Date and Time: Tuesday, July 14, 2015 (10:00am-2:45pm)

Location: BC Safety Authority New Westminster Office, Monarch Mountain Room #200 – 505 6th Street, New Westminster BC

Presiding Chair: Jim Gamble – Electrical Program Chair, Okanagan College (Co-Chair)  
Jim Mummery – Manager, Powergrid Electrical Services Ltd (Co-Chair)

Participants: Steve Dyck – President & Chief Executive Officer, C&S Electric Ltd  
Jim Gamble – Electrical Program Chair, Okanagan College (Co-Chair)  
Gary Geissinger – Senior Associate, Senior Designer/Inspector, Nemetz (S/A) & Associates Ltd.  
Lawrence Gibson – President & Engineering Director, Quality Auditing Institute Laboratories  
Mark Kelvin – Senior Engineer, Distribution Standards and Development, BC Hydro  
Nick LeFort – Electrical Safety Manager, City of Surrey  
Eddie Low – Electrical Protection Engineer, Telus ATOPS  
Adam Van Steinburg – Business Manager, International Brotherhood of Electrical Workers, Local 213 – Jim Lofty (Alt)  
Bill Strain – President, Villa Electric

BCSA Employees: Ulrich Janisch – Provincial Safety Manager, Electrical  
Paige Hill – Regional Business Leader, Vancouver Island  
Doug Kelly – Senior Policy Analyst  
Christa Peters – Business Partner, Stakeholder Engagement  
Michael Pilato - Technical Programs Leader, Electrical (Telecon)  
Darryl Way – Policy Analyst  
Nikki LHeureux – Administrative Support (recorder)

Regrets: Cam Duncan – Field Services Supervisor, Stantec Consulting  
Seth Nair – Engineer, Engineering Section, WorkSafeBC  
Ken Scambler – BC Commercial Construction Sales Manager, Schneider Electric

Guests: BC Hydro (Item 3.1.2)

Marisa Mihailoff – Business Partner, Education (Item 2.5.1)

Kelly Moon – Business Partner, Communications (Item 6.3.5)

**SUMMARY**

Discussion about inspection rates  
Michael Pilato presented a history of the accident prevention model used by BCSA to regulate quality control.
ETAC and BCSA discussed inspection rates, safety model, and safety risks. Problems were identified and solutions proposed. Some members of ETAC indicated a desire for more inspections, while others talked about focusing on training and enforcement. This discussion will be ongoing and written recommendations were requested to focus the debate.

### Working Group updates

#### 3.2.1 Working Group on 2015 CEC
- 2015 CEC has been submitted for approval.

#### 3.2.2 Working Group on Annual Operating Permit Process
- Recommendation was to use directive and guideline.
- Directive and bulletin issued.

#### 3.2.3 Working Group on Low Voltage Permits
- Intent was to not require permit for maintenance of security alarm systems using Ontario amendment to rule 16-222.
- Properly and specifically explain the recommendation is strictly for replacement of existing Class 2 security alarm devices.

#### 3.2.4 Working Group on FSR
- Nothing to report.

### Actions for BCSA
- Ulrich Janisch to send verified inspection numbers to ETAC members.
- Paige Hill to distribute report that gives inspection rates per request.
- Organizational response to the use of the operating permit log book at next meeting.
- Put recommendation back to Low Voltage Working Group - record recommendation. Similar characteristics and rating.
- Doug Kelly to draft a letter from the ETAC chair on the overhead clearance issue for review and sending to BC Hydro, UBCM and the Municipal Insurance Association of BC.
- Tying permits in with UBCM. One is municipal, one is provincial. Can it be a considered an avenue to determine unpermitted work? Paige will look into and respond.
- Ulrich Janisch and Nick LeForte to share information about contractors already having compliance orders with BCSA.

### Documents
- Agenda
- Polling responses
INTRODUCTION

2.1 INTRODUCTIONS

Jim Mummery – Co-chair

CURRENT BUSINESS

1 DISCUSSION ABOUT INSPECTION RATES

Christa Peters introduced the purpose of the morning portion of the meeting – to discuss inspection rates.

Michael Pilato presented a brief history of the accident prevention model.

- Results from the field from the past 3 decades.
- When inspections exceed 35-50%, become counterproductive, regulator becomes quality control.
- Issue for Authority is safety - stakeholders are asking for 100% inspection.
- There is no single right answer.
- Changes to the way BCSA manages risk will be data driven.
- BCSA will focus on certification and education, as well as operating permits.

