Electrical Safety Authority

Electrical Distribution Safety

Utility Advisory Council Meeting

Minutes of Meeting
October 24, 2024
9:00am – 3:00pm

Utility Advisory Council Members

LDC/Owner-Operator	
Alectra Utilities	Joseph Chiuco
Elexicon Energy Incorporated	Rajroop Saini
Enova Power Corporation	Shevan Mustafa
Festival Hydro	Bryon Hartung
Hydro One - Distribution	Peter Petriw
Hydro One - Transmission	Ajay Garg
Hydro Ottawa	Edward Donkersteeg
InnPower Corporation	Arthur Berdichevsky
London Hydro	Scott Glazer
Toronto Hydro	Sushma Narisetty
General Interest	
Bell Canada/Telecom Industry	Zhi Lin
Consumer Advisory Council	Sandy Manners
Power Workers Union	Patrick Fee
Regrets	
Newmarket-Tay Power Distribution Ltd.	Alex Braletic
CSA Group	Mark Humphries
IHSA	Al Leger

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

Other Attendees

Esther Terner (Ministry of Public and Business Service Delivery and Procurement), Fred Kouhdani (Hydro One Transmission), Mansi Modi (Ontario Energy Board), Namrata Joshi (Alectra Utilities), Brittany Ashby (EDA), Lori Gallaugher (USF), Rob Koekkoek (Orangeville Hydro), Dervla Murphy (Ministry of Energy), Muayad Tarabain (Hydro One)

ESA Attendees

Nansy Hanna, Jason Hrycyshyn, Patrick Falzon, Mel Pace, Declan Doyle, Fred Lam, Mohammed Marfatia, Saira Husain

1 Notice & Quorum

- Meeting has quorum

2 Agenda

- Peter Petriw asked to add 'Meter Disconnect & Combustible Gases' to the agenda
- Jason H added quick update on Auditor Debrief

3 Minutes of UAC Meeting

The following motion was carried:
Motion: To accept the minutes of the June 20, 2024 meeting
Motioned by: Sushma Narisetty
Second: Shevan Mustafa
Motion carried.

4 Review of Open Action Items

- 2019-03-01: ESA to develop a process for facilitating resolution of conflict between LDCs and a Third Party equipment owner
    - On the agenda
- 2020-03-01: Update on the 3-Phase 3-Wire Solidly-Grounded Wye Installations
    - On the agenda

5 Electrical Safety Award Winners (Nansy Hanna)

- The article about the Electrical Safety Award winners can be found at the link below
- https://esasafe.com/newsroom-2024/electrical-safety-authority-recognizes-safety-excellence-in-ontario/

6 Member Terms (Jason Hrycyshyn)

- 3 LDC/Owner-Operator and 2 General Interest terms expired in 2024
- Group 3 renewal letters will be going to members
- Renewals of group 3 to be confirmed in the February 2025 meeting
- Any party looking to become a voting member of the council should contact Utility.Regulations@electricalsafety.on.ca

7 Financial Update (Mohammed Ali Marfatia)

- The formula for calculating the Regulation 22/04 annual fee is unchanged for 2025

8 2024 OESR (Freda Lam)

- On overview of some of the statistics from the Ontario Electrical Safety Report was provided
- The complete Ontario Electrical Safety Report can be found one the ESA website at https://esasafe.com/ontario-electrical-safety-report/
- Is there is any geographic breakdown for the stats in the OESR?
    - A geographic breakdown is not included with the report due to the small number of reports and privacy concerns

9 Voluntary Meter Base Bonding Reporting Update (Freda Lam)

- The Voluntary meter base reporting pilot will run for about 6 months starting Oct 25th to the end of April 2025
- How to best share the details of the pilot
    - One page that is straight forward and simple so it can be printed and issued with the work folder as a reminder
    - Sharing with the EDA and USF to provide details to their members
        - EDA offered to have ESA present at its meetings
    - Auditors could bring this forward during the audit to encourage voluntary reporting
    - ESA Inspectors communicate with the crews regularly so this would be a good communication point as well
    - ESA will update its website to be more clear on the ask and purpose of the pilot and to make it as easy as possible for LDCs to submit the information
    - Communication should happened with trade schools and apprentices
- Issues observed in the field
    - When the LDC is going out to replace these meters LDCs are finding that the information is not visible as it is behind a plate
        - ESA is not looking for LDCs to go open meter bases, but if they are on site and see something we'd appreciate the collaboration
- How does this get communicated to LECs? Is it going to be issued as a defect the same way other defects are or if the inspector doesn't see it does this mean it's a freebie?
    - ESA is educating the LECs about this issue.
    - If we see this in the field then ESA will be taking action and issuing a defect to the contractor or a Z7 to the property owner
- If something is submitted by the LDC and ESA finds that it is code compliant is the LEC going to be charged for the LDC to go back and reconnect?

  - ESA will review this
- Once you find an incorrect installation for an LEC will ESA be going back to look at past work done by that LEC?
  - ESA will have a conversation with the LEC to make sure there are no other locations where a non-code compliant installation exists
- There were concerns about the LDC policing these installations
- Lines crews aren't experts so they may be hesitant to report. If lines crews observes a defect does the crew connect or not? Not being the experts the crew may connect. There is an uncomfortableness around this from the lines crews.
  - In the case of a trouble call there would be an LEC on site and they would be required to submit pictures to the on call inspector.
- The more ESA asks of the LDCs the less you may get as it is additional work.
- If the meter base was not installed correctly there is now a potential for the meter base to become energized putting the worker at risk.

