Auditor Debrief

November 9, 2018

Disclaimer

- The information in this presentation was prepared as discussion points for the auditor meeting. In some cases more information may be required to understand the issue fully as discussed during the meeting. For more information please contact martin.post@electricalsafety.on.ca or jason.hrycyshyn@electricalsafety.on.ca

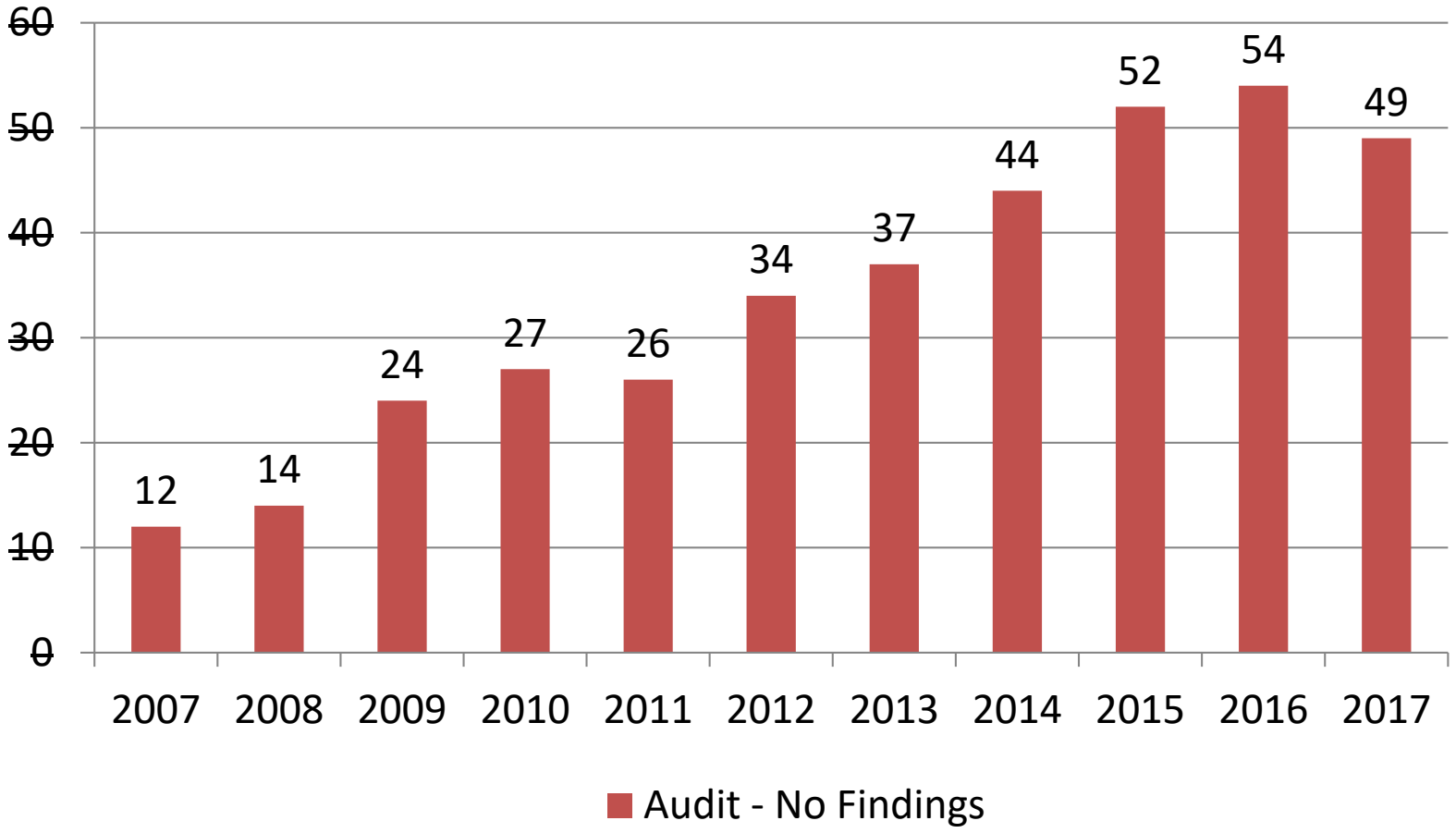
AGENDA

1. Review of 2017 Audit results
2. Key 2017 Audit Findings
3. 2018 Questions & Issues / Auditor Feedback
4. Focus of 2018 Audits
5. Other Information
    a) Bulletins
    b) Other Issues

