificates of Deviation Certified Lists of Deviations
- 5. Application for Licensed Occupancy of Structures.
- 6. In-Span Structures and Overhead Unsupported Conductors
  - Aligned information with CSA proposal for 2025. The reference to "installed in-span poles was removed".
     Certificates of Deviation can be used.
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### Third Party Guideline

### Significant Revisions List (Part 2 of 3)

Software-Based Engineering Tools paragraph was added to the Guideline

Professional engineers are responsible for all aspects of the design or analysis they incorporate into their engineering package for the proposed work. Software-based engineering tools can be approved for use in a similar manner as the approval of standard designs, for compliance with Regulation 22/04 – Section 7. This may include defining the scope which the software can be used, similar to notes within a standard design. Where software-based engineering tools are used by a third party attacher as part of a plan or work instruction, the certificate of approval shall be made available upon request by either the distributor or ESA.

The distributor may stipulate the software and associated settings to use when analyzing the loading of supporting structures. This would ensure supporting structures are analyzed consistently among all parties.

### Significant Revisions List (Part 3 of 3)

Appendix A - Minimum Review Document Requirements for Proposed Attachments on Distributor Structures

Appendix A provides the "Minimum Review Document Requirements. This list was reviewed and edited by the Working Group. The Working Group was requested to focus on this Appendix. There is a note that states "If both parties agree, different levels of information may be required and provided".

Titles within Appendix A:

- 1. Required Documents
- 2. General Requirements
- 3. Basic Drawing Requirements (applies to all drawings)
- 4. Project Specific Drawing Orientation Requirements
- 5. Project Specific Drawing Requirements

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### Third Party Guideline

### Minor Revisions List (Part 1 of 2)

The following Definitions were added, deleted or modified

"accounted for"

"certificate of deviation"

"distribution system"

"equipment"

"like-for-like replacement"

"owner"

"professional engineer"

"record of inspection"

"review"

"service drop"

"should"

"structure"

"support"

"supporting structure"

### Minor Revisions List (Part 2 of 2)

Guidance related to "certificates of deviation" was modified from the bulletin affecting

- 1. Materially Insignificant Work; and
- 2. Make-Ready Work

Guidance related to "Construction Verification Programs" was added

- 1. Noting that Attachers may submit documentation to a distributor for inclusion of staff; and
- 2. Construction Verification Program re-fresher training (1 year recommended and 2 year with documented agreement)

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### Third Party Guideline

### <u>Insignificant Revisions List (Part 1 of 1)</u>

Updated Legal Disclaimer

Guidance on how "Notes" are to be interpreted in the Guideline

• Notes within this document are not to be considered any different from any other information in this guideline.

"Owner" has been replaced with "distributor" or "attacher" as appropriate



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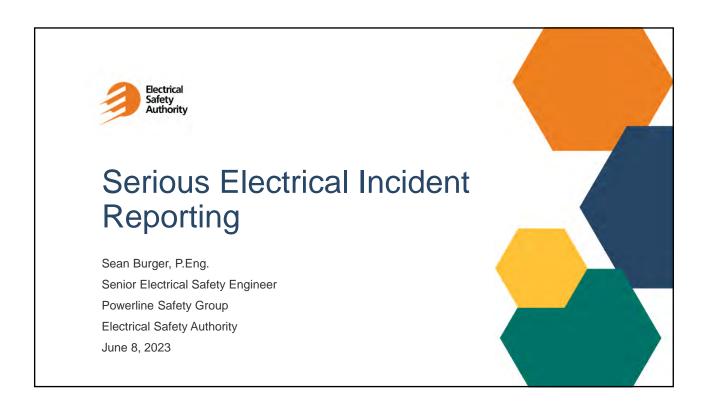
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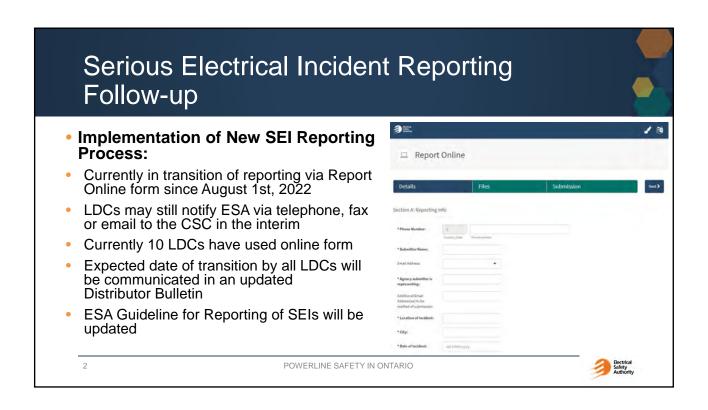