10 Meter Base Direction Change (Patrick Falzon)

- For the single meter base there are 2 options (diagram 2 & 3)
- For Multi-Gang meter base ESA will not provide an option other than grounding in the meter base as per the OESC
- This will be for new installations. Wil there be direction to existing installations? Will there be any direction for grounding and bonding when the meter base is on the line side
- Who will be paying if changes are necessary for customer owned equipment?
  - The customer would be responsible for any changes required on the customer side as a result of this code rule
- LDCs need more time to look at this change and will have some of their metering experts contact ESA to discuss further
  - Does the council feel that representation on the UAC is enough for consultation or should ESA connect with all LDCs on this consultation?
    - Consultation should be done with all LDCs. The consultation needs to be very specific, only allow the grounding electrode at the gang meter base
  - ESA has asked for feedback to be provided within 2 weeks
- LDCs should check their conditions of service to make sure any meter bases that are specified will meet the OESC requirements
- When ESA issues the connection authorization does ESA inspect the grounding and bonding?

- Depending on the LEC it would be audit based so some services may not have had a physical inspection
- For gang meter bases these are inspected more frequently
- If a physical inspection is done by ESA then inspecting the grounding and bonding would be a part of the service inspection

- Does the council feel that representation on the UAC is enough for consultation or should ESA connect with all LDCs on this consultation?
  - Council thought the consultation should be done with all LDCs. The consultation needs to be very specific, only allow the grounding electrode at the gang meter base
- What are the timeline for making a decision on this issue?
  - ESA is looking to roll this out in with the 2024 OESC in May 2025. This will help in eliminating the confusion regarding installing a bonding conductor in single meter base as it will now be required in all meter bases.

11 Clearance to Overhead Powerlines (Sushma Narisetty – Toronto Hydro)

- USF had a working group on clearances to infrastructure with municipalities. It may be easier in a smaller municipality to sit down with the building departments to develop a good working relationship.
- USF has 4 brochures that can be used to communicate about the requirements of clearances. Some of these need updates, but they are available for USF members to add their logos to.
- This issue is also being discussed at CSA as this is a nation wide issue.
- Alectra is currently working on a standard letter that would go to municipalities with general conditions and a link to the website where builders/developers can submit documentation to get a specific list of conditions for that site. The municipality will typically not issue a building permit until they have received clearance letters from all the utilities.
- There are challenges with smaller developments where a site plan is not required.
- This is an important issue that needs constant maintenance. From the ESA perspective this is an important safety issue so ESA is here to support the LDCs. ESA has issued orders in the past where clearances are an issue.

12 Customer Equipment Supporting/Barriering Distributor Equipment (New Installations) (Jason Hrycyshyn)

- ESA has met internally to create direction on this issue. A proposed direction is being reviewed by other departments within ESA to identify any potential issues. Once internal discussions have been completed ESA will bring the proposed direction to the UAC for discussion

- If there are things that aren't being inspected by ESA would that fall on the LDC to inspect?
    - If ESA isn't inspecting then it would need to meet the LDCs standards
    - LDCs specifications sometimes differ from the OESC for example grounding of a transformer with the number of ground rods (electrodes) or conductor size. The direction will clarify what ESA has or has not inspected

13 Customer Equipment Supporting/Barriering Distributor Equipment (Existing Installations) (Action Item 2019-03-01) (Jason Hrycyshyn)

- ESA has scheduled an internal working group to discuss this issue
- More information will be brought the UAC once these discussions have concluded

14 Update on the 3-Phase 3-Wire Solidly-Grounded Wye Installations (Action Item 2020-03-01) (Jason Hrycyshyn)

- Update provided on the progress of LDCs
- This work to remove these installations is progressing

15 Guideline Working Group Update (Section 10 and Section 11) (Jason Hrycyshyn)

- Reminder to submit volunteers as these 2 working groups will be starting soon

16 Maintenance at locations with a Plug-In Transfer Device (Patrick Falzon)

- LDCs were in agreement with the proposal
- Would use the word 'replace' instead of re-install so there is no confusion… you are replacing what was already there and not installing something
- ESA will create a Distributor Bulletin

17 Powerline Safety Campaign Results (Saira Hussain)

- Great work on the campaigns. Glad to see how ESA has been able to target specific groups. Has ESA been able to target window washers?
    - Not yet, but it is on the radar to get to this year or next
- ESA has been working with Aecon to create a powerline course that is a part of the Aecon University
- When Hydro One gets outages they are very frequently MVAs. Internal reports about MVAs show that the majority of people are leaving the vehicle before Hydro One gets to site. There is a lot of travel time in most cases for Hydro One to get on site

  - ESA has made contact with OPP dispatch to advise people about what to do if powerlines are down. ESA may be providing some training to their contact centre employees potentially next year.
- Excavator rental companies would be a good target. Small contractors rent out equipment and they are typically unaware of the hazards
- One of the other items Hydro One sees in the internal reports is farmers and their equipment breaking poles or grabbing the overhead lines
  - 2025 CSA Update had a lot of work done related to farm equipment and LDC infrastructure.

18 Section 7 & 8 - Revised Guideline Proposal (Jason Hrycyshyn)

- ESA expressed appreciation for the great job that the working group did revising the guideline
- No opposition from the UAC to publishing the revised guideline
- ESA will publish the revised guideline

19 CSA C22.3 No. 11:22 – Maintenance (Jason Hrycyshyn)

- The OEB looked at CSA C22.3 No. 11:22 for maintenance however any discussions regarding the standard haven't been scheduled
- The UAC discussed how to best address the existence of No.11 and Appendix C
- Appendix C will remain as a maintenance requirement for the foreseeable future
- LDCs are not aware of any safety issues that have come up as a result of using Appendix C
- UAC recommended the need to continue to recognize Appendix C
- No opposition from the UAC for ESA to recognize Appendix C "or" No.11 as acceptable for meeting the maintenance requirements of Regulation 22/04.
- ESA will look at publishing recognizing Appendix C or No.11 in a bulletin

20 DFN-02-24 - Energized Equipment Barriers for Temporary Work (Jason Hrycyshyn)

- ESA was requested to review the information in the published Flash Notice, to recognize the use of adequate barriers for the energized parts or conductors that are in the equipment
- Question was asked if the LDC provided the barrier to an LEC to install is this acceptable?
  - No the LDC needs to install the barrier
- It was noted that the expectation is that if it is a dedicated supply line it should be disconnected at the point of supply. This method should only be used for cases

where it is difficult to disconnect from the point of supply (e.g. taps from an underground bus)

