

## Meeting Minutes – October 16, 2014

Time: 9:30 am to 3:00 pm

Location: AESO Offices, 2500 330 5<sup>th</sup> Ave SW, Room 2538

Attendance List:

Attended	Name	Company	Email
X	[REDACTED]	AESO	[REDACTED]
	[REDACTED]	AESO	[REDACTED]
X	[REDACTED]	AESO	[REDACTED]
X	[REDACTED]	AltaLink	[REDACTED]
X	[REDACTED]	AltaLink	[REDACTED]
X-CC	[REDACTED]	EPCOR	[REDACTED]
X	[REDACTED]	ENMAX	[REDACTED]
	[REDACTED]	ENMAX	[REDACTED]
	[REDACTED]	ATCO Electric	[REDACTED]
X	[REDACTED]	ATCO Electric	[REDACTED]
	[REDACTED]	ATCO Electric	[REDACTED]
	[REDACTED]	TFCMC	[REDACTED]
X	[REDACTED]	UCA	[REDACTED]

CC = via Conference Call

### 1 Review of Needs List

- Item 92 Revision to Lightening Arrestor: Revisions to Rule regarding shield wire: ATCO ([REDACTED]) to propose revised wording for Rules section 14 to address use of surge arrestors vs. shield wire.  
**Action item:** ATCO ([REDACTED]) carried forward to next meeting
- Item 97: Comments on Meeting Minutes: UCA ([REDACTED]) had forwarded comments on minutes of previous meeting. Suggested some minor revisions for clarity – WG agreed.  
**Action item:** AESO ([REDACTED]) agreed to revise minutes per [UCA]'s comments and re-issue.
- Item 105: Loading Cost Comparison Report: discuss in review of reports. [AESO] has received feedback from UCA ([REDACTED]) and ATCO ([REDACTED]).
- Item 108: Swing clearance on long spans – commitment not completed, carried forward.  
**Action Item:** AESO ([REDACTED]) will propose alternate wording in ID for section on swing clearance to acknowledge long spans ie: over rivers, etc., for next meeting. Item carried forward.
- Item 112: Galloping Draft Report: Discuss in review of reports section.
- Item 113: Conductor Sizing Draft Report: Discuss in review of reports section.
- Item 114: Optimized Conductor Report: Discuss in review of reports section.
- Item 116: Scope of Conductor Sizing Report – Scope was clarified in discussions between [AESO] and [AESO]. Item Complete.
- Item 117: Summary of 5 selected lines for possible tower development sent out. Marked complete.
- Item 119: Proposal for Altalink to undertake investigation for galloping mitigation devices was read. Discussion followed. Altalink ([REDACTED]) requested clarification of the intent; why AltaLink and why not an independent to do review of what's out there, perhaps 3<sup>rd</sup> party? Also some concern with the wording of the proposal; some galloping mitigation devices may cause more problems

than they solve - there is a need to be cautious with these investigations. AESO ( ) responded that by making this formal and getting a report back at least we have something to get us answers. AESO ( ): Investigation could be two-stage; stage 1 to investigate viable options and the cost of further investigation, stage 2 to apply in a test zone. UCA ( ) suggested first stage should gather what's out there, what experience AltaLink, ATCO, and others have with using these devices. Once this information is gathered then the committee will determine what direction to move. WG members agreed.

**Action items:** Step 1: AESO ( ) issue a request to share what info has already been gathered, what have has been investigated to date? AESO ( ) to rework scope and send out to TFOs. Step 2: Market review of available devices. Step 3: committee review and decide what devices should be tested.

UCA ( ) to contact ( ) see if EPRI galloping recording video instructions are readily available.