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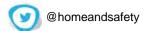




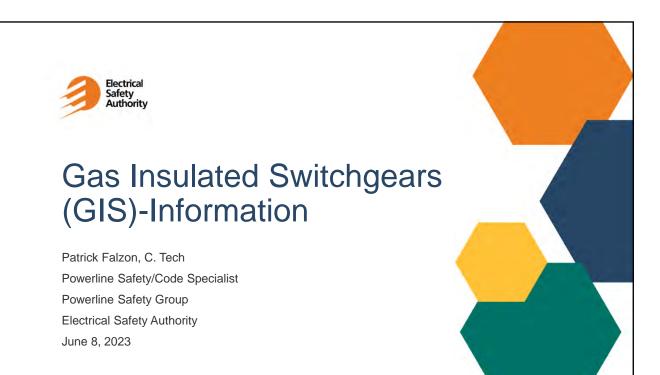


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# • Background • GIS was designed for utility use on the utility side of the demarcation point • ESA has seen customer GIS equipment used at the demarcation point

POWERLINE SAFETY IN ONTARIO

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### Gas Insulated Switchgears (GIS)



- Issues
  - Equipment is not certified and does not meet the C22.2 No. 31 switchgear standards including service entrance requirements
  - Overcurrent protection is accomplished by fault interrupters which is not recognized by the standard
    - Standard-fuses or breakers only



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POWERLINE SAFETY IN ONTARIO



### Gas Insulated Switchgears (GIS)



- Issues cont'd
  - Rotary switch handle-closed, open and grounded
    - If incoming feeder is left energized, the switch can be switched into the grounded position causing a potential worker safety issue and failure of upstream and downstream of equipment



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### Gas Insulated Switchgears (GIS)



- Bulletin 36-15-\* direction-Service Entrance Applications
- As an interim solution notwithstanding Rules 2-034, 26-250 and 36-204 and until May 1, 2025 (based on the date of notification of work to ESA), the ESA will consider accepting under a deviation request GIS equipment that is not approved for service entrance where the following criteria are met:
  - Field Evaluated based on the SPE1000 (not including service entrance requirements);
  - All fault interrupters are configured to provide equivalent overcurrent protection and have a full-load rating that may be closed with the safety of the operator with a fault on the system as required by Rule 36-204. Information on the required settings for that installation shall be provided by a third party (manufacturer, professional engineer, or other qualified person);

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### Gas Insulated Switchgears (GIS)



- Bulletin 36-15-\* direction-Service Entrance Applications cont'd
  - Enclosure to have lockable separate compartments for:
    - · Supply authority switching;
    - Supply authority cables; and
    - Main consumer switch;
  - Main Consumer switch shall have load interrupting capability and the compartment shall be permanently labelled (factory or field) "MAIN CONSUMER SWITCH";
  - All other switches shall have load interrupting capability;

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### Gas Insulated Switchgears (GIS)



- Bulletin 36-15-\* direction-Service Entrance Applications cont'd
  - Compartments containing the cables and switch for supply authority use shall be locked by the supply authority and labelled "COMPARTMENT FOR SUPPLY AUTHORITY USE ONLY";
  - Switches capable of grounding the service conductors shall be made incapable of being placed in the grounded position (Figure B2), unless locked in a separate compartment under the control of the supply authority (Figure B1); and
  - The main consumer switch shall remain readily accessible (not locked by the supply authority)

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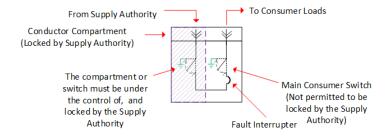
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### Gas Insulated Switchgears (GIS)