21 Meter Base Adapters (Jason Hrycyshyn)

- ESA noted that there is a new type of meter base adapter, that ESA is aware the manufacturer is looking to bring into Canada
- ESA noted that it will be further investigating these devices and was interested to see if any Distributor's would like to join ESA in its investigation
- Hydro One noted it has a lot of questions. This is a new service with additional load? What standards will this be built to as there are several different products within it.
- If anyone is interested in investigating this product with ESA, please contact Utility.Regulations@electricalsafety.on.ca
- Has this been communicated to the inspectors? Inspectors may not be willing to issue a connection if they have never seen a product before
    - ESA will be investigating and sharing material within ESA and with the UAC

22 Meter Disconnect & Combustible Gases (Muayad Tarabain - Hydro One)

- Meters with an internal disconnect are very popular
- Hydro One had some options on how to handle this issue
- Hydro One has seen an EPRI study result and it matches the results of a similar study out of Quebec. If anyone is interested in looking at this issue please contact Utility.Regulations@electricalsafety.on.ca and ESA will forward your request to Muayad

23 Auditor Debrief Quick Update (Jason Hrycyshyn)

- Auditor Debrief presentation will be posted online in the next couple of weeks

24 Proposed 2025 Meeting Dates

- February 20, 2025
- June 26, 2025 (in-person)
- October 23, 2025

- There were no issues with the proposed dates for 2025

UAC Membership Renewal

ESA

Update

October 24, 2024

1

UAC Membership Groups

Member Type	Member Holding Seat	Group	Term Expiration
LDC/Owner-Operator	InnPower	1	June 2025
General Interest	Hydro One - Transmission	1	June 2025
LDC/Owner-Operator	Newmarket-Tay Power	1	June 2025
LDC/Owner-Operator	Toronto Hydro	1	June 2025
LDC/Owner-Operator	Elexicon Hydro	1	June 2025
General Interest	IHSA	1	June 2025
LDC/Owner-Operator	Alectra Utilities	2	June 2026
LDC/Owner-Operator	Festival Hydro	2	June 2026
LDC/Owner-Operator	Hydro Ottawa	2	June 2026
General Interest	Bell Canada	2	June 2026
General Interest	Power Workers' Union	2	June 2026
LDC/Owner-Operator	**Hydro One**	**3**	**June 2024**
LDC/Owner-Operator	**Kitchener-Wilmot Hydro**	**3**	**June 2024**
LDC/Owner-Operator	**London Hydro**	**3**	**June 2024**
General Interest	**Consumer Advisory Council**	**3**	**June 2024**
General Interest	**CSA Group**	**3**	**June 2024**

2

Members: Group 3

Member Type	Member Holding Seat	Group	Term Expiration
LDC/Owner-Operator	Hydro One	3	June 2024
LDC/Owner-Operator	Kitchener-Wilmot Hydro	3	June 2024
LDC/Owner-Operator	London Hydro	3	June 2024
General Interest	Consumer Advisory Council	3	June 2024
General Interest	CSA Group	3	June 2024

- 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 February 2025 meeting

3

Terms of Reference: Membership

Member Type	Current Member Count	Minimum Member Count	Maximum Member Count
LDC/Owner-Operator	**10**	**8**	**13**
General Interest	**6**	**4**	**12**

4

Fee Summary

Distribution Regulation Fee

October 24, 2024

1

Distribution Regulation Fee Summary

- The Distribution Regulation fee charged by ESA is based on the following variables:
- **Number of Customers:** $0.215 per customer
- **Distribution Revenue:** $0.00044 per dollar of revenue
- **Minimum Fee:** Flat fee of $1,100 per organization

XYZ Electricity Distributor	Base	Charge Rate	Fee
Minimum Fee (Flat Fee)			$1,100
Total Customers	50,000	$0.21500	$10,750
Distribution Revenue	$20,500,000	$0.00044	$9,020
Total Fee			**$20,870**

2

Meter Base Direction Change (Grounding)

Information

Patrick Falzon

October 2024

1

Background

- In 2019 when ESA adopted the changes in OESC Section 10 (Bonding and Grounding) it was identified that the industry would not reasonably be able to accommodate the new requirements (primarily where Rule 6-402 2) is applicable for metering ahead of the service box)
- Direction was provided to notwithstand 10-210 d) in OESC bulletins to address the design of meter bases that were built to the C22.2 No. 115:**14** and readily available
- An updated standard, C22.2 No. 115:**20**, was published which has provisions for the grounding and bonding connections, and these products are now readily available.

2

Single Meter Base

Diagram 1

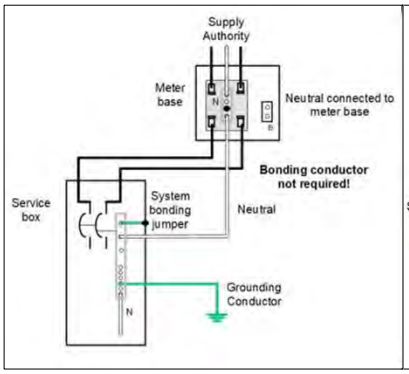


Diagram 2

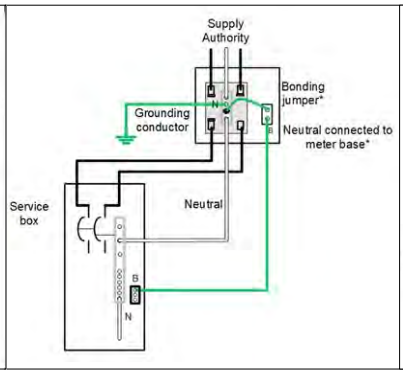
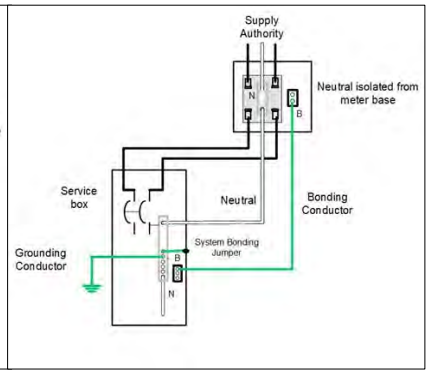


