

## Meeting Minutes – February 27, 2014

Time: 9:30 am to 3:00 pm

Location: AESO Offices, 2500, 330 5th Ave SW; 25th Floor; Room 2539 or via Conference Call

Attendance List:

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

CC = via Conference Call

1	<p>Introductions</p> <ul style="list-style-type: none"> <li>A full round of introduction was undertaken by the participants. [REDACTED] joined the WG as a representative of ENMAX.</li> </ul>
2	<p>Review of Needs List</p> <ul style="list-style-type: none"> <li>Item 26: Galloping – The WG reviewed the scope AESO ([REDACTED]) previously sent to the WG. The WG engaged in discussion including giving consideration to shorter spans to help reduce the burden of the galloping requirement. ACTION: [AESO] to include assumptions in the scope and bring it back for the WG to review. Continuing this topic under item 58 as it is a duplicate topic. Item 26 is marked complete.</li> <li>Item 40: Review of Economic Parameters used in ATCO's Line Optimization Studies – AESO ([REDACTED]) summarized for the WG his update as follows:                     <p>The AESO reviews various project options at the Need stage and undertakes an economic review of these options and then files a recommendation with the AUC for review. Once approved, the AESO creates a FS which will require a TFO to undertake a conductor / line optimization which is then filed with the Facility Application (FA) to the AUC. A recent conductor optimization by ATCO utilized different economic parameters / assumptions. Utilizing AESO's parameters, the AESO came to the same conclusion regarding the optimal conductor but the second and third choice changed positions. The AESO and ATCO have met twice to discuss optimizations and have determined the following:</p> <ul style="list-style-type: none"> <li>Annual Operating and Maintenance Costs – ATCO will provide a note regarding their O&amp;M costs and will give consideration to filing this number in their next GTA.</li> <li>Annual Depreciation Rate – ATCO has utilized the Transmission depreciation rate and AESO has been referencing the blended asset class rate.</li> <li>Cost of Debt – Final email regarding calculations to be exchanged.</li> <li>Discount Rate - Final email regarding calculations to be exchanged.</li> <li>Power Pool Price – ATCO has agreed to use the EDC values.</li> <li>ACTION – AESO ([REDACTED]) committed to review the ID document to see if it can be further</li> </ul> </li> </ul>

enhanced to highlight the parameters used in the optimization study.

The workgroup had further discussion regarding social aspects and the cost of construction which would also be taken into account by a TFO in making a conductor selection. With the proposed addition of ACSS conductor to the approved list, it was suggested that it would be in a TFO's best interest to include it in any optimization. The workgroup further discussed how tower placement and landowner concerns could affect the results of an optimization.

- Item 47: Meeting Invites - AESO (██████) will send revised March outlook invites out today. Item marked complete.
- Item 48: Conductor Galloping – This item was already discussed in item 26. Continuing this topic under item 58. TDC [AESO] to propose Scope of Work - Item 48 is marked complete.
- Item 50: Sequence of Failure - No update was brought forward. Item carried forward to next meeting.
- Item 51: Item carried forward to next meeting.
- Item 56: Update ID on Optimization - No update was brought forward. Item carried forward to next meeting.
- Item 57: Shield Wire Exemption Wording - No update was brought forward. Item carried forward to next meeting.
- Item 58: This item was already discussed in item 26. Continuing this topic under item 58 as it is a duplicate topic.
- Item 59 & 60: 240kV 100C Requirement - AESO (██████) gave a summary of the scope [AESO] provided. The WG discussed the scope had some comments as follows:
  - Ensure the consequence of the AESO choosing a maximum loading level to low is considered.
  - TFO's expressed they don't see a need for a specified maximum plus a requirement to go beyond the stated maximum.
  - Consideration should be given to shorter spans to minimize the issue.

ACTION: [AESO] will discuss the WG's comments with [AESO] and [AESO] will revise scope and bring it back to the WG.

- Item 61: Failure Containment - UCA (██████) gave a summary of his findings and proposed revisions to the ID to the WG. The findings included that Ontario Hydro specifies a substantially more onerous double failure on opposite sides of a tower (a "double twist") which is far beyond AESO's requirements. Other utilities use ice loading with a single failure such as the existing rule. ACTION: If the WG has any further comments on this they are requested to bring them back to next meeting. ACTION: [AESO] will start transferring revisions to the ID into the ID. Item 61 declared complete.

3 Other Items

Items from Feb 6 meeting (Was not included on the Needs List due to an error):

- ACSS - TW: Item declared complete.
- LTP: AESO (██████) will engage [AESO] to assist. Item carried forward.

New Items:

- AESO Regional Plans – AESO (██████) gave an update on this topic. He let the WG know that the Regional Plans are not posted yet. [AESO] and [AESO] will be engaging AESO's planners to determine future tower needs. Item carried forward.
- [AESO] checked in with the WG regarding a summary of major outstanding rule items that will have an effect on cost and reliability which are as follows:

- Sequence of failure
  - Galloping
  - 100 C at 240kV
  - Radial lines going out to customers
- ATCO (██████) provided a brief summary regarding their upcoming Lidar program.
- AESO (██████) provided an overview of AESO's plan for the development of ARS FAC-008 Facility Ratings. As the same players will most likely be involved, [AESO] will try to coordinate meeting dates to minimize travel.