



**MINUTES OF THE
SECOND ELECTRICAL SUB-COUNCIL MEETING OF 2022**

DATE: April 4, 2022

TIME: 8:31 a.m. to 10:34 a.m.

LOCATION: videoconference

PRESENT: *Sub-Council Members*

Gerry Wiles, Chair
Scott Basinger, Vice Chair – North
Patrick Conway
Hussein Desouki (until 9:50 a.m.)
Tim Driscoll
Ken Forbes
Adam Ghani
Glenn Hedderick, Vice Chair – South
Ken Hood
Nicolas Leblanc
Lori Monaghan
Barry Voogd
Ed Knaggs

Safety Codes Council

Allison Karch, Kathryn Derkach

Alberta Municipal Affairs

Clarence Cormier, Bob Hall

REGRETS: Bert DeBruin, Gerry Doan

GUESTS: Jason Drenth, EUSC Liaison

RECORDER: Kathryn Derkach

2022 MEETINGS: June 6 (tentatively in person), October 7 (tentatively in person), December 5 (virtual)

1. Meeting Opening

The Chair called the meeting to order at 8:31 a.m. Members were reminded that their primary duty is to act in the best interests of safety in the built environment for the benefit of all Albertans.

1.1 Agenda Adoption

Glenn Hedderick / Scott Basinger moved that the agenda be adopted, as circulated; CARRIED

1.2 Adoption of the February 7, 2022 Minutes

Scott Basinger / Patrick Conway moved to adopt the minutes of the February 7, 2022 meeting, as circulated; CARRIED

2. Matters for Decision

2.1. STANDATA 21-ECB-002 Section 2 – General Rules

The STANDATA was included in the portal and the draft change was reviewed. A question was asked about enforcing replacement of unapproved equipment and it was clarified that is a different topic. There were no suggested changes to this STANDATA.

Ken Forbes / Ken Hood moved to support issuance of STANDATA 21-ECB-002 Section 2 – General Rules; CARRIED.

2.2. STANDATA 21-ECB-010 Section 10 – Grounding and Bonding

The STANDATA was included in the portal and the draft change was reviewed. It was explained that this change came about through conversations with a consultant who noted confusion about how the CE Code comes into play when bonding requirements are stated in another discipline's code. The change to this STANDATA clarifies what section of the CE Code would apply to bonding requirements for fuel tanks under the fire code.

Ed Knaggs / Glenn Hedderick moved to support issuance of STANDATA 21-ECB-010 Section 10 – Grounding and Bonding; CARRIED.

2.3. STANDATA 21-ECB-026 Section 26 – Installation of Electrical Equipment

This is a new STANDATA developed in response to a question that came up at a past ESC meeting. It would clarify that Class A GFCIs could be used in lieu of branch circuit breakers for ground fault protection in sites below ground level in flood hazard zones. It was suggested that this STANDATA may not be needed, and it could cause issues with nuisance tripping.

It was suggested that adding a sentence indicating it's the installer's responsibility to ensure an appliance won't cause nuisance tripping might be beneficial. Some members have been urging manufacturers to state whether their appliances will work on GFCIs, but it needs to be in the manufacturer's standard to get traction. It was suggested that for this specific issue, it might be useful to find out history and why 30 milliamp is suggested rather than standard GFCI.

It was suggested that further consideration should be given to these issues before publishing this STANDATA. The Administrator will consider comments and review the need for the STANDATA.

[Cormier]

2.4. STANDATA 21-ECB-004 Section 4 – Conductors

The STANDATA was included in the portal and the draft change was reviewed. It was explained that the change is based on input from the Colour Coding of Conductors Working Group.

Ken Hood / Tim Driscoll moved to support issuance of STANDATA 21-ECB-004 Section 4 – Conductors; CARRIED.

