

I. Purpose of this session

The purpose of the Energy Storage Industry Learnings Forum (ESILF) Kick-off Session on May 20, 2020 was to seek feedback and obtain alignment on forum intent and method, forum scope and focus areas, and action plan, priorities and timelines.

II. Session agenda

Agenda Items	Est. time	Presenter
Optional <ul style="list-style-type: none"> Allow for members to log-in/Networking 	30 mins (1:00 - 1:30)	
Background on ESILF <ul style="list-style-type: none"> Why are we here? Roles and Expectations Transparency 	15 mins (1:30 - 1:45)	Dennis Frehlich
ES Initiative Overview: <ul style="list-style-type: none"> AESO Overview Background on ES Roadmap 	15 mins (1:45 - 2:00)	Ata Rehman
Discussions: <ul style="list-style-type: none"> AESO ES Roadmap Review and Update (Understanding and alignment) ES Principles (Understanding and alignment) Future Workshop Topics (Discussion and feedback) Future Workshop Timelines and Priorities (Discussion and feedback) 	80 mins (2:00 - 3:20)	Terry Martin
Wrap up and next steps	10 mins (3:20 - 3:30)	Ata Rehman

III. Attendees

Attendees	Company
ABB (ASEA Brown Boveri)	Dan Gustafson
Alberta Energy	Michael Fabiyi
Alberta Innovates	Maureen Kolla
Alberta Utilities Commission	Olexandr Vasetsky

Attendees	Company
AltaGas	Cherise Nielsen
AltaLinK	Hao Liu
ATCO	Jenny Wang
CanWEA	Evan Wilson
Chapman Ventures	Dan Chapman
Enel North America	Ryan Prescott
ENMAX	Dallas West
ES Canada	Justin Rangooni
FortisAlberta	Neil Cumming
Market Surveillance Administrator	Derek Olmstead
Nutana Power	Graeme Harrison
Power Advisory	Travis Lusney
RMP Energy Storage	Robert Stewart
Solas	Paula McGarrigle
Suncor	Daniel Visser
TERIC Power	Craig Barnes
TransAlta	Akira Yamamoto
TransCanada	Michael Edwards
WindRiver (TPG)	Kipp Horton
AESO	Dennis Frehlich
AESO	Ata Rehman
AESO	Nicole LeBlanc
AESO	Biju Gopi
AESO	Terry Martin

IV. Overall outcomes from the day

The meeting began with the introduction of AESO members in attendance, chaired by Dennis Frehlich and lead by Ata Rehman. The ESILF members were then asked to introduce themselves and to provide their background, experiences on energy storage development, and the organization they represent.

The AESO provided background on the ESILF including the mandate of the forum, roles and expectations of members and spoke to the AESO's *Stakeholder Engagement Framework*.

The AESO then presented the Energy Storage Roadmap and principles and members asked clarifying questions. Future workshop topics, timelines and priorities were then presented, and further discussion ensued. This summary incorporates high-level themes and comments shared by members in attendance.

Following the meeting, a survey was sent to each member, allowing for further feedback and questions on the topics presented, and the prioritization of each.

Pre-read material and the kick-off session presentation can be found on the Energy Storage page of the AESO website.

V. Discussions

Below you will find ESILF member questions, statements, recommendations and concerns and corresponding AESO responses where they occurred.