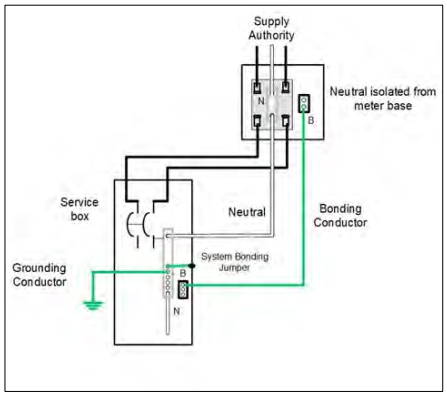
Diagram 3



Only Diagrams 2 & 3 meet the requirements of the OESC, while Diagram 1 is permitted in OESC Bulletin 10-15-7

3

Single Meter Base



See Distributor Bulletin DB-03-24 for more information

4

Multi-Gang Meter Base

Diagram 4

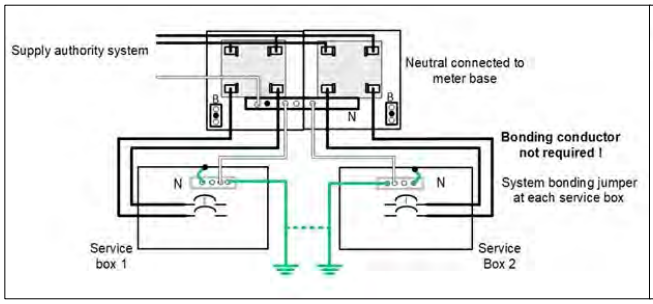
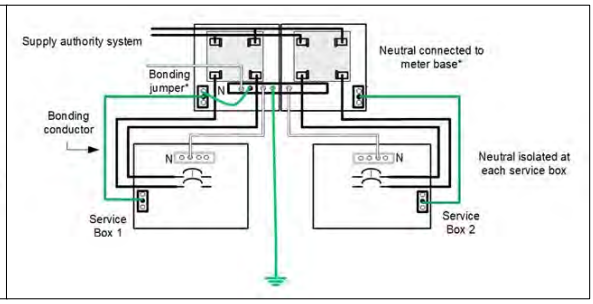


Diagram 5



Only Diagram 5 meets the requirements of the OESC, while Diagram 4 is permitted in OESC Bulletin 10-15-7

5

Bulletins and Discussion

Bulletins

- OESC Bulletin 10-15-7 includes the direction to notwithstand 10-210 d)
- Distributor Bulletin DB-03-24-v1 provides awareness of methods of grounding and bonding for services

Discussion

- ESA is interested to hear feedback regarding **multi-gang meter bases** and no longer permitting the installation of grounding conductors in the service box (**Diagram 4**).

6

Inspection Requirements for Customer Equipment Supporting/Barriering Distributor Equipment

Jason Hrycyshyn
Feedback
October 2024

1

PHASE 1
NEW INSTALLATIONS

October 2024

2

Mission

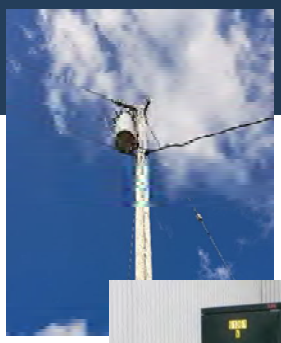
(CO = Customer-owned) (DO = Distributor-owned) (ODP = Ownership demarcation point)

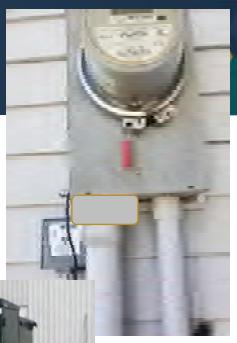
- ESA completed internal Working Group meeting
- ESA is looking to create direction detailing whether or not to inspect CO equipment, where DO equipment relies upon CO equipment. **Installations are new**.
- Common examples are
  - CO poles with DO transformers or wires on them (downstream of ODP);
  - CO meter base with DO meter (downstream of ODP);
  - CO conduit with DO cables inside them (upstream of ODP); and
  - CO grounding (and similar) for DO transformers.

3

Examples

1. Customer-owned **poles and conductors** with distributor-owned **transformers** attached (downstream of the ownership demarcation point).
2. Customer-owned **meter base** with distributor-owned **meter** attached (downstream of the demarcation point).
3. Customer-owned **conduit** with distributor-owned **cables** inside them (upstream of the demarcation point).
4. Customer-owned **conductors and grounding** with distributor-owned **pad-mounted transformer** (downstream of the ownership demarcation point).