Summary of Audit Findings for 2017

- Total of 68 LDC Audit reports
- 49 LDCs - Full Compliance (‘16-54)
- 2 LDCs with Non-Compliance findings
- 18 LDCs - Needs Improvement only
- 11 LDCs with only one finding (NI or NC)
- 8 LDCs with two or more findings (NC or NI)
- 2 LDCs had more than 1 Non-compliance

Summary of Audit Findings Life to Date



Section 4/5 Audit Findings

Section 4/5 – Safety Standards

- To fully implement Inspection/Maintenance of OH/UG/Station and meet OEB's Distribution System Code Appendix C
- No overhead inspections have been done since 2014
- No underground inspections have been done since 2014

Section 6 Audit Findings

- PO's do not provide sufficient information. (The LDC's purchase orders do not consistently show sufficient detailed information to ensure that approved equipment is specified.)
- Legacy or returned equipment in stores but no record of inspection/approval for use/re-use (Equipment returned from field and scheduled for scrapping in Stores area)
- ensure all transformer test reports are stored at the time the transformers are received
- unapproved material used to fill a woodpecker hole in a distribution system pole
- The distributor did not have an approved equipment list available for checking and crosschecking material ordered on the system
- Major equipment returned directly from the field is inspected by warehouse personnel and returned to stock without any records of inspection confirming "no undue hazards".

Section 7 Audit Findings

- As-built drawing did not reflect changes (cross-arm installation) in the field.
- Third party attachment plans were prepared and approved by P. Eng., however plans were not approved by LDC
- Conditional certificate of approval from third party attacher

Section 8 Audit Findings

1. Review and update/modify CVP
2. Certificate of Deviation signed by non P. Eng.
3. The operations clerk did the sign offs electronically but is not identified in the CVP as a qualified person.
4. Record of Inspection/Certificate completion issues
   - Underground civil construction by contractors is inspected by engineering personnel without providing an inspection record.
   - Record of Inspection signed and dated but without check on the boxes.
   - Ensure the Certificates are signed after the Record of Inspection. If a change is made a new Certificate should be issued
   - Inconsistencies in the completion of the Record of Inspection and Certificate - Trouble Calls, Partial Cert.,
   - No Record of Inspection available for 3rd party attachments
   - RoI not completed for meter work – meter changes and new meters

Auditor Question – From 2017

Q. Tablets using the Mcare software are more often used to complete work records for activities such as meter removals and installations. A “no undue hazards” statement can be generated, but the work can be completed without clicking on the NUH statement. Is this acceptable? Should a NUH statement be mandatory before signing off on an assignment?

A. Yes, a “No Undue Hazard” statement is required as a form of Certificate where no Record of Inspection and Certificate are otherwise completed. However, the requirement for programming an electronic process is not enforceable under the Reg. The LDC can determine how the NUH is recorded, but it must be available for the auditor, in the same way a RoI or Certificate are required.

Auditor Question

Q. mCare software is used by various LDC's to record activities, e.g., such as meter removal, meter installation, meter disconnects/reconnects, trouble calls, emergency work etc. A "No Undue Hazard" statement is required as a form of Certificate, where no Record of Inspection and Certificate are otherwise completed.

FYI; mCare software has an option - a scanned copy of "Record of Inspection" with "No Undue Hazard" statement can be attached to the soft copy of that particular WO in mCare.

A. ESA is fine with software / softcopy records and accepts their use.

LDCs should be following the (ROI/Certificate) vs (Statement of No Undue Hazard) direction provided in the Technical Guideline (Flowchart 4.1.3).

i. Most work done to Plans or Standard Designs should have a system and verbiage that mirrors the (ROI/Certificate process).

ii. Most Like-for-Like, and Emergency work should have a system and verbiage that mirrors the (Statement of No Undue Hazard process).

iii. “meter removal, meter installation, meter disconnects/reconnects, trouble calls, emergency work” – These can all use the statement of No Undue Hazard..

