

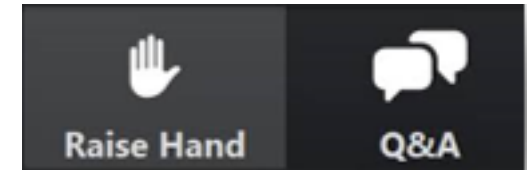
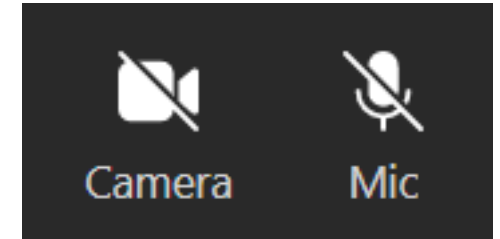
Interim Market Power Mitigation Stakeholder Information Session

June 11, 2024

In accordance with its mandate to operate in the public interest, the AESO will be audio and video recording this session and making the session recording available to the general public on AESO Engage. The accessibility of these discussions is important to ensure the openness and transparency of this AESO process, and to facilitate the participation of stakeholders. Participation in this session is completely voluntary and subject to the terms of this notice.

The collection of personal information by the AESO for this session will be used for the purpose of effectively capturing and sharing stakeholder input for the Interim Market Power Mitigation stakeholder information session. This information is collected in accordance with Section 33(c) of the *Freedom of Information and Protection of Privacy Act*. If you have any questions or concerns regarding how your information will be handled, please contact the Privacy Officer, Law at 2500, 330 – 5th Avenue S.W., Calgary, Alberta, T2P 0L4, by telephone at 403-539-2890 or by email at privacy@aeso.ca.

- All attendees join the webinar in listen-only mode (cameras are disabled and microphones muted)
- Before asking your question, please unmute, introduce yourself including your organization
- Two options to ask questions via computer:
 - During the session Q & A periods:
 - Click the icon to raise your hand (click again to lower) and the host will see that you have raised your hand
 - The host will unmute your microphone and you, in turn, will need to unmute your microphone before you can ask your question
 - Your name will appear on the screen, but your camera will remain turned off
 - Click the “Q&A button” at any time:
 - Type your questions into the Q&A window at any time
 - You’re able to like questions that have already been asked
 - Preference will be given to hands up questions first



LAND ACKNOWLEDGEMENT



AESO is committed to actively taking part in reconciliation and believes in the National Truth and Reconciliation Centre recommendation of honouring the First Peoples of these lands.

Indigenous Peoples have inherent kinship ties with the land, which we should all respect and help restore. We encourage everyone to think of their relationship with the land, when their ancestors first stepped onto Turtle Island, and recognize that First Peoples have been here since time immemorial.

We would like to acknowledge that we are on the Traditional Territory of Treaty 7, which settlers have renamed to Calgary, Alberta. These lands hold the hearts and footsteps of many First Nations, Métis and Inuit, and we would like to especially recognize the Tsuut'ina First Nation, the Blackfoot Confederacy, which is made up of the Kainai, Piikani, and Siksika Nations, the Stoney Nakoda tribes, and is also the homeland of the Métis Nation of Alberta, Region 3.

We are grateful to have the opportunity to work and be present in this territory together with many Indigenous Peoples from across Turtle Island. We offer this acknowledgement as a stepping stone towards reconciliation by honouring the First Peoples of the land that today we call home, and as an expression of our commitment to Indigenous communities.

The background of the slide features a blue-tinted image of two hands shaking in a firm grip, symbolizing agreement or partnership. In the background, a city skyline is visible under a clear sky. Overlaid on this image is a network of thin white lines connecting various points, suggesting a global or interconnected system.