3. Review Matters Arising/Action List

	Item	Action	Date Initiated	Responsible	Status/Update
1.	CE Code-072 Concrete Encasements	Consider drafting a Proposed Change to CE Code Part 1 UPDATE: Scott is working on a proposed change for the next code cycle (2024). This will be brought to the sub-council at a future meeting.	Feb. 6/17	Basinger	In Progress.
2.	Submission Regarding C22.1 Rule 4-004 and Table 5D	A letter will be prepared to respond to the proponent and forwarded to Council staff.	Feb. 8/21	Basinger	Ongoing.
3.	CE Code Rule 64-918	It was reported that the requirements for energy storage systems in the 2021 CE Code has received pushback. The member representing Solar will prepare further information for discussion at a future meeting.	Feb. 7/22	Knaggs	Further discussion under agenda item 4.1.
4.	Mast Couplers	A letter to the manufacturer will be drafted to request the rationale for this note in the product guide, and will be copied to the Standards Council of Canada so they are aware of this inconsistency.	Feb. 7/22	Ghani, Basinger, Wiles, Forbes	Letter is being worked on and will be sent to ABB. Ongoing.
5.	CSA Technical Committee of Photovoltaic Energy Systems	The member representing Solar will send the membership request to all ESC members as some may have other contacts within their organizations that may be interested.	Feb. 7/22	Knaggs	Email sent on February 23, 2022. Those interested can still apply. Complete, remove from action list.
6.	BILD Alberta Letter	There was general agreement that there is a need for increased residential service capacity. Council staff will work with Barry Voogd, Scott Basinger, and Gerry Wiles to draft a response to BILD	Feb. 7/22	Voogd, Basinger, Wiles, Council Administration	A letter is being drafted and will be brought to the next meeting.

		showing support of new developments considering minimum 200 amp services.			
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4. Matters for Discussion

4.1. CanREA submission regarding CSA public review 64-900

The member representing the Solar Industry reported that there have been many changes to the standard that this section of the CE Code is based on. His nominating organization, CanREA, submitted proposed changes to CSA previously, which were approved by the CSA committee and went through the CSA public review process for inclusion in the 2024 code. CanREA submitted further proposed changes during the public review. It was suggested that a variance STANDATA could be created to implement the changes in Alberta prior to the changes being incorporated into the code. The public review documents and CanREA’s further submissions on them were posted in the portal and reviewed in detail. The biggest issue the changes seek to address is related to residential vs non-residential installations and the type of battery system, as more care needs to be given to lithium batteries because of the potential fire risk.

The following was discussed:

- A question was asked about the demand for these storage batteries and the need for a potential STANDATA on the topic. It was reported that demand for these systems is high in the US and will soon increase in Canada, and suggested that a STANDATA would be beneficial because the current rules are confusing and difficult to follow, which could lead to storage batteries being put in an inappropriate location. The biggest concern is around lithium products in residential occupancies.
- It was clarified that UL9540 is a bilateral standard and is referenced in Appendix B.
- It was clarified that the CSA committee already voted to remove the maximum limit of 1kWh for residential storage systems and the further CanREA submissions consist of tweaks and changes to align with what’s happening in the US. Any system above 1kw will have to meet UL9540.
- It was clarified that there is some simple reorganization in the changes but also clarity about one hour fire ratings in residential occupancies and what is considered residential vs commercial.
- In the current rules, these storage systems cannot be below grade at all. There is nothing about flood plains mentioned in this section and it was suggested to take that back to CanREA as an additional suggested change.
- It was noted that the definition of non-habitable spaces is taken from a US document that speaks to storage/utility rooms. This is where the one hour fire rating comes in, but it was noted this is difficult in utility rooms because of wall penetrations.
- It was suggested that no products currently on the market will meet UL9540A, the cell level testing standard. There are changes speaking to this in Appendix B about UL9540A—reports are being produced that show fire propagation from one unit to another to show that shortened distances between units won’t spread fire.

It was clarified that the second set of changes proposed by CanREA have not been voted on by the CSA committee and it would be beneficial to wait to see the outcome of CSA’s process. This topic will be added to a future ESC agenda. [Council Administration]

4.2. CE Code Rule 26-602 Panelboards in suites

It was reported that contractors have had questions about the locations of panelboards in secondary suites regarding the code provision that the panelboard be accessible. Some municipalities interpret this to mean that it should be accessible to tenants and should therefore be in a common area. If there isn't a suitable common area or the suite is separately metered, there would be a panel board in each suite. It was noted that the code states the panelboard needs to be accessible but accessible to whom is not clear.

4.3. Working Group Reports

4.3.1. Low Voltage Lighting

The group will be meeting on April 14. Discussion was held about the scope of this group and that it may need to be revised to pertain only to extra low voltage lighting systems (less than 30v). It was noted that the power supply may be low voltage rather than extra low.

Adam Ghani / Glenn Hedderick moved to amend the scope of the working group to “explore low and extra low voltage lighting systems in Classes 1 and 2, and the approval and permitting thereof, as well as how a consumer can report issues on this topic”; CARRIED

4.3.2. Colour Coding

This group will be meeting on April 11 to discuss a proposed code change submission to the CE Code Part 1.

4.3.3. Non-Metallic Outer Jacket Cables

There is nothing to report because this group hasn't met since the last ESC meeting.

