

# Energy Storage Engagement and Progress Update

May 31, 2021

## *OUR ENGAGEMENT PRINCIPLES*

**Inclusive and Accessible**

**Strategic and Coordinated**

**Transparent and Timely**

**Customized and Meaningful**

# Energy Storage Roadmap Update

- Provide a quarterly progress update on energy storage activities:
  - Share progress update on the Energy Storage Roadmap integration activities since February 2021 update;
  - Provide an update on activities planned for Q3 2021;
  - Provide an update on interrelated initiatives; and
  - Provide an opportunity for stakeholders to submit questions on the update information provided.

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# What's new since February?

- There are 12 projects currently on the connection list:
  - Fortis Alberta Buffalo Creek
  - Fortis Alberta Killarney Lake
  - ATCO Michichi Creek
  - AltaLink Greengate Jurassic MPC
  - Vega Solar Battery
  - Greengate Midnight MPC
  - Fortis Alberta Metiskow
  - TPG Canyon Creek
  - TCE Saddlebrook
  - Sol Aurora Solar Battery
  - BowArk Drywood
  - EDTI DG Solar
- One of these projects has in-service date in 2021
  - Fortis Alberta Buffalo Creek
- There are three projects that connected to the AIES in 2020:
  - TransAlta Summerview II
  - ENMAX Crossfield
  - ATCO Rycroft

- Activities completed since last update
  - Competition launched on March 24, 2021
  - Deadline for proposals was May 3, 2021
- Next Steps
  - AESO is currently evaluating the proposals
  - Contracts to be awarded to one or more service provider(s) in mid-2021, each for a 12-month term starting as early as Q3 2021 or as late as Q1 2022
- Further information on the FFR Pilot is available on AESO's website: <https://www.aeso.ca/market/ancillary-services/fast-frequency-response/>
- Questions can be directed to [EnergyStorage@aeso.ca](mailto:EnergyStorage@aeso.ca)

- ESILF 3<sup>rd</sup> workshop held on March 19<sup>th</sup>, 2021 with the attendance of majority of the members, Alberta Energy, Market Surveillance Administrator (MSA) and the Alberta Utilities Commission (AUC)
- Presented by ESILF members, workshop topics included:
  - Economic Modeling;
  - Sharing of experiences in commissioning and testing of new technologies or configurations; and
  - Process efficiencies within our existing framework
- Presentations and summary of the workshop have been posted on [www.aeso.ca](http://www.aeso.ca)
- Next workshop currently planned for Fall 2021



# Looking ahead

- AESO cross-functional teams to finalize their work and assessment on required internal changes (tools, systems and processes) to integrate ES based on the Market Participation Recommendation:
  - Forecasting, planning and market reports
  - Configurations, market qualification and connection requirements
  - Operations
  - Market Participation
- The identified internal changes will be implemented throughout 2021
- The AESO plans to incorporate the recommendations of the different work streams into a single ISO rules engagement process

# 12-month Rolling Timeline

Classification	ES Roadmap Integration Activities	2021 Q1			2021 Q2			2021 Q3		2021 Q4			
		J	F	M	A	M	J	J	A	S	O	N	D
Education and Awareness	<b>ES Progress Updates – UPDATED</b> Share progress on the Energy Storage (ES) Roadmap integration activities, interrelated initiatives and provide a forum to address stakeholder questions.		E			E			E			E	
	<b>ES Industry Learnings Forum (ESILF) – UPDATED</b> Organize forum to provide expertise and key learnings to the AESO on targeted matters related to the integration of energy storage in Alberta.			E						E			
Phase 2 Long-term Implementation	<b>ISO Tariff Design – RESUMED</b> Work in concert with ISO tariff design to ensure ES is considered.	Progress will align with Bulk and Regional Tariff Design											
	<b>Forecasting, Planning and Market Reports*</b> Develop and implement forecasting and planning models to support Long-term Outlook (LTO) and Long-term Transmission Plan (LTP).				C								
	<b>Configuration, Qualification and Connection Requirements*</b> Develop appropriate functional specification documents; identify market participation options, permissible configurations, and metering requirements for ES.				C								
	<b>Market Participation*</b> Evaluate long-term options for energy storage participation in the Energy and Ancillary Service markets.				C								
	<b>Operations*</b> Perform technical studies for the review of the operating parameters and requirements for the different types and configurations of ES; identify the impact to the connection processes and system applications to enable full range of ES operation.				C								
	<b>ISO Rule Changes</b> Based on the work performed by the different cross-functional teams, the AESO will conduct a single consultation process under AUC rule 017 to develop and file the proposed					D							D

I, E (only pertaining to AESO internal changes)  
\*These work streams provided input on potential ISO rule changes to enable storage and will continue to provide support to the single ISO rule changes process as required.