4

Working Group - Summary

Reviewed

- Past inspection practices
- Inspection obligations under the OESC
- Information on the Notifications regarding Distributor-owned equipment

Brainstormed Ideas

- Put-into-use
- Above-Grade vs Below-Grade equipment
- Demarcation Points
- Tested different ideas against the examples on the previous slide

5

Electrical Safety Authority

PHASE 2
EXISTING INSTALLATIONS

October 2024

6

Mission

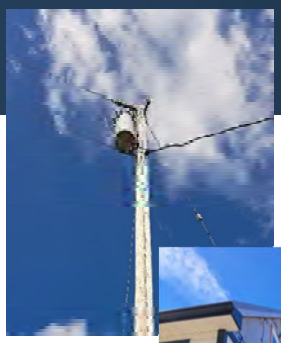
(CO = Customer-owned) (DO = Distributor-owned) (ODP = Ownership demarcation point)

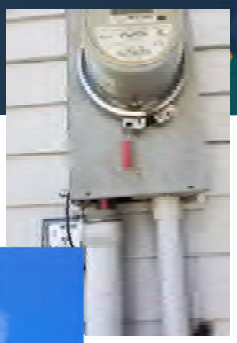
- ESA has scheduled internal Working Group meetings
- ESA is looking to create direction detailing a procedure documenting what actions ESA should take and what actions ESA expects from our safety partners. **Installations are existing**.
- Common examples are
  - CO proximity issues with DO equipment (e.g. O/H conductors);
  - CO rotting poles with DO transformers on them;
  - CO conduit with DO cables inside them.

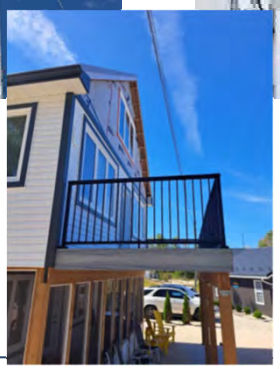
7

Examples

1. Customer-owned **structures** with proximity issues to distributor-owned **conductors**.
2. Customer-owned **poles** rotting with distributor-owned **transformers** attached.
3. Customer-owned **duct** pulled from meter base with distributor-owned **conductors** inside.







8

1

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

FLASH NOTICE #1	November 2023	April 2024	October 2024
Number of Possible Configuration of Concerns	Number of Possible Configuration of Concerns	Number of Possible Configuration of Concerns	Number of Possible Configuration of Concerns
~15,000	1,261	964	792
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	44	47	48

2

Contact Us

Electrical Safety Authority
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Utility.Regulations@electricalsafety.on.ca

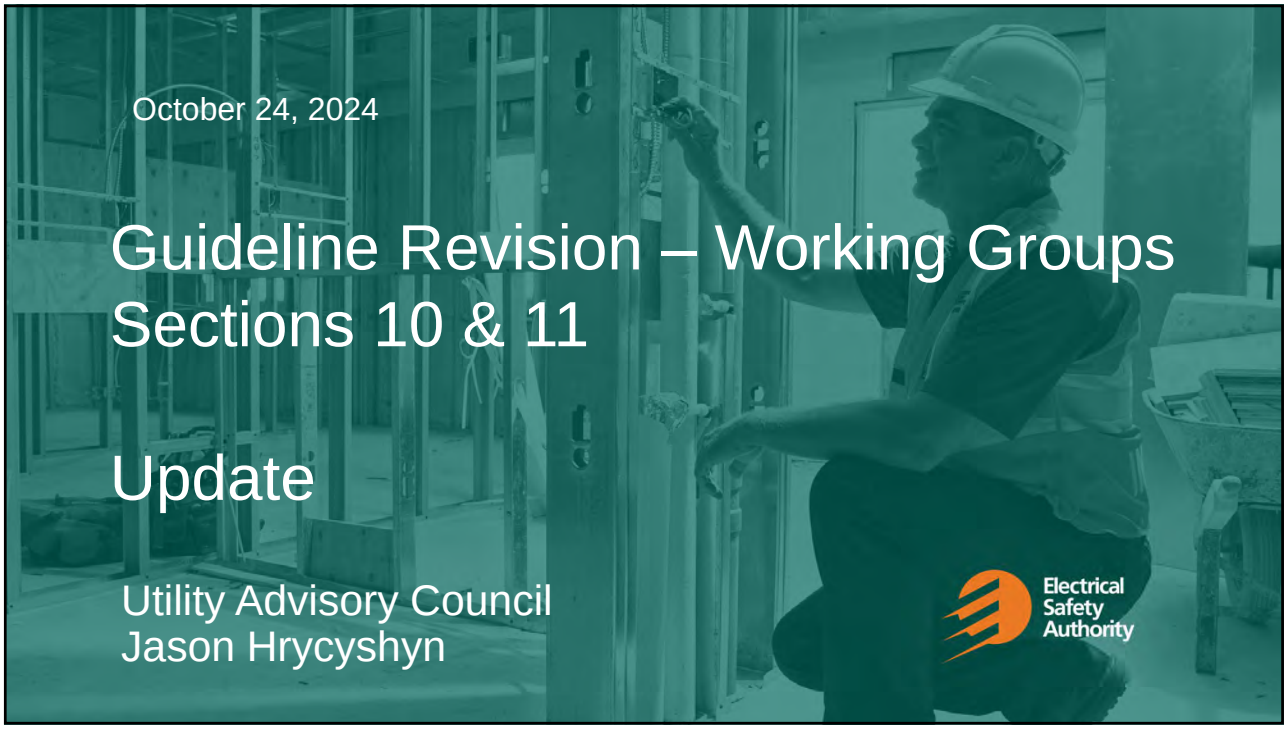
Visit our website: esasafe.com
Visit us on social media:

@homeandsafety

@ElectricalSafetyAuthority

3

3



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Guideline Revision – Working Groups Sections 10 & 11

Highlights

- September 20, ESA emailed Stakeholders a request for participation on Guideline Working Groups for Sections 10 & 11.
- ESA wanted to highlight this request in today's meeting and remind attendees that ESA will select participants within 2 weeks, of today. Request for **volunteers closed November 1, 2024**.

2

Guideline Revision – Working Groups Sections 10 & 11

Highlights

- **Section 10** (Proximity to Distribution Lines)
  - Expected to meet 4 times (3 – ½ Day Meetings)
  - Currently: 4 Distributor Volunteers
- **Section 11** (Disconnection of Unused Distribution Lines)
  - Expected to meet 4 times (3 – ½ Day Meetings)
  - Currently: 2 Distributor Volunteers
- ESA is suggesting a similar process, in which, ESA provides the Working Group with a seed document to work from.