Auditor Question

Q. Can pictures be considered as partial/final "Record of Inspections" of underground trenching construction?

A. Pictures alone are not a Record of Inspection. An address, date and person inspecting ID is also important parts of the ROI. ESA is fine with pictures being used to supplement a Record of Inspection.

For example, if the workers working on the trench are not on the CVP and they wish to send in photos to a person that is on the CVP in order for the Record of Inspection and Certificate to be filled out ESA accepts that practice, as long as the LDC accepts that practice.

Auditor Question

Q. Revision dates of "Technical Guidelines for Section 6, 7 and 8 of O. Reg 22/04" and "Technical Guidelines for Third Party Attachments" are September 30, 2005 and October 5, 2005 respectively. Are there any plans to revise these documents in near future?

A. Yes, ESA is working on a Best Business Practice which will document that ESA will review each Guideline on a 5 year cycle, like many CSA standards. Below is the proposed schedule ESA discussed with the Utility Advisory Council (UAC) in our November 2017 meeting.

Auditor Question

Proposed schedule – Order in which to address guidelines (Note 1)

1) Year 1 - Guideline for Excavation in the Vicinity of Utility Lines (Section 10)
2) Year 1 - Guideline for Third Party Attachments (Section 7 & 8) – (Note 2)
3) Year 2 - Technical Guideline (Section 7)
4) Year 2 - Technical Guideline (Section 8)
5) Year 3 - Technical Guideline (Section 6)

Note 1: Order may be changed as needed to address new requirements, stakeholder feedback, etc (e.g. Regulation amendments).

Note 2: Review includes assessing to incorporate into Technical Guidelines, either as 4th section or incorporate into sections 7 & 8.

Proposed schedule – Order in which to address guidelines

6) Year 4 - Guideline for Change of Ownership (Section 3) (Note 3)
7) Year 4 - Guideline for Proximity to Distribution Lines (Section 10)
8) Year 4 - Guideline for Disconnecting Unused Lines (Section 11)

9) Year 5 - Guideline for Reporting of Serious Electrical Incidents (Section 12)
10) Year 5 - Guideline for Audit (Section 13)
11) Year 5 - Guideline for Declaration of Compliance (Section 14)

Note 3: Main participation is ESA internal, specifically Operations group since they perform inspections of equipment/installations to be transferred

Auditor Question

Q. Due to organization changes in LDCs, are the LDCs required to get re-approved all procedures, standard design drawings and other documents pertaining to O. Reg. 22/04?

A. No. Now if a P.Eng signed off their standards and is no longer an employee of that LDC that is a concern of ESA. If you run across this, please note it as a “Needs Improvement”.

   i. All other processes and procedures are seen as the Distributors and if a staff member signed off on a procedure and is no longer there, ESA still sees the procedure as in-force within the LDC.

Auditor Question

Q. Any plans to re-arrange the audit schedules for LDC in Group 1 (winter). This matter was brought up before this group. Some time Driving is very strenuous. Freezing rain or driving while sandwiched between two transport trucks is very scary. Considerations should be given to the safety of the auditors. Incident can happen even during nice weather. Let's us come with a solution to avoid any incident in future?

A. ESA agrees that the Groups need to be revisited and revised as I am in 100% agreement with your concern. This is currently not in the works to change, if you'd like to propose something that would be great, otherwise I'll try to work it into the schedule soon. The process will be to draft up a Proposal, run it past the Auditors and UAC and transition to the new schedule.

Auditor Question

Q. Is it acceptable to use timesheets as "Record of Inspections" for New Lines, Line Upgrades or Line Replacements. My understanding is that timesheets can be used as "ROI" for only emergency work, or trouble calls type of work.

A. Depends what is in the approved CVP. Generally ESA would agree that timesheets do not typically have sufficient language to qualify as a ROI. If this cannot be verified please note the item as a “Needs Improvement” and ESA can discuss with the LDC.

Auditor Question

Q. "If a merger occurs between Company A and Company B and in the past Company B has had audit results with needs improvements or non-compliance, what are the expectations of the merged company for resolving these comments? Will the audit on the initial merged year with both Company A and Company B be unfavourable if the comments have not been resolved fully?