4.4. Liaison Reports

4.4.1. Building

The liaison reported that he raised the issue of identifying plenums at the last BSC meeting and BSC suggested that this can be addressed through cross-discipline coordination. ESC members noted that this can work well as long as the electrical work happens after HVAC work and this is the basic advice to all electrical contractors, but the process can differ across municipalities and further clarity would be beneficial. ESC members will outline the issue in writing to take back to BSC to seek further clarity. [Hood/Wiles/Hall]

4.4.2. Electrical Utilities

There was nothing to report because the EUSC hasn't met since the last ESC meeting.

4.5. Administrator/AMA Report

The Administrator reported on the following:

- Summary of industry meetings.
- The Administrator reviewed ESC's recommendation for creation of a STANDATA to clarify that Section 8-106(2) can be used to allow for electrical management systems labelled for electric vehicle charges to be used for other loads and has declined to create such a STANDATA. Support for this alternate use would need to be given in writing from the manufacturer. This would negate the need for a STANDATA.

4.6. Council Updates

A written report was included in the portal and updates were provided on:

- The Council office reopened on March 14th.
 - Staff may continue to work from home on some days.
 - All meetings that have been identified as tentatively in-person remain so.
 - There is always the option for members to participate in in-person meetings virtually instead; please let Council staff know if you intend to attend an in-person meeting virtually.
 - This meeting was previously identified as in-person but there weren't enough in person attendees to go forward. The next meeting in June is tentatively in-person. Staff will poll members prior to the next meeting to confirm how you will attend. Members were reminded that it's important to attend in person if that is how they've responded.
- The Council AGM will be held in the fall, likely in person in conjunction with the volunteer appreciation event.
- Member training: New Member Orientation: April 28, 9:00 a.m. – 12:30 p.m. (virtual)— please contact Gerry Letendre to register.
 - All member training offerings will be held again in the fall as well.
- Watch past webinars on the [Council website](#).

5. Meeting Finalization

5.1. Round Table

- Tim Driscoll reported on items that are in Appendix A of the code but are not product standards.
 - IEC 61511: this is an engineering standard that was flagged for removal from the appendix but was inadvertently not removed. The process for removal has begun, which involves the CSA Part 1 Committee, Executive Committee, and Technical Committee on General Requirements.
 - Discussion was held at the Integrated Committee on Hazardous Locations about IEC 60079-25, the engineering standard for intrinsically safe systems. Some believe it should be removed from Appendix A while others prefer it remain. There are currently no plans to remove it. It's not believed to be likely to cause issues but because it's a mandatory standard it is possible.
 - General discussion was held about system-type standards that are included in Appendix A, which is intended to be for product approval standards only. There doesn't seem to be any other place for design/system standards in the code. The Administrator noted CAN/ULC S524, the installation standard for fire alarms, which is referenced in the building code. Tim Driscoll and the Administrator will discuss this separately.
- A question was asked about owners who have purchased unapproved equipment and not complied with an SCO's instruction to correct it. The Electrical Code Regulation states that one cannot buy unapproved electrical equipment and there is a STANDATA on equipment approval. There is also an administrative penalties program under the Safety Codes Act, but prior to a penalty being issued, the SCO would need to issue an

order. The Administrator will forward the STANDATA and information on the administrative penalties program to post in the portal. [Cormier]

- Solar & Storage Canada conference is happening in Edmonton, May 25-26.
- CE Code Rule 64-106 (inverter connections and markings on inverters) is out for public review. Changes involve aligning with the new #9 standard. Inverters are becoming more intelligent and there will be two different markings: basic and advanced. With the utility's permission, the code change being reviewed would allow use of these advanced functions. Basic inverters will have anti-islanding functions but advanced inverters will be able to relax some of those functions.

5.2. Next Meeting

The next meeting was reconfirmed for June 6, 2022 tentatively in person at the Council office at 9:30 a.m.

5.3. Meeting Adjournment

The meeting was adjourned at 10:34 a.m.

– NEW ACTION ITEMS –

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[Cormier]

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[Council Administration]

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[Hood/Wiles/Hall]

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[Cormier]

– MOTIONS –

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– WORKING GROUP MEMBER LISTS –

WORKING GROUP	WORKING GROUP MEMBERS (<u>Chair</u>)
Single Family Residential Dwellings (Joint with GSC)	ESC: Barry Voogd, Bert DeBruin GSC: Roy Herrington, Mark Guderjan, Larry Miller
Colour Coding of Conductors	<u>Adam Ghani</u> Bert DeBruin, Gerry Doan, Ken Hood
Non-metallic outer jacket cables re. gap in CE Code Rule 12-500	<u>Bert de Bruin</u> Ken Hood, Gerry Doan, Adam Ghani
Extra Low Voltage Lighting	<u>Adam Ghani</u> Ken Forbes, Ken Hood, Gerry Doan