3

Contact Us

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Visit our website: esasafe.com
Visit us on social media:

@homeandsafety

@ElectricalSafetyAuthority

4

Utility Advisory Council- Maintenance at locations with a plug-in transfer device- Information

Patrick Falzon, C. Tech

Powerline Safety/Code Specialist

October 24, 2024

1

Plug-in meter base transfer device

- Installation of plug-in meter base transfer device falls under the OESC and is required to be installed only by either the Licensed Electrical Contractor (LEC) or the homeowner
- Notification of work is not required for the installation of the plug-in meter base transfer device when the installation is performed by the LEC unless the Distributor requests a connection authorization
  - Installation by the homeowner requires a notification of work and a connection authorization

2

Plug-in meter base transfer device

- Distributor requested clarity about re-install process when attending a residential location involving the existing installation of a plug-in meter base transfer device when a customer notifies the Distributor of no power or part power call
- Trouble shoot process:
  - Distributor removes plug-in connection cord from the generator (black yellow in the photo),
  - then removes the first meter seal,
  - then removes the revenue meter,
  - then removes the second meter seal for the plug-in device to the meter base,
  - then removes the plug-in device itself to access the interior of the meter base.

3

Electrical Safety Authority

3

Plug-in meter base transfer device

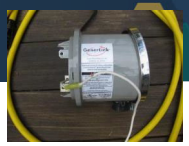
- Distributor's proposal is to reverse the process after correcting the trouble call and re-install the components in the reverse order including the plug-in transfer device
- Their rationale:
  - To eliminate the customer to contact an LEC to re-install the plug-in transfer device.
  - LEC's may not be readily available depending time of day or night trouble call
  - Travel time for the Distributor to go back to meet with LEC to disconnect once again

4

Electrical Safety Authority

4

Plug-in meter base transfer device



- **Proposal** is to permit the Distributor to perform the re-install provided <u>they do not remove the neutral lead from the meterbase-only disconnect from the spade connector</u>
- Will only apply to a “Generlink”
- Excludes other devices that requires a mounting bracket

- Will publish a direction in a Distributor Bulletin

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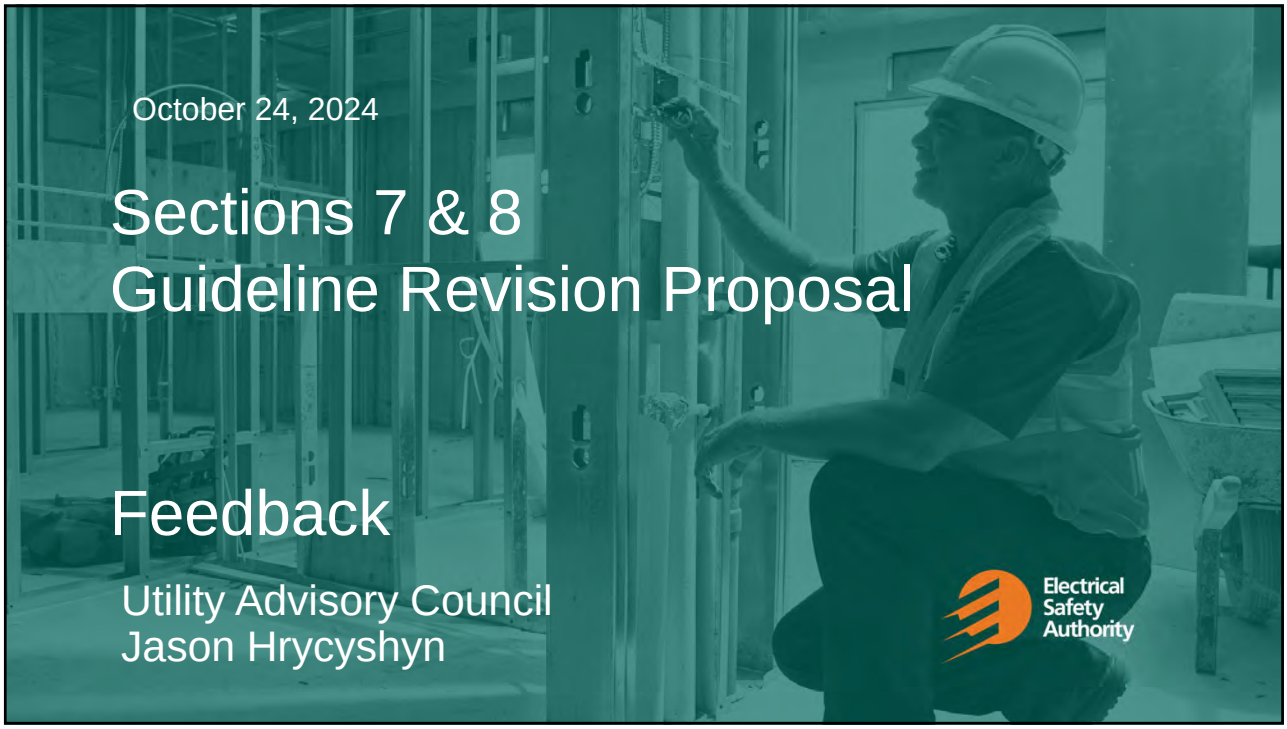

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Sections 7 & 8 Guideline Revision Proposal

- **Sept 24, 2024** - ESA emailed a copy of the Proposed Guideline
- **Goal** - Obtain feedback (questions or concerns) on Proposed Guideline
- **Presentation Layout** - The following slides address proposed revisions
  - More significant revisions summarized on earlier slides.