A. The merged company is seen to have a Needs Improvement and/or a Non-Compliance that they have to deal with. If the findings were not dealt with prior to the latest audit then this would be a subsequent finding and should be noted. A N/I should be noted as a N/C the second time around, even in the event of a merger.

Auditor Question

Q. CSA Z463 “Guideline for Maintenance of Electrical Systems” became CSA Standard Z463 in September. Are LDC’s to comply with the standard and if so, are we to audit to its requirements for preventive maintenance?

A. No. ESA is not enforcing this standard under Regulation 22/04. In addition, it is ESA’s understanding that there is currently an exclusion in this standard that applies to Distributors.

Auditor Question

Q. PART #1: Transfers of third party attachments are often necessary when lines are moved for road widening or line rebuilds. LDC's usually cut down the old poles to a point just above the attachments. The stub poles and the attachments often remain in place for many months before the third parties get around to transferring over to the new line. What is a reasonable time delay for the transfers?

A. ESA does not have nor plans to create requirements or recommendations for the amount of time for a transfer. ESA typically sees this as a business issue.

Auditor Question

Q. PART #2: Transfers of third party attachments are often necessary when lines are moved for road widening or line rebuilds…. Should line rebuilds fall under the ESA guideline for third party attachments?

A. Yes. 2.3 Like-for-Like Replacement

"When a transfer of equipment is proposed by an owner or an attacher it shall be considered a like-for-like replacement and shall be subject to the process for completing records of inspection and statement or no undue hazards identified in the owner's Construction Verification Program."

Auditor Question

Q. PART #3: Transfers of third party attachments are often necessary when lines are moved for road widening or line rebuilds…. If so, should we consider this as design by the owner?

A. Yes. Most LDCs and 3rd Parties will use the Like-for-Like Replacement definition in the Guideline. Where this is not used the design can be generated by the LDC or 3rd Party, as per Section 7 of Regulation 22/04.

Auditor Question

Q. When an LDC installs its equipment in a customer-owned vault, should the LDC follow the rules for OEB substations?

A. The vault is to meet the requirements of the National Building Code (NBC). The CSA Underground Technical Committee is reviewing inserting a new section that will apply to equipment “within the footprint of a building” (this would include “vaults”), the Scope will be widened to allow for this. With respect to maintenance, the LDC is at minimum required to visually inspect to ensure there is an adequate barrier to their equipment periodicly.

Auditor Question

Q. When rebuilding municipal overhead lines, some LDC's produce partial certificates of inspection when lines and equipment are re-energized in stages. Others claim that they never do this because they disconnect and re-energize at one time. It is difficult to imagine that a line rebuild of many blocks, carried out over many weeks could all be disconnected and re-energized at one time, but it is very difficult to find evidence after the fact. Do you have any guidelines?

A. ESA does not see this a realistic possibility. ESA requests that this be documented as a "Needs Improvement".

Auditor Question

A. Continued: ESA does not see this a realistic possibility. ESA requests that this be documented as a "Needs Improvement".

4.1.2 What is meant by "putting a *distribution system* into use"?

Putting a system into use means after completion of the work or portion of the work to construct, repair or modify an electrical installation forming part of the electrical *distribution system*, it is placed back into full service or is made available for service.

For new construction the system is available for service when the construction reaches a stage where it can be used to distribute electrical energy. For modifications and repairs to existing systems the system is available for service when it can be returned to normal use.

Energizing part of a project: For projects such as a voltage conversion or a *line upgrade* in which equipment is connected to a new primary circuit at various stages, a partial inspection and certification is required prior to each portion being made available for service.

Auditor Question

Q. A number of LDC acquisitions and mergers have occurred over the past year. I know that the minutes of your 2016 meeting contain some guidelines. Anything further?

A. No. LDCs undertaking an acquisition or merger contact ESA to generate a Plan to transition Regulation requirements to the new entity. The “Audit & DoC Due date” bulletins address the new entities, without all the details.