Guiding principles:

- Risk to safety is found predominantly in operating permits, equipment, and unpermitted work.
- Inspection and sample rate needs to be data and research driven.
- When inspection rate is greater than 35%, there is decreased safety and an increased number of inspections becomes prevalent.
Discussion regarding inspection rates:

- Confirmation was provided that sample rate is based on permits with at least one inspection requested.
- There were some questions about the accuracy of data. Ulrich Janisch agreed to review the data and report back on the differences.
- Sample rate is always lower than actual physical inspection.
- There are two ways of looking at this. Number of inspections per permit. Number of inspections per request.
- BCSA vision has been to
  - focus on improving education to prevent mistakes and improve quality of work in the field. Need to build quality FSRs who we can rely on to do quality control checks and we monitor their jobs.
- Need to professionalize the industry.
- There are concerns raised by some that education and enforcement is not the answer, more inspection rates will solve the problems.
- Suggestions to increase inspection rates will need to be supported by rationale showing the problem and supported by verifiable facts

Results of polling (Christa Peters):

- What is greatest concern of permit sample rates. Only 8/10 respondents felt permit sample rates were an issue.
- Survey results indicated that ETAC members were concerned about quality work.
- Survey results indicated that ETAC members believe that fewer safety officers inspections make it difficult to identify trends.
- Survey results indicated that people aren’t willing to pay much more.

Discussion on polling results:

Identified problems/questions:

- Quality of work is owned by installers (contractors, FSR’s, workers)
- Public and industry perception is that inspections by safety officers achieve quality.
- Safety officer inspections assess performance of contractors and FSR’s.
- If quality of work is a problem – the answer may not be as simple as providing more inspections by safety officers.
- Not reaching people who are the problem. The same (good) contractors attend Tech Talks.
- Too few inspections on the poor performing FSRs. They need to be held accountable
- When bringing examples of poor work forward to BCSA – some members feel it is not followed up on.
- FSRs may not have been mentored properly while going through systems.
• Some ETAC members stated that they believe there is a gap. Public safety is at risk.
• FSRs not held accountable.

**Suggested solutions:**

• Attach performance assessment to inspection process. Can’t measure performance on written test.
• Move to building better competency with FSRs. Work to enhance the program. Education and reporting needs to be part of an enhanced program. FSRs should be inspecting work in the first place.
• Need to identify the bad guys. BCSA not building relationships with industry. Identify the problem contractors and get them in the classroom.
• Move to process of renewing certificates.
• Set in requirement for regular upgrading and raise the bar for initial certification requirements.
• Education has to be part of the solution.
• Offer incentives to contractors doing good work
• Stricter enforcement: publish names of bad guys or allow people to opt in to having their record published for the public to review.
• Need to elevate perspective of safety officers to license holder where FSR provides technical guidance to owner and influences how business is carried out.
• Alternative ways to do inspections: pictures, videos, facetime. Use technology to help, but not replace.
• All about accountability and holding people accountable. Key to success is getting away from polarized opposite and getting people closer together. Get industry and government together; they could hold professionals accountable.
• Increase the professionalism of the industry.
• Take inspections away from industry and privatize the inspection service.
• Formal recommendations need to be made, based on data, not gut feelings.
• BCSA believes that there is a process that helps us identify higher risk contractors through RAP program and by safety officer inspections. Believe we have a process that helps us key in on those individuals. Then those deemed as lower risk don’t get inspected. If us targeting the bad guys isn’t correcting it, then how?
• What’s the process we can follow to identify risks?
• Transparency into the process
• Wouldn’t it be better if contractor was chased down and lost license instead of having more inspections. Solve the problem by following up on observed hazards. Enforcement. Mandatory FSR training. As well as posting contractor ratings.
- One possibility is to use BC Hydro. When making connections. They won’t turn on the system unless there is a permit.
- Need to build better FSRs. More knowledgeable, reliable, competent.
- Educate contractors where they can improve. Provide incentives and recognition.
- SOs will look for improvement in behavior and decreased risk.
- Only way to have good data is with depth of inspections. Not just quantity but quality.
- Suspend contractors who owe money. As risk increases, contractors are flagged and must meet on site. Holding them accountable. Impacts time. Changes behavior.

**ACTION** – More discussion is required to determine common ground and to make written recommendations to the group. Individuals were encouraged to agree to a path forward. Should this work be done in a working group?

### 3.1 GUEST PRESENTATIONS

#### 3.1.2 Guest speaker:

**BC Hydro**

- Patricia, Patty Silva, and Cliff from BC Hydro introduced Express Connection, an online connection request service.
- Customer connect. Takes care of two connections.
- Deals with new connection. Single phase, 120/240 up to 200amp.
- 400amp and over usually takes extra work.
- Express connections deal with easy connections. Pole outside location. Connect to pole. No additional work required. Called express connection. 33000 per year.
- Design connection more complex. Design connections 7000 per year.
- Provide customers and electricians with opportunity to initiate connection requests and where they’re at in the process. What needs to be done and by who. A lot of info that explains process itself. If customer wants to initiate connection requests. Requires electrician and customer. Have visibility of each other’s tasks and what the status is.
- Ability to upload BCSA declarations.
- Not introducing anything into process. Just way of visualizing and exchanging information between the contractor and BC Hydro.