- Item 120: Request to review rule 19 –, right of way standards: [AESO] went over changes made. Before rules document is finalized it will go thru technical writer at AESO. EPCOR ( ) changes abbreviate it, further context may be required in ID document. UCA ( ) noted that the air gaps specified in AEUC are different from CSA. Intent is that the largest clearance will govern. **Action item:** AESO ( ) to change document to use swing methodology as per CSA and air gap clearance as per AUEC.
- Item 121: Recommendation was added to the report to revise the longitudinal loading requirements to exclude all direct embedded structures, not just wood poles. Item Complete. See further discussion on report status.
- Item 122: Completed. WG members have clean version of rules document emailed by AESO ( ).
- Item 123: UCA ( ) did crude analysis of savings which could be realized by re-designing towers using Havard galloping requirement (rather than CIGRE) and shared with group assuming recently estimated steel prices and construction costs. Savings range from about \$300 per km for the RD series towers to about \$4,000 per km for the RA series. Results show that it wouldn't justify redesign of tower for this saving alone.  
**Action item:** UCA ( ) to send out copy table/report to WG.
- Item 124: Renewed request for the WG to review the phase to phase air gap provisions in the galloping report. UCA ( ) suggested addition of table to Information Document listing phase to phase air gaps for transmission voltages.  
**Action item:** WG Members to review phase to phase air gap provisions of galloping report and provide comments by Nov 30th.
- Item 125: Altalink ( ) sent link on AUC website of new definitions of TFO's responsibilities to Owen.  
**Action item:** Altalink ( ) to resend to the rest of WG; item extended to Nov. 21, 2014.
- Item 126: In clean version of UCA proposal reviewing rule 12 (1)(d). Item complete.  
**Action item:** WG to review new proposed wording and give feedback to [AESO] before next WG meeting.

2 Review of Status of Reports

- Item 112 Report S1 – Revision 3 has been posted on FTP for comments. Have received some minor comments that need to be incorporated into the draft report. It is preferred that, even if a WG member has no comments, they are requested to send a note saying so.
- Item 105 Report S2 – Revision 2 has been posted on FTP site for comments. Some minor comments

	<p>received and will be incorporated. Some discussion of the recommendations which appear inconsistent with the scope of the report; committee suggested these should be observations.</p> <ul style="list-style-type: none"> <li>○ Observation: swing criterion for moderate wind trumps all other criteria using AltaLink air gap;</li> <li>○ Observe inconsistency on AESO criterion on sequence of failure - exclude all direct embedded poles as opposed to just wood pole structures.</li> </ul> <p><b>Action item:</b> Aeso (██████) to make recommended change Rule 10 subpoint 8) for wood/steel pole. For approval from the WG and feedback due by November 28, 2014.</p> <ul style="list-style-type: none"> <li>● Item 113 Report S3 – no further progress, a list of upcoming projects has been circulated; comments on five selected projects for review were received; nothing negative. Action item: AESO (██████) to report what is the number of years that are associated for terms: short, medium, long. Action item: AESO (██████) to request planners to rerun system studies under the assumption of a single conductor (as opposed to two-bundle), to determine impact on load flows for optimization. From that determine minimal conductor size. [AESO] and [AESO] to meet with planners (north) prior to next meeting and bring back committed dates for completion of conductor size study.</li> <li>● Item 114 Report S4 – this is a take on to S3 nothing will be done until S3 is completed. Item carried forward</li> <li>● Report S5: report on history of Meteorological Load Development – about 70% complete.</li> </ul> <p><b>Action item:</b> AESO (██████) to create table to compare MRI report to final results.</p> <p><b>Action item:</b> [AltaLink] to get Altalink to ok sending [UCA] report on 500kV loading criteria to AESO and a copy of the old MRI report to AESO for reference in report S5.</p>
3	<p>Review of Outstanding Items from the Meeting with the Transmission Facilities Cost Monitoring Committee Member (TFCMC), [CCA]</p> <ul style="list-style-type: none"> <li>● [AESO]: During the first meeting of the complete WG with [CCA], 4 of the 17 total topics were covered. In the 2<sup>nd</sup> meeting [AESO] and [AESO] met couple weeks ago with intention to grind through some of the remaining items. Good conversation about 100 degree C for 240kV, and why, we need actual numbers to make decision was discussed.</li> <li>● [AESO]: “2<sup>nd</sup> meeting progressed fairly quickly, items discussed were primarily AESO-related items. Also provided [CCA] with the list of short term, medium term, and long projects extracted from the published AESO regional plans. [CCA] had learned much from the first meeting with the entire group – this meeting was more constructive than confrontational.</li> </ul> <p><b>Action item:</b> AESO (██████) to book another two meeting with TFCMC to try and close as many remaining items as possible.</p>
4	<p>AESO Wind Maps (request for clarification of wind loads near Pincher Creek)</p> <ul style="list-style-type: none"> <li>● A clarification was requested for the AESO 100yr Wind Gust 10 metres: problem isotach contours near Pincher creek are not labeled and contours cannot cross as they seem to do on the map. Also disclaimer should be updated or removed.</li> </ul> <p><b>Action item:</b> AESO (██████) to investigate where we can get non PDF version to be modified, if the map has to be re-created from scratch it will be a lot of work. Then [AESO] to update the map with contours correctly shown and labeled.</p>