Focus of 2018 Audits

- Section 8
- Certificates of Deviation
  - ESA has noticed that construction that should have “Certificates of Deviation” do not always have them accompanying the design.
  - Best practice would be to sign a Certificate of Deviation in the events that the LDC is not meeting a “shall” clause in the standards (e.g. CSA) that relates to safety.
- Regulation 22/04 Amendments
  - What are the amendments and some impacts of those amendments.
  - Section 5 - CSA Standards
- CSA Clause 1.2 (CSA C22.3 - 2006 vs 2015)
  - ESA has noticed that some LDCs were not aware of the changes to the Overhead and Underground standard with respect to Clause 1.2.
  - ESA has noticed that there are some LDCs that are confused on the application of ESA bulletin DIB-0-08 entitled “CSA C22.3 Elucidation”.
- “Work Instructions” vs “Plans”
  - ESA has a concern that there may not be a clear delineation between “Work Instructions” and “Plans”.
  - ESA has a concern regarding the use and approval of “SPIDA Calc” and “PLS Pole”.
- “Delta – Wye” conversions
  - Update Auditors on this project, in the event you are asked questions.

Focus of 2018 Audits

Section 8

- Audits for 2016 and 2017 indicate a trend of increased findings for Records of Inspection and Certificates not being completed correctly or at all
- Causes?
  - changes in field staff/ Management?
  - Training?
  - Complacency?
- Auditors are directed to consider trending in each LDC they audit and mark as non-compliant if necessary

Focus of 2018 Audits

Certificates of Deviation

- For compliance with Regulation 22/04 ESA is reviewing direction to LDCs to complete "Certificates of Deviation" in the events that the LDC is not meeting a "shall" clause in the standards (e.g. CSA) that relates to safety.
- Bulletin in ESA's "Work in Progress" regarding structures (e.g. poles) that are installed less that the CSA requirement.

Focus of 2018 Audits

Regulation 22/04 Amendments

- Amendments in Force, starting October 1, 2017.
- Are LDCs using the old version of Reg. 22/04?
- Section 5 Updates
  - Updates to CSA standards to 2015.
  - Updates to the OESC Section 86.
  - Update to NESC C2 2017.
- Other updates included outside of Audit scope.

Focus of 2018 Audits

CSA Clause 1.2 (CSA C22.3 - 2006 vs 2015)

2006: Existing installations, including maintenance replacements, **additions, and alterations**, meeting the original designs that currently comply with prior editions of this Standard, need not be modified to comply with this edition of the Standard, except as might be required for safety reasons by the authority having jurisdiction.

2015: Existing installations (including maintenance replacements **and maintenance alterations**) meeting the original designs that currently comply with prior editions of this Standard, need not be modified to comply with this edition of the Standard, except as might be required for safety reasons by the authority having jurisdiction.

Focus of 2018 Audits

CSA C22.3 No.1 – A.1.2

2015: The intent of this Clause is to permit overhead lines that have been constructed in compliance with a prior version of the Standard to remain in service in the event of a subsequent revision of this Standard, without being modified to comply with the revised Standard.

This Clause is not intended to permit the addition of new line sections, new conductors, new attachments, or new equipment to an existing line that do not comply with the current version of the Standard. Such new additions are intended to comply with the latest revision of the Standard.

Maintenance of an existing line, including repair, or replacement where necessary, of failed or failing components of the line (including poles, conductors and other equipment), is permitted without modifying the line to meet the latest revision of the Standard.

Focus of 2018 Audits

ESA has not removed nor revised the direction provided in DIB-03-08, which was drafted in accordance with the 2006 standard.

ESA is awaiting further analysis by the CSA Technical Committee, before ESA makes any changes.

LDCs however should be aware of this change in the CSA standards.

Focus of 2018 Audits

"Work Instructions" vs "Plans"

Question #1

If the design is based on a single standard (such as a residential service relocation), could the technician release a simple design based on the approved standard without the professional engineer's approval?

Answer #1

Yes, the technician can release the "simple design" using the approved standard. The Certificate of Approval requirement of Section 7, would be with the Professional Engineer that approved the single standard.

Focus of 2018 Audits

"Work Instructions" vs "Plans"

Question #2

If the design is based on numerous standards that need to be properly assembled together and properly integrated with the existing system, is the technician required to get the design checked and stamped/sealed by the professional engineer or can the design be checked by his immediate supervisor who is not an engineer?