**E – Engagement:** inform and/or discuss topics with Stakeholders

**A – Analysis:** internal work phase for the AESO where an activity is researched, performed analytics, studies, etc.

**C – Conception:** after analysis, AESO will conduct an options analysis and may develop recommendations on the matter.

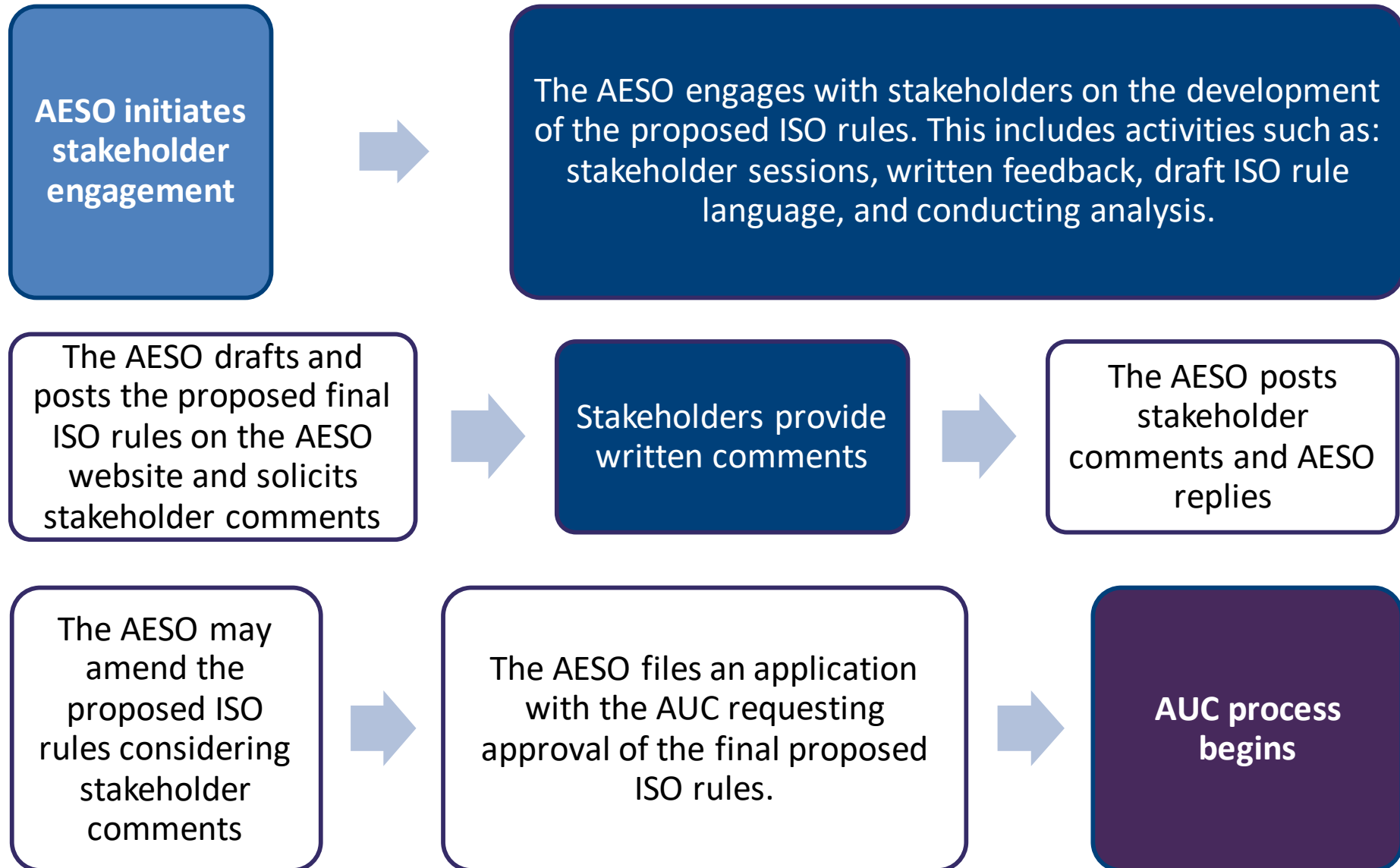
**D – Development:** AESO shares recommendations and works with stakeholders to create proposed ISO rules or changes to existing ISO rules.

**I – Implementation:** includes changes to IT, business processes and training to integrate ES.

- The AESO's long-term integration of ES will cover
  - The development of recommended changes to ISO rules that capture the unique attributes of ES
  - The required internal changes to the AESO's forms, processes, tools and systems
- Technical studies and learnings from the short-term activities will feed into the long-term activities
- Tariff – all ES tariff-related activities will continue to be part of the Bulk and Regional Tariff Design

# ISO Rules Development

- Section 20 of the *Electric Utilities Act* grants authority to the AESO to develop ISO rules.
- AUC Rule 017, *Procedures and Process for Development of ISO Rules and Filing of ISO Rules with the Alberta Utilities Commission*, sets out the requirements for the development of ISO rules, including:
  - Stakeholder engagement requirements; and
  - AUC application requirements



- Letter of Notice regarding proposed ISO rule development posted on February 17
- Feedback on priority and timelines from stakeholders received
  - Broad support for the identified issue and purpose of the engagement and rule changes
  - Flexible and reasonable pace
  - Feedback does not fundamentally change the AESO's design recommendation
- The AESO intends to work on blacklines of proposed ISO rule changes, targeting further stakeholder consultation in Q3 2021



# Interrelated Initiatives Update

- AESO is evaluating energy storage tariff treatment in the Bulk & Regional Rate Redesign
  - AESO proposed to expand eligibility for Demand Opportunity Service, including certain energy storage use cases of the transmission system

<https://www.aeso.ca/assets/Uploads/Presentation-Session-5-March-28.pdf>

- Further information on proposed changes to the Demand Opportunity Service rate discussed at May 20<sup>th</sup>, 2021 session

<https://www.aeso.ca/assets/Uploads/Session-5B-DOS-Presentation2.pdf>

<https://www.aeso.ca/assets/Uploads/Session-5B-DOS-Bid-Examples-FINAL.pdf>

# Next Steps

- Initiate ISO rules development, working toward stakeholder engagement in Q3 2021
- ESILF workshop 4 planned for Fall 2021
- Next progress update session planned for August 2021
- If you have questions related to this update, please email [EnergyStorage@aeso.ca](mailto:EnergyStorage@aeso.ca) with the subject *ES Q2 Update* by June 11, 2021



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Thank you