**Discussion highlights**

- How is the AHJ notified of the connection?
- Should show emergency connections.
### INDUSTRY ROUNDTABLE

**Industry Roundtable**

Don’t change two things at once. Won’t know which impacted change.

Contractors and FSR that are identified as a problem need to pay for it; affect their business plan; get unruly contractors out of systems; they created issues and hazards that we’re here to prevent.

Enforcement and accountability would improve safety.

Public safety is at risk. Need to map out ways to improve it.

Transfer switches with generators installed. Proposing lock out main and take out Kirk key to mimic transfer switch. Misunderstanding CSA certified transfer switch is approved as specific device. Inspected by jurisdiction. Happens after service meter.

Revising advisory to include both things. Have collar. Pop out collar. Plug in emergency generator. Our objective revenue meter is utility and remain CSA approved assembly of design for that purpose. Jaws are not designed to take unilateral forces.

BCSA should consider issuing a directive to reiterate that transfer switches are domain of BCSA.

Improper installation is safety issue.

BC Hydro installing on private property. Working towards having installation in line with consultants as though it’s a customer only install. Will issue update advisory to clarify most issues.

### WORKING GROUP STATUS REPORT / RECOMMENDATION SUBMISSION

#### 3.2.1 Working Group on 2015 CEC (Bill Strain)

- CEC has gone for approval. Ministry staff reviewing it now.
- Expect adoption in October.
- Discussions back and forth with respect to coroner’s inquest - Strongly supported BCSA’s recommendations on incident and use of the word wood dust.
- Will keep ETAC informed.

#### 3.2.2

- Submitted for adoption.
- Recommendation was to use directive and guideline.
Working Group on Annual Operating Permit Process (Steve Dyck, Ulrich Janisch, Adam Van Steinburg – absent, Nick LeForte)

- Directive and bulletin issued.
- The group is still awaiting feedback on whether or not the operating permit log book will be used.

3.2.3 Working Group on Low Voltage Permits (Gary Geissinger)

Everyone read rationale. Intent is to get rid of requirement of permit. Decrease stress on BCSA.

Process is the working group takes info to ETAC. ETAC then decides if it is put forward. Consensus to move forward from working group. Recommendation included in package.

**Issue:** For security alarm systems, replacement of existing system components (such as motion sensors) currently requires an installation permit. Other higher risk devices can be replaced without permits.

**Consequences of not addressing the issue:** The requirement for permits currently places a costly burden on the contractor with little or no ability to recover the cost.

**Recommendations or Status update**
The general consensus was to implement the same Ontario amendment to rule CEC 16-222 to read as follows:

**16-222 Equipment located on the load side of overcurrent protection, transformers, or current limiting devices for Class 2 circuits:**
Equipment located on the load side of overcurrent protection, transformers, or current limiting devices for Class 2 circuits shall for Class 2 circuits operating at more than 42.4 peak or dc be arranged so that no live parts are accessible to unauthorized persons.

**Rationale for Recommendation**
The Ontario amendment to rule 16-222 is intended only to be applicable to Subrule (1) (a) and Subrule (2) since the requirement for equipment connected to Class 2 power supply is not to exceed 42.4 V peak or DC. By eliminating the requirement for an operating permit to be issued prior to commencing with the work of which has created more nuisance then worth as there is no electrical hazard present.
**Discussion highlights**  
No fee permits would be administrative burden for both installers and BCSA, with no cost recovery for BCSA.

The rule generally talks about suitable equipment, etc. in the original code. Making an amendment to the code doesn’t change the requirement under the regulation. If amendment or change in regulation, it could be in electrical regulation section 18.

Intent was to not require permit for maintenance. Still regulated work but maintenance doesn’t require permit.

Properly and specifically explain the recommendation is strictly for security alarm devices - operating at what energy level.

Ontario exception is specific to telecommunications only.

Recommended that working group continue reviewing this matter and provide recommendations that are within scope of working group.

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<th>3.2.4</th>
<th>Working Group on FSR (Jim Gamble)</th>
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<th>3.3</th>
<th>TECHNICAL SAFETY ISSUES</th>
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<tr>
<th>3.3.1</th>
<th>Safety Manager Report: Electrical incidents, risk registry summary and hazard maps (Ulrich Janisch)</th>
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<tbody>
<tr>
<td></td>
<td>Report provided for review prior to meeting.</td>
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<td>Question - Tying permits in with UBCM. One is municipal one is provincial. Can it be a considered an avenue to determine unpermitted work?</td>
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<th>3.3.2</th>
<th>Update on limited scope electrical</th>
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3.3.3 Overhead clearance lines (Ulrich Janisch, Doug Kelly, Mark Kelvin, Jim Mummery)

There continues to be confusion about what jurisdiction governs overhead clearance lines. The debate continues regarding the role BCSA, BC Hydro, and the municipalities play in approving unsafe distances for electrical lines.