Answer #2

Depends.

If the numerous standards, approved by a Professional Engineer, are such that they can be assembled by a "competent person" (e.g. technician) then this would be considered a "Work Instruction" and the technician can release the "design".

If the standards were not designed in such a fashion that they can be assembled by a "competent person" then the resulting multi-standard design work would be considered as a "Plan" and would require a Certificate of Approval for that "Plan".

Focus of 2018 Audits

"Work Instructions" vs "Plans"

Answer #2 – Con't

- **For simple multiple tangent lines** and some angled poles without equipment attachments, it is likely that the distribution line could be assembled by a "competent person" and none of the approved standards will be violated. Therefore, this job could be viewed as a "**Work Instruction**" and the P.Eng's on the individual standards are the P.Eng's for Section 7.
- **For more complex designs**, it is possible that the distribution line could be assembled by a "competent person" and none of the approved standards will be violated. However, there is a good chance that a complex design may/will violate some approved standards. ESA suggests that for **many complex designs these should be seen as a "Plan"** and a P.Eng sign the Certificate of Approval for Section 7 to cover the complex design.
  - Note #1 (typically relating to more complex designs): In the event that a "Work Instruction" (assembled approved, individual standards) is used for a design and that design violated some of the approved standards, ESA would find the LDC to be in Non-Compliance with Regulation 22/04.
  - Note #2 (typically relating to more complex designs): In the event that a ""Work Instruction" (assembled approved, individual standards) is used for a design and that design did not violate some of the approved standards due to the wording of the approved standards, however created a safety issue, ESA may find the LDC in Compliance with Regulation 22/04 Section 7, and would evaluate whether to send the issue over to the PEO to investigate the P.Eng for Professional Misconduct 72(2) or Incompetence Section 28(3).
- **Example of Complex: The approved standards book doesn't limit the amount of standards that apply to a single pole (Switches, Risers, Transformers, 4-circuits, etc… are all attached to a single pole), however the approved standards book technically doesn't prevent the "competent person" from doing this**. The pole is "overloaded" but it is issued as a "Work Instruction". The LDC may or may not technically meet the requirements of Regulation 22/04. The P.Eng may or may not technically meet the requirements of the PEO

Focus of 2018 Audits

"Work Instructions" vs "Plans"

Question #3

If the overhead design requires engineering calculations, such as guying and anchoring and therefore require the use of a non-linear analysis tool, such as SPIDA Calc. or PLS Pole, is the technician required to get the design checked and stamped/sealed by a professional engineer or can the design be checked by his immediate supervisor who is not an engineer?

Answer #3

Depends.

If a Professional Engineer signs off the use of SPIDA Calc or PLS Pole, as they would an approved standard (with a Certificate of Approval) or equivalently recognizes that the programs are harmonized with the standard, then the work can be considered a "Work Instruction" and the Certificate of Approval would be with the Professional Engineer that approved the use of the program.

Focus of 2018 Audits

“Work Instructions” vs “Plans”

For example, the Professional Engineer recognizes that the program (e.g. SPIDA Calc or PLS Pole) aligns with the approved standards then that tool can be used for the calculations. If the program produces numbers that meet the requirements of the approved standard then the “competent person” can assemble the information and this would be considered a “Work Instruction” and the design can release by the technician. If the information produced by the program does not meet the requirements of the approved standard (e.g. too much deflection in the structure) then the information should not be used, without a “Certificate of Deviation” or some other sort of Professional Engineer approval.

Note: If the standard does not contain any limitations (e.g. restricting the deflection) and it should, then it would technically be approved under Regulation 22/04, however ESA would likely be forced to bring this information to the attention of the PEO in the event there was a concern regarding Negligence and/or Incompetence with the Professional Engineer.