2

Sections 7 & 8
Guideline Revision Proposal

Revisions

- 6 Bulletins were moved into the Guideline. Bulletins to be removed from list of approved bulletins
- Material formerly requiring a “certificate of deviation”, now also recognizes the use of “certificates of approval” as equivalent
- Information regarding transitioning to latest National Standards
  - Encourage the use of the latest standard
  - Typically, 1-year from publication date

3

Sections 7 & 8
Guideline Revision Proposal

Revisions

- CVP guidance added
  - Re-fresher training intervals added
  - Maximum interval of 10 years (re-affirmation or revision)
  - Sampling information added
  - “Partial” and “Final” certificate information
- Guidance on Software-based engineering tools were added
  - Same information included in the Third Party Guideline

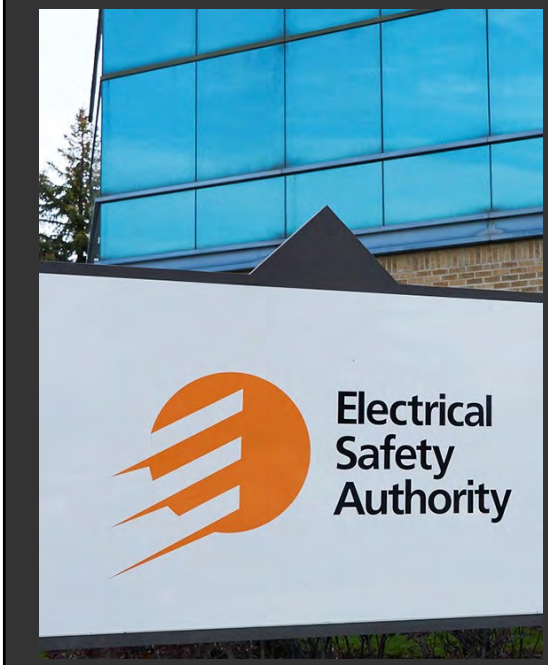
4

Sections 7 & 8
Guideline Revision Proposal

Revisions

- Revised use of “Qualified Person” and “Competent Person”
  - No intended changes, improvements made to consistency of terms
- 12 Definitions added, deleted or modified.
- Added guidance regarding the use of “Notes” within the guideline.
- Updated Legal Disclaimer

5



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6

1

CSA C22.3 No. 11 - 2022 - Maintenance of Electric and Communication Utility Equipment and Systems

Background

- ESA currently uses the Distribution System Code's – Appendix C entitled (Minimum Inspection Requirements)
- C22.3 No.11 was published in 2022
- The Technical Committees for C22.3 No.1 and No.7 are looking at adding a "General requirements" which will document a reference to **CSA C22.3 No. 11** to address maintenance. (Public consultation period is closed)
- Past discussions discussed moving in harmonization with the OEB

2

CSA C22.3 No. 11 - 2022 - Maintenance of Electric and Communication Utility Equipment and Systems

Feedback

- ESA is seeking the Council's advice on Maintenance
- ESA is interested in discussing moving to C22.3 No.11
  - Perhaps recognition of Appendix C **or** C22.3 No.11 as acceptable; or
  - Moving directly to only C22.3 No.11

3

4

5

CSA C22.3 No. 11 - 2022 - Maintenance of Electric and Communication Utility Equipment and Systems

Background

- Z463 TC and SCOPE (CSA Steering Committee on Power Engineering & EMC) came to an agreement that:
  - Utilities would be included under Z463; or
  - Utilities would have a separate maintenance Standard by next edition (2023).
- Early 2020 - Technical Committee Member recruitment for the development of C22.3 No.11, included representation from:
  - Generation
  - Transmission
  - Stations
  - Distribution
  - Communications

6

CSA C22.3 No. 11 - 2022 - Maintenance of Electric and Communication Utility Equipment and Systems

Highlights

General Inspection – identification of risks and hazards for planned corrective action

Detailed Inspection – a thorough review of the asset to identify state of deterioration, which may include visual review, measurements, testing, or taking samples, and may prompt corrective action

Note: Currently there are no requirements for a "Detailed Inspection" in Appendix C. This may require new processes and training to be put in place by Distributors which may increase costs.

Time-based Approach – frequency of maintenance activities of the asset(s) based on a fixed cycle time (next slide for a visual)

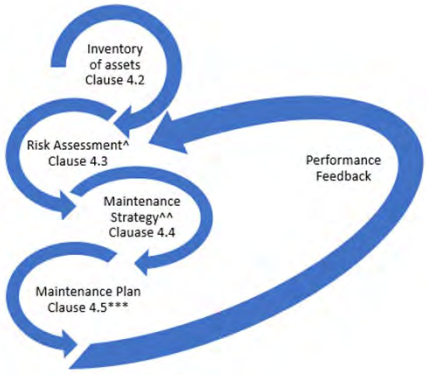
Risk-based Approach – frequency of maintenance activities of the asset(s) based on a risk assessment (next slide for a visual)

Note: Currently there is only the "Time-based Approach" allowed. In the short term the "Risk-based Approach" may increase costs incurred by the Distributor in the short term, however in the long term this should be a lower cost for the majority of the equipment.

7

CSA C22.3 No. 11 - 2022 - Maintenance of Electric and Communication Utility Equipment and Systems

Risk-based Approach



Time-based Approach

8

CSA C22.3 No. 11 - 2022 - Maintenance of Electric and Communication Utility Equipment and Systems

Highlights

- No.11 requires more than the Appendix C's "Patrol or Simple Visual Inspection".
- Require LDCs to inventory their assets and assign them to either a "Risk-based Approach" or a "Time-based Approach" for their maintenance.
- For equipment that they put under a "Risk-based Approach"… a "Risk Assessment " and "Maintenance Strategy" must be created.
- "**Risk Assessment**" – Equipment is evaluated to things such as safety, environmental impacts, reliability, customer satisfaction, contingency outage and a total score is generated as to assign the "Maintenance Strategy". This is like the health index for DSPs.
- "**Maintenance Strategy**" – Based in part on the "Risk Assessment" each piece of equipment is assigned a strategy such as corrective, condition based, operations based, predictive, preventative or even run-to-fail.