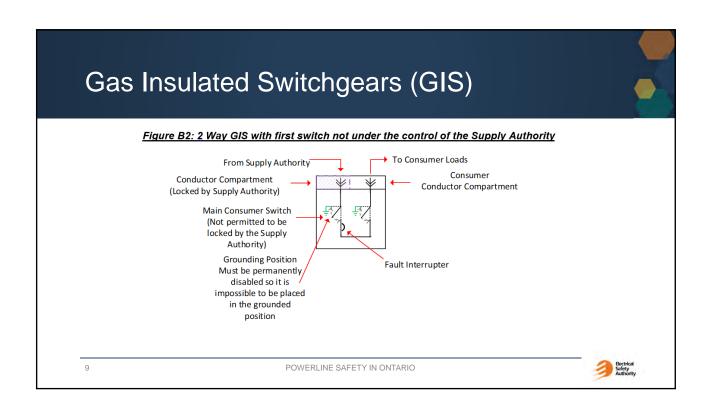


### Figure B1: 2 Way GIS with first switch under the control of the Supply Authority



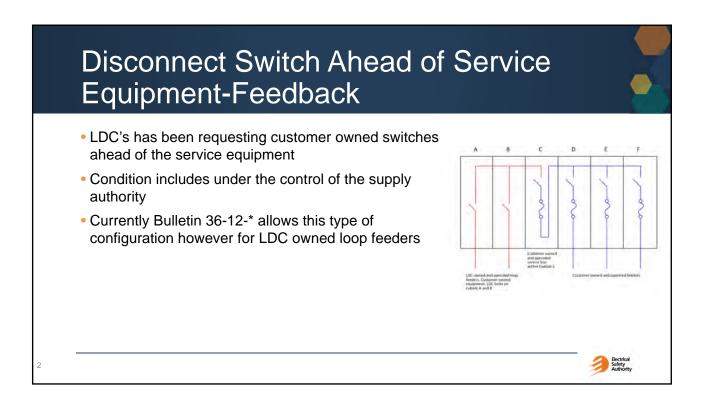
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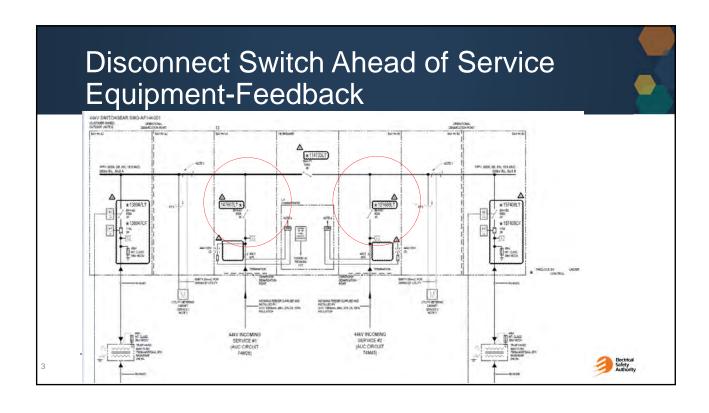


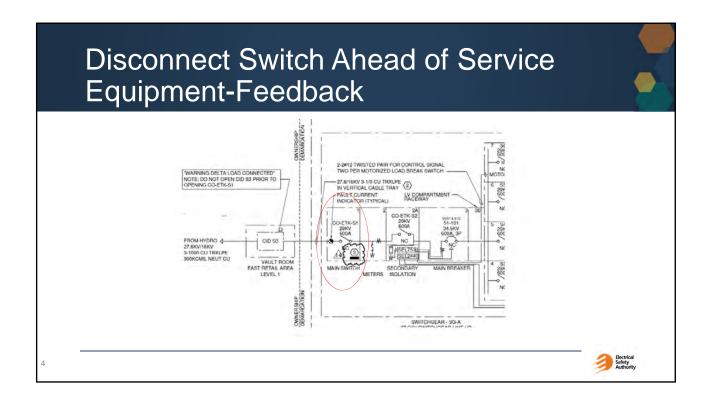












## Disconnect Switch Ahead of Service Equipment-Feedback



Looking for feedback from LDC's on their requirements and rationale for customer owned disconnect switch to be located before the customer's service equipment.