Bulletins published

Bulletins

DB-02-18 Distribution Stations Standard - CAN/CSA-22.3 No. 61936-1

DB-03-18 Engineering Practices and Regulation 22/04 - Sections 4 & 5

DB-04-18 Electrical Work and Service Connections

Flash Notices

FN-01-18 (Phase 1) 3-Phase, 3-Wire, Solidly-Grounded Wye Customer Services

FN-01-18 (Phase 2) 3-Phase, 3-Wire, Solidly-Grounded Wye Customer Services - Proposals

FN-01-18 (Phase 2) 3-Phase, 3-Wire, Solidly-Grounded Wye Customer Services - Corrective Action Proposal Worksheets

FN-01-18 (Phase 2) 3-Phase, 3-Wire, Solidly-Grounded Wye Customer Services - Complete

DB-02-18 Distribution Stations Standard - CAN/CSA-22.3 No. 61936-1

The intent of this bulletin is to ensure all Local Distribution Companies (LDCs) are aware that ESA has completed our evaluation of CAN/CSA-22.3 No. 61936-1 entitled Power Installations Exceeding 1kV A.C. – Part 1: Common Rules, with respect to Regulation 22/04 – Sections 4& 5.

ESA DIRECTION

Regulation 22/04 requires that the primary Safety Standards be met when working on the distribution system. An LDC is deemed to meet the Safety Standards when Section 5 of Regulation 22/04 is met or exceeded. ESA recognizes that distribution stations designed, constructed, installed, protected, used, maintained, repaired, extended, connected and disconnected that meet or exceed CAN/CSA-22.3 No. 61936-1:08 will be deemed to meet the Safety Standards of Regulation 22/04, despite the fact the Standard is not currently included in the current wording of Regulation 22/04 for distribution stations.

ESA plans to propose to amend Regulation 22/04 to include the reference to CAN/CSA-22.3 No. 61936-1, the next time the Regulation is reviewed for amendments.

DB-03-18 Engineering Practices and Regulation 22/04 - Sections 4 & 5

The intent of this bulletin is to clarify the process Local Distribution Companies (LDCs) follow when they are looking to introduce engineering practices, to ensure that they meet the Safety Standard requirements of Regulation 22/04 – Sections 4&5.

ESA DIRECTION

Regulation 22/04 requires that the primary Safety Standards be met when working on the distribution system. An LDC is deemed to meet the Safety Standards when Section 5 of Regulation 22/04 is met or exceeded. In the event that an LDC wishes to introduce an engineering practice which does not meet / deviates from the Safety Standards, the LDC shall contact the ESA Utility Regulations department to review the engineering practice. Failure to inform ESA may result in an annual Audit and/or Compliance Investigation finding (Non-Compliance or Needs Improvement) by ESA.

DB-04-18 Electrical Work and Service Connections

This bulletin addresses LDCs training customer-owned electrical cables into position for connecting a customer to the distributor's equipment, and any associated mechanical protection (i.e. barriers) work.

When an LDC is performing termination work to connect customer-owned equipment to the distributor's equipment, the LDC may perform electrical work on the customer equipment, that is directly associated with making the connection, under Regulation 22/04. The electrical work may include training of customer-owned electrical cables into position for connecting a customer to the distributor's equipment and installation of any associated mechanical protection (e.g. power cable guard).

ESA DIRECTION
LDCs may perform termination work associated with connecting a customer to a distributor's equipment under Regulation 22/04, such as:

- Training customer cables up a pole & installing the associated riser mechanical protection;
- Training the customer cables into subsurface chambers or boxes & backfilling the trench; or
- Training the customer cables into foundations or pad-mounted equipment & backfilling the trench.

Auditors
If the LDC chooses to do this work, then section 8 of Reg. 22/04 apply -
(Statement of No Undue Hazard or Record of Inspection & Certificate)

Other Issues

1. Configurations of Concern
2. Energy Storage & Generation
3. Audit of Compliance Assessment process for LDC Scorecard
4. Review of all guidelines by UAC/working groups
5. Substation standard CAN/CSA-C22.3 No.61936-1

Other Issues - FYI

CONFIGURATIONS OF CONCERN

1. All LDCs are participating in the program to remove the configuration of concern from their systems.
2. FN#1 – Jan 2018 ::: FN#2 – June 2018
3. Some LDCs believe that delta secondary connections are no longer allowed in Ontario. This is FALSE. ESA believes slang in the industry is to blame for much of that confusion.