Energy Storage Roadmap Review and Update

- Concern stated with progression of the Energy Storage Roadmap that the progress on energy storage implementation could come to a standstill and the short-term will become the long-term solution by default.
 - This is a general worry in any large initiatives; however, the AESO is pushing to ensure solidified plans for the long-term to be implemented. The AESO is continuously challenging conversations and cross-functional teams that are involved, to ensure issues, which may delay progress, are resolved.
- Concern stated with progression of the energy storage Roadmap in regard to the delay in the Bulk and Regional Tariff Design and resultant uncertainty for projects in the queue.
 - The AESO had to make decisions through COVID19 to prioritize engagements and the delay of the Bulk and Regional Tariff Design engagement was one of those decisions. Supported by load and industry, which are facing challenges and focusing on core business, the AESO has redirected focus, and is busy with bill deferral and rate impacts, and engagement on tariff was best to be deferred.
 - The AESO deliberated parsing out energy storage from the scope of Bulk and Regional Tariff Design, and continue engagement on that specific aspect; however this was decided against as some tariff design options being considered to incorporate energy storage into the AESO tariff would not only apply to energy storage, but to other users of the transmission system as well. Therefore it was deemed important to maintain the overall scope for the Bulk and Regional Tariff Design.
 - The AESO understands the importance of tariff as part of the economic decision making for any energy storage project; the AESO is working towards a holistic tariff through the Bulk and Regional Tariff Design that creates stability of investment signals for all participants.
- Recommendation made that the topic of energy storage configurations be added to the first workshop (i.e. hybrid, standalone, etc.), as well as requirements and obligations that may be difficult for energy storage to adhere to.

- Question regarding if the AESO had considered a form of Rate Demand Opportunity Service (DOS) for hybrid assets.
 - As a reminder, the short-term integration of energy storage is being applied under the current legislative framework and AESO authoritative documents (AD), including the Tariff and the provisions applicable to DOS. DOS provisions were analyzed for applicability and the AESO concluded that the energy storage configurations in the connection process that were looked at in consideration of this did not clearly meet the requirements to qualify for DOS. However, the option should be further investigated.
- Statement made that for energy storage to offer as ‘standalone’, tariff is very important and has great economic impacts, and so tariffs should be discussed in the ESILF workshops in advance of the Bulk and Regional Tariff Design proceedings.
 - Through the various engagements currently underway, the AESO is looking to have discussions, hear ideas, and present and evaluate options through the Bulk and Regional Tariff Design, as opposed to ESILF. This is to ensure a holistic tariff design is done across all parts of the industry that want to participate, as well as understand how it fits within the broader tariff aspect.

Energy Storage Principles

- Suggestion made that if energy storage is treated as a unique asset then the applications (the application of configurations to provide various services) should also be treated differently; not a one size fits all application because of wide variety of potential different ways of providing those transmission solutions.
 - The AESO understands there is a gap in the application specific elements of energy storage, and this should be discussed in future workshops.
- Recommendation to discuss ownership issues through a more principle-based approach. 3rd bullet of the AESO principles should be impartial on the ownership of energy storage. Ownership should be debated and reviewed based on safe, reliable, economic operations as well as a FEOC impact.

Future Workshop Topics

- Recommendation to start the workshops with introduction about language and definitions for what services energy storage can provide as generation, transmission and load to ensure common language. (Services energy storage is capable of applicability in Alberta)
- Recommendation for the first workshop was a review of services and applications which will help define what value each energy storage configuration can provide. This will also help inform discussion on whether certain configurations will be delivering the outcome where ISOs can accomplish safe reliable economic operations and whether there will be a FEOC impact.
- A question and discussion ensued to clarify the potential workshop topic of economic modelling. This discussion culminated in a suggestion that the workshop topic be broadened to learn about not just economic hurdles, but also connection process hurdles that typical load or generation applicants do not have to face.
- Recommendation for workshop 2 that when discussing ‘Market Qualifications’ there should be discussions around transparency on the State of Charge (SOC). Should SOC be available to other market participants in the day-ahead market or just the AESO? Also, in workshop 2 when discussing ‘Market Opportunities in the Energy and AS markets’ we should add other potential revenue streams (i.e. ramping).

- Recommendation for including the topic of non-wire applications and how they will be procured into workshop 2.

Future Workshop Timelines and Priorities

- Recommendation to move 'Market Qualification' discussion from the second to the first workshop based on the upcoming energy storage active connection projects. A comparison of treatment of ES and conventional generation in the Ancillary Services market and the qualification process areas

VI. Wrap Up and Next Steps

The session summary and the finalized workshop topics and schedules to be published on the AESO website at www.aeso.ca. Any further questions can be sent to the Energy Storage inbox at energystorage@aeso.ca.