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CSA C22.3 No. 11 - 2022 - Maintenance of Electric and Communication Utility Equipment and Systems

C22.3 No.11 - Schedule

Public Review:	Nov 2021- Jan 2022
CSA Group's Pre-Approval Editing:	Jan – April 2022
Technical Committee Ballot:	May 2022
Ballot Disposition:	May - Jun 2022
Publication:	July - Sep 2022

- ESA and OEB are looking into jointly assessing next steps.
- UAC feedback / advice

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11

October 24, 2024

Energized Equipment Barriers for Temporary Work

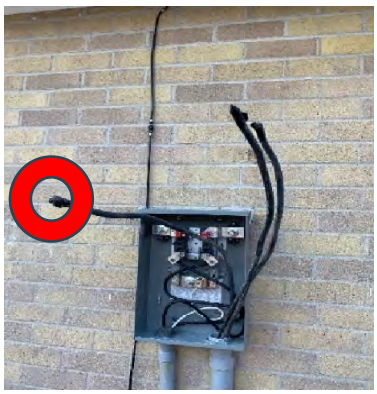
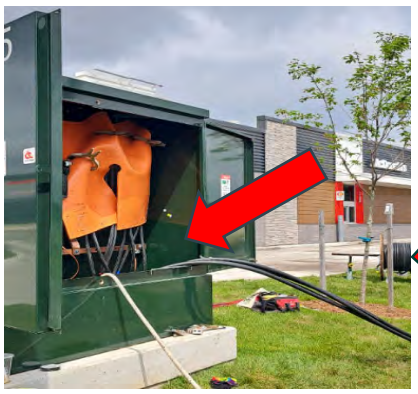
Information

Utility Advisory Council
Jason Hrycyshyn

Electrical Safety Authority

1

Energized Equipment Barriers for Temporary Work

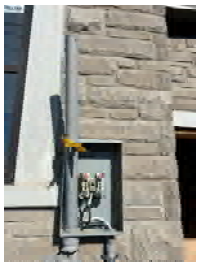

2

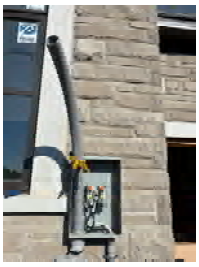
Energized Equipment Barriers for Temporary Work

Flash Notice – Update Highlights

a. No energized parts or conductors are in the equipment that the customer or Licensed Electrical Contractor (LEC) is expected to be working on or in; ~~and~~ **or**

b. Barriers (e.g. mechanical protection) exist that are suitable for the situation and hazards to which the live parts and~~/or~~ conductors are reasonably expected to be exposed.





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4

Meter Base Adapters

Feedback
Jason Hrycyshyn
October 2024

1

Background *All Material from ConnectDER

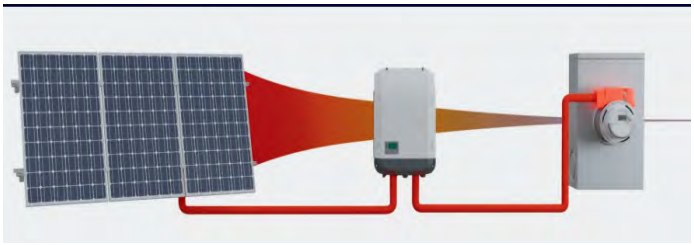
The ConnectDER™

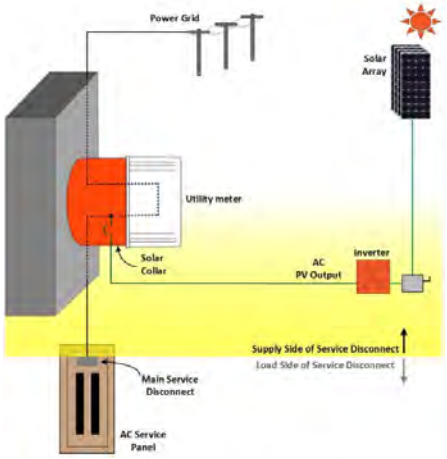
- ConnectDER Solar and ConnectDER EV
- Two (2) Meter Socket Adapter (MSA) are designed to rapidly connect to the home
  - Grid-ready solar PV; and
  - EV chargers
- The MSA is ETL listed and tested to UL 414 standards, certified to CSA C22.2 No.115.
- Currently unavailable for purchase in Canada.

2

Background *All Material from ConnectDER

ConnectDER Solar - Highlights





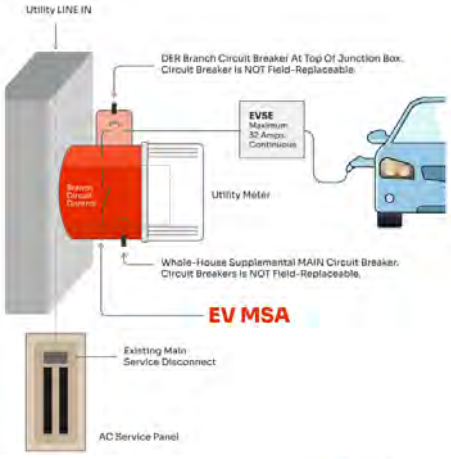
Integrated overcurrent protection device for Solar PV (80A, 22k AIC maximum).
Tool-free junction box removal allows for removal by emergency personnel.

3

Background *All Material from ConnectDER

ConnectDER EV - Highlights

DER BRANCH CIRCUIT CONTROL PARAMETERS (Load Control for Service Rating)		
UTILITY SERVICE RATING	125A	100A
CONTINUOUS CURRENT TRIP (15 MIN ACCUMULATED)	98A	78A
CONTINUOUS CURRENT TRIP (30 SEC)	119A	100A
RECONNECT TIME (15 MIN ACCUMULATED)	66A	46A



Integrated controls and overcurrent protection to prevent exceeding continuous current rating of meter socket and service

4

Discussion

- ESA will be taking a closer look at this type of MSA
- ESA is interested input from Distributors
- ESA is interested in discussing Next Steps