Not a lot BCSA can do on building code side regarding overhead clearance lines.

Nick LeFort said the City of Surrey had meeting with group from hydro. We don’t know about process until after permit. Before building permit is issued, building inspector does inspection, including clearance. Then alerts hydro.

The City of Vancouver: Have to fill out performance and nonperformance letter.

The City of Burnaby: During development permit, electrical assessment is done. Underground lines are recommended.

There was some agreement that this issue is outside BCSA scope.

ETAC can send letter to the ministry, their response in the past is this is the jurisdiction of BC Hydro. It’s building code approvals by municipalities that cause the problem.

Authorities Having Jurisdiction can issue local bylaw and overrule building code.

No clarity on who’s responsible for enforcing it.

4 CURRENT BUSINESS (CONTINUED)

4.4 Regulatory improvement issues

2.4.1 Safety Standards Act Review update (Doug Kelly)

Currently discussing with ministry. Within BCSA business proposal. Supporting ministries review. Safety standards act refresh. How to stay current. Will report out next meeting in terms of next steps. Possible policies in what we’re calling safety standards act refresh.

2.4.2 Field Safety Representative

Nothing to report until more feedback comes from the working group.

Moving ahead with concept of requiring renewal of FSR certificates.
| **program enhancements**  
| (Ulrich Janisch) | Looking ahead - What level do we want FSRs to reach. How do we stage that. Making sure whatever level we set that we aren’t making it unreachable. Expecting feedback from working group. What does industry want to see. |

### 4.5 Service Delivery issues

#### 2.5.1 Education Programming  
(erin Cardona)

Marisa delivered a presentation on a stakeholder multi-technology group to discuss educational issues.

Starting with electrical, gas, and boiler, but will expand to other industries.

Collaborating more with industry for development and training. How to reach communities. Talked about different types and qualities of events and features. Want it relevant but not so high level that it has no meaning nor so specific.

Know where we are. Know where we want to get. How do we get there.

#### 2.5.2 Unpermitted Work  
(Paige Hill)

Unpermitted work.

Need to create level regulatory playing field. Target bad guys. Pat on the back for good guys.

Provide consistent enforcement, across technologies and regions.

Needs to be regional coordination. Support on new methodology.

Accountability.

How is safety model affecting safety.


Legal approves going back 2 years to identify unpermitted work.

Working to identify existence of permits where construction takes place. Both electrical and gas. Following up with contractors.

Will keep ETAC advised.

### NEW BUSINESS

#### 5.1 SUBMITTED AGENDA ITEMS
### 5.1.1 Expired Permits

**Nick LeForte**

Technically, there is no such thing as an expired permit. Regulation states requirement is declaration within 180 days.

Letter 21 days prior.

Letter at expiry.

Both require response.

Looking for bandwidth with legal to make changes to bond and give BCSA the ability to pull bond and charge the contractor for the inspection when not called for within 180 days.

Unless bond issue is changed, the best approach is through compliance order. Address behavior. If permit expires again go ahead to monetary penalty.

Works out over $150,000 per year spent chasing down expired permits.

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### CLOSING AND ADMINISTRATION

#### 6.1 ADMINISTRATIVE ISSUES

**6.3.1 ETAC Recruitment: New ETAC members**

ETAC recruitment. Group meeting next week. Received 39 applications for vacant positions and successful applicants will be invited to the October meeting.

**6.3.2 Electrical Technology E-Newsletter (Christa Peters)**

Christa Peters reminded individuals to subscribe to the newsletter

**6.3.3 TAC Sub Committees: Inter-TAC, Governance, ITAP (Christa Peters)**

Christa Peters said that meeting invites will go out shortly for some sub-committee meeting times/dates.

**6.3.4 Action Log and Recommendations Review (Christa Peters)**
Christa Peters said she would send out the action log in advance of the next meeting.

6.3.5 Lieutenant Governor’s Awards (Kelly Moon)

Kelly explained that sponsorship might be of interest; there is a lot of publicity and it’s a big campaign.

From BCSA’s homepage, click events and Lieutenant Governor Safety Awards 2015.

There is no cost for nominating and self-nomination could be considered. The form is online.

6.2 NEXT MEETING DATES

October 20, 2015 - 10:00am: New Westminster

6.3 MEETING ADJOURNMENT

The meeting was adjourned at approximately 2:45pm