FLASH NOTICE #1	FLASH NOTICE #2
Number of Possible Configuration of Concerns	Number of Possible Configuration of Concerns
~15,000	~10,900
Number of LDCs without a Possible Configuration of Concern	Number of LDCs without a Possible Configuration of Concern
12	22

Other Issues

Energy Storage & Generation

- Guideline has been published on ESA's website.
- Guideline outlines what is typically deemed "part of a distribution system under Regulation 22/04"
- This will be auditable. For starters, please note as an Observation if the LDC is planning these installations.

Other Issues

EV Charging Stations

- ESA issue prior direction that this equipment cannot be installed under Reg. 22/04
- Please note as an Observation if the LDC has installed or is planning these installations as a distribution asset.

Other Issues

What types of Energy Storage are deemed part of a distribution system under Regulation 22/04?
To be deemed part of a distribution system under Regulation 22/04 an energy storage unit shall meet the following criteria:

a) The energy storage unit is deemed a distribution asset by the Ontario Energy Board (OEB) or the energy storage unit is to primarily exist for such purposes as equipment upgrade deferrals or improved reliability of the distribution system (see Appendix A for more examples). * Note: (i) An energy storage unit will not be deemed by ESA as part of a distribution system if it is deemed not a distribution asset by the OEB;

b) The energy storage unit is connected to the line side (i.e. upstream) of the ownership demarcation point; and

c) Regulation 22/04 Sections 4 & 5 are satisfied.

Other Issues

What types of Generation are deemed part of a distribution system under Regulation 22/04?
To be deemed part of a distribution system under Regulation 22/04 a Generator would have to meet the following criteria.

a) The generator is deemed a distribution asset by the Ontario Energy Board (OEB) or the generator is to primarily exist for such purposes as for equipment upgrade deferrals or improved reliability of the distribution system (see Appendix A for more examples). * Note: (i) A generator will not be deemed by ESA as part of a distribution system if it is deemed not a distribution asset by the OEB;

b) The generator shall be connected to the line side (i.e. upstream) of the ownership demarcation point; and

c) Regulation 22/04 Sections 4 & 5 are satisfied.

Other Issues

* Note: In the event that the OEB has not yet determined the status of the equipment and the LDC determines (using this guideline) that it likely is a “distribution asset”, and at some future point the OEB deems the equipment to “not be a distribution asset” then ESA will harmonize with the OEB decision and will also consider the equipment to “not be part of the distribution system”.

Other Issues

Reminder
Regulation Amendments

- Section 5 Safety Standards updated
  - Section 5(1) OESC section reference
    - 86-402 becomes 86-404
  - Section 5(2) overhead standard
    - C22.3 No. 1-01 becomes C22.3 No. 1-15
  - Section 5(3) underground standard
    - C22.3 No. 7-94 becomes C22.3 No. 7-15
  - Section 5(4) Distribution stations
    - NESC C2-1997 becomes NESC C2-2017

Reminder
Regulation Amendments

- Regulation amendments came into effect on October 1, 2017
- Projects in design phase before October 1 can be completed under previous standards or new standards;
- Projects started (design) after October 1 meet new standards
- LDC not incorporating new standards in 2017 should be assessed a Needs Improvement, to be escalated to Non-compliance if not addressed in 2018

Reminder
Regulation Amendments

- Other sections amended
  - Section 10 (1) & 10(2) Proximity to Distribution Lines amended to reflect same CSA standard update
  - Section 12 Reporting Serious Electrical Incidents
    - Added obligation to assist ESA investigation of serious incident [12(3.1)]
    - Added definition of ‘Force Majeure’ and ‘meter’
    - Expanded reportable scope to include meters (under 750V)

Reminder
Regulation Amendments

Discussion

- Did anyone have any issues or questions last year?

LDC Mergers and Acquisitions

1. Alectra and Guelph Hydro
   - OEB Approved
   - Close of transaction is scheduled for January 1, 2019
2. Newmarket-Tay Power and Midland Power
   - OEB Approved
3. Veridian and Whitby
   - Application before OEB for merger
4. Kenora and Thunder Bay
   - Application before OEB for merger
5. Hydro One and Peterborough
   - In discussion

- Any Questions?