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### Contact Us

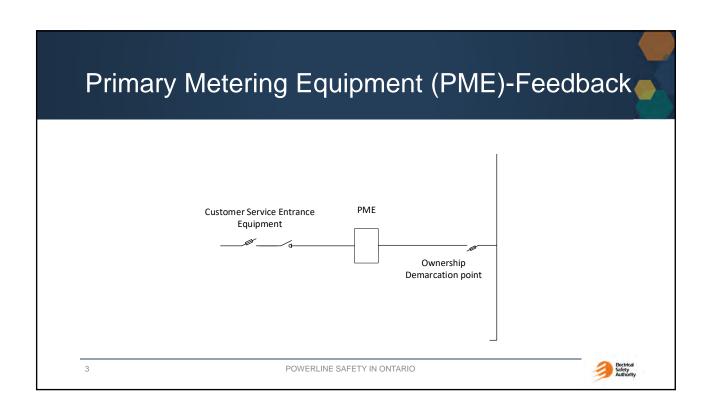
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- Visit us on social media:

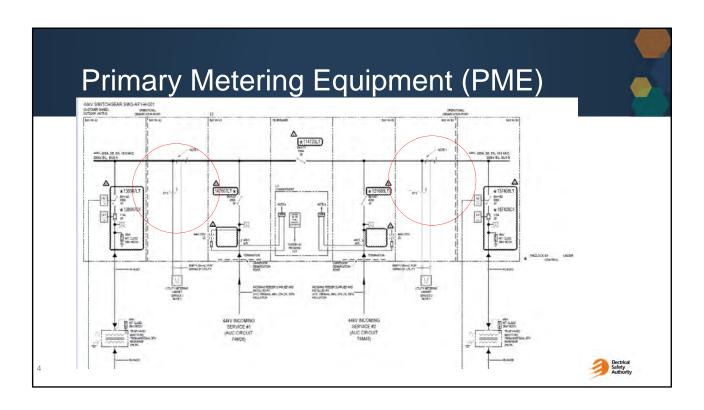


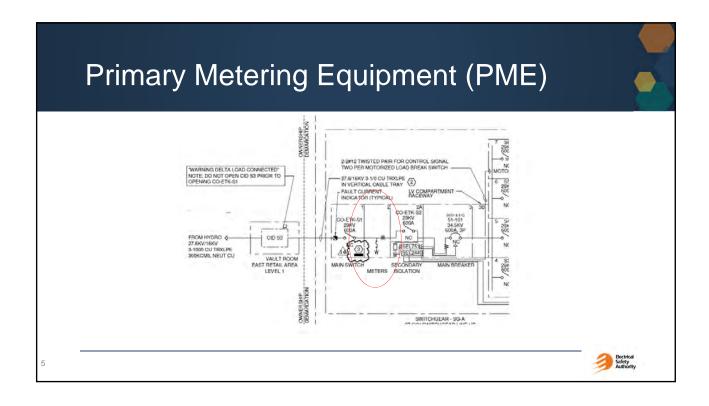




# Primary Metering Equipment (PME)-Feedback Background HV service layouts provided by the LDC's shows the PME beyond the ownership demarcation point ahead of the customer's service equipment This requirement causes the customer to install a non-code compliant installation POWERLINE SAFETY IN ONTARIO







### Primary Metering Equipment (PME)-Feedback

Rule 6-402 Method of installing meter loops

- 2) Metering equipment shall be connected on the load side of the service box, except that it shall be permitted to be connected on the supply side where
  - a) no live parts or wiring are exposed;
  - b) the supply is ac and the voltage does not exceed 300 V between conductors; and
  - c) the rating of the consumer's service does not exceed
    - i) 200 A for a meter mounting device;
    - ii) 320 A for a meter mounting device equipped with a bypass means; or
    - iii) 600 A for a transformer rated meter mounting device located outdoors.



### Primary Metering Equipment (PME)-Feedback

Looking for feedback from LDC's on their requirements and rationale for PME to be located before the customer's service equipment.

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