OUR ENGAGEMENT PRINCIPLES

Inclusive and Accessible

Strategic and Coordinated

Transparent and Timely

Customized and Meaningful

- The participation of everyone here is critical to the engagement process. To ensure everyone has the opportunity to participate, we ask you to:
 - Listen to understand others' perspectives
 - Disagree respectfully
 - Balance airtime fairly
 - Keep an open mind

- Alberta Direct Connect Consumer Association (ADC)
- Alberta Utilities Commission (AUC)
- Alberta-Pacific Forest Industries
- AltaLink L.P.
- ATCO
- Aurora Energy Research
- Bema Enterprises Ltd.
- Best Consulting Solutions Inc.
- BHE Canada
- Bjei Australia
- BP Canada Energy Group ULC
- Camelot Power and Energy Corp.
- Canadian Renewable Energy Association
- Capital Power
- Captstone Infrastructure
- Carbon Assessors
- Carlotta Energy
- Cenovus
- Chymko Consulting
- ClearWater Power Corp.
- CNOOC Petroleum NA
- Cognera
- Competition Bureau
- Customized Energy Solutions (CES)
- Dapp Power LP
- Depal Consulting Limited
- DePaoli & Associates Inc
- Dichotomy Capital LLC
- Direct Energy
- Dynasty Power
- EMRC
- Enbridge
- Enel Green Power
- Enerfin
- Energy Storage Canada
- Enfinite
- ENMAX
- EPCOR Utilities Inc
- ERM
- Evolugen
- FortisAlberta
- Government of Alberta
- Green Cat Renewables Canada Corporation
- Heartland Generation
- Hill and Knowlton Strategies
- Imperial Oil
- Independent Electricity System Operator
- IPCAA
- Jupiter Energy Advisors
- Kîwetinohk Energy Corp.
- London Economics International
- Lionstooth Energy
- Market Surveillance Administrator
- Maskwa Environmental Consulting Ltd.
- Maskwa High Voltage
- McCarthy Tetrault
- Millar Western Forest Products Ltd.
- Neoen
- NorthPoint Energy
- Northstone Power
- Norton Rose Fulbright Canada LLP
- NRG
- Office of the Utilities Consumer Advocate
- Pivotal Energy Partners
- Plus Power
- Polar Asset Management
- Potentia Renewables
- Power Advisory and Renewable Generator Alliance
- Powerex
- Procido LLP
- SaskPower
- Selkirk Advisory Group
- Signalta Resources Limited
- Suncor
- TC Energy
- TD Securities
- TransAlta
- Trio
- URICA Energy Real Time Ltd.
- Versorium Energy Ltd.
- Voltus
- West Fraser Mills Ltd.
- Western Power Partners

- Presenters
 - Ruppa Louissaint, Director, Markets
 - Kaitlyn Ahearn, Manager, Market Implementation
 - Kurtis Villiger, Senior Analyst, Market Implementation
 - Darren Gogol, Senior Analyst, Market Implementation

- Purpose
 - Share final design details to implement changes related to the *Market Power Mitigation and Supply Cushion Regulations*
 - Provide an overview of the processes, reports and requirements developed to be in place by July 1, 2024
 - Address key stakeholder questions/comments
- Out of scope for the discussion today
 - Explanation, assessment or exploration of provisions and requirements in the regulations
 - The AESO's Restructured Energy Market recommendation

Agenda Item	Time
Introductions	10 min
Background	10 min
Secondary Offer Cap <ul style="list-style-type: none"> • Overview • Process • Reports and Example • ISO rules and related material 	30 min
Q&A	20 min
Unit Commitment <ul style="list-style-type: none"> • Overview • Eligible Long Lead Time Assets • Process • ISO rules and related material 	45 min
Q&A	20 mins
New and Amended ISO Rules	5 min
Next Steps	5 min
Q&A	Remaining time

- In March 2024, the Alberta government announced two temporary policy changes which limited economic withholding in the energy market
 - The AESO worked with the Market Surveillance Administrator (MSA) and Ministry of Affordability and Utilities (MAU) to develop an implementation approach
- The changes are being implemented through two new regulations: the *Market Power Mitigation Regulation* and the *Supply Cushion Regulation*
 - The *Market Power Mitigation Regulation* establishes a secondary offer cap on thermal offers of market participants with five per cent or greater market share, once a certain net revenue threshold has been reached
 - The *Supply Cushion Regulation* requires the AESO to direct on certain long lead time assets when the supply cushion is forecasted below a specific threshold
 - The new regulations are expected to be interim; both regulations expire November 2027

- Following the Government of Alberta's announcement and filing of the *Market Power Mitigation Regulation* and the *Supply Cushion Regulation* the AESO launched an engagement: [Interim Market Power Mitigation](#)
 - Provided opportunities for stakeholders to ask questions, submit comments, register for information sessions
 - AESO posted design information, FAQs, proposed rules, draft templates and information documents
- This is the final information session planned in this engagement
 - Proposed ISO rules to be filed on June 14, 2024
 - Effective date is July 1, 2024
 - If further content needs to be developed, communicated or updated, the AESO will publish accordingly

Engagement and Materials to Date

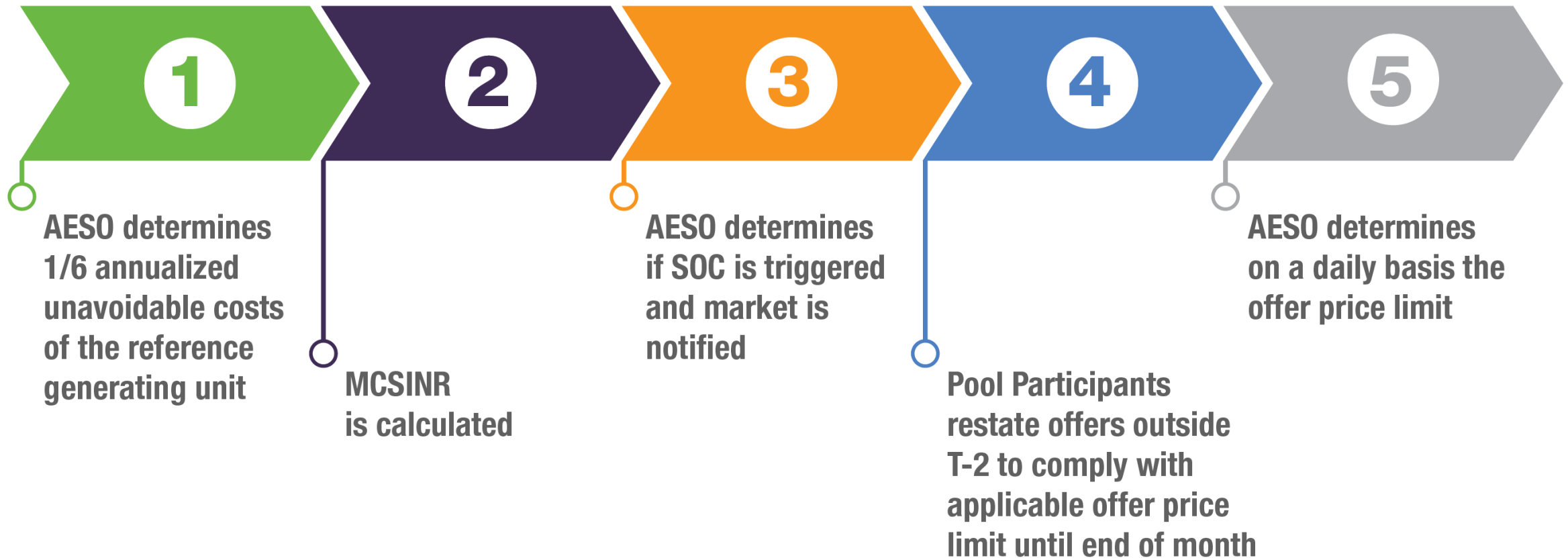
Date	Milestone
March 11, 2024	<i>Market Power Mitigation</i> Regulation and <i>Supply Cushion</i> Regulation filed and posted to Kings Printer
March 27, 2024	Example Application of <i>Market Power Mitigation</i> Regulation reference unit and MCSINR posted (updated May 28, 2024)
April 16, 2024	FAQ posted (updated May 17, 2024)
April 18, 2024	Stakeholder information session 1
May 21, 2024	Proposed ISO rules posted for stakeholder comment
May 24, 2024	Proposed Estimated Cost Parameters and Physical Constraint Template, and Actual Incremental Costs Calculation Templates posted for stakeholder comment
May 30, 2024	Draft Information Documents posted to support proposed ISO rules
May 31, 2024	Stakeholder comments due for proposed ISO rules. (Comments posted to AESO Engage June 6, 2024)
June 3, 2024	Stakeholder comments due for proposed templates
June 5, 2024	Market Update notices posted regarding new and amended Energy Trading System (ETS) reports and Automated Dispatch and Messaging System (ADaMS) display
June 11, 2024	Stakeholder information session 2
June 14, 2024	Expedited ISO Rules changes filed with the AUC
June 21, 2024	Proposed Estimated Cost Parameters and Physical Constraint Template due to for submission to AESO
June 20, 2024	IT changes released (ETS and ADaMS)
At least by June 21, 2024	AUC ISO rules proceeding process begins
July 1, 2024	ISO rule changes in effect

Secondary Offer Cap (SOC)

Market Power Mitigation Regulation

- *Market Power Mitigation Regulation* in effect as of March 2024; ISO rules required to be in effect by July 1, 2024
- Requires the calculation of monthly cumulative settlement interval net revenue (MCSINR) and annualized unavoidable costs of a hypothetical reference generating unit
- The AESO is required to notify pool participants when the MCSINR > 1/6th annualized unavoidable costs of the Reference Unit and the Secondary Offer Price Cap (SOC) is in effect, and the applicable secondary offer price limit (greater of \$125/MWh or 25 times day ahead gas price)
- Requires electricity pool participants, with five per cent or greater offer control, to mitigate “thermal” offer prices, to the secondary offer price limit
 - Resets at the end of the month

SECONDARY OFFER CAP OVERVIEW



- The AESO will determine 1/6th annualized unavoidable cost for the reference generating unit as per the calculation in the *Market Power Mitigation Regulation* and Section 206.1, *Secondary Offer Cap* of the ISO rules (Section 206.1)
- Once determined at the beginning of the month, will be posted by the AESO
- Remains the same for the entire month, may change between months

- The AESO will calculate the MCSINR of the reference generating unit for each settlement interval as per the calculations in the *Market Power Mitigation Regulation* and Section 206.1
- The MCSINR calculation requires pool price, so can only be done after pool price has been posted
- AESO will not determine the MCSINR in the last 20 minutes of a settlement interval
- The MCSINR value displayed is a cumulative total of all settlement intervals in the month

- If the MCSINR value exceeds $1/6^{\text{th}}$ annualized unavoidable costs, the SOC is triggered, and a secondary offer price limit will be in effect for settlement intervals more than two hours from the time of posting
- The AESO will notify pool participants when they are required to align offers in accordance with the secondary offer price limit
- Once SOC has been triggered, it remains in effect for the remainder of the month

- If the SOC has been triggered, a secondary offer price limit will be posted
- The SOC, and posted secondary offer price limit, will be effective for the first settlement interval that is more than two hours from the time of posting
- Pool participants with greater than 5% offer control are required to restate all thermal offers to conform with the offer price limit
- The pool participant will maintain offers equal to or less than the offer price limit for the remainder of the month

- After the SOC has been triggered, the AESO will determine secondary offer price limits
 - Will be the greater of 25x day ahead gas price (ICE NGX AB-NIT Day Ahead Index) or \$125
 - Requires day ahead gas price to calculate, the next day's secondary offer price limit can be posted once the day ahead gas price becomes available
 - The secondary offer price limit can change daily, effective at the start of a gas day
 - Will continue to be calculated and posted for the duration of the month

- The AESO has created three new Energy Trading System (ETS) reports
 - Monthly Cumulative Settlement Interval Net Revenue (MCSINR) Report
 - Available as both current and historical report
 - Secondary Offer Price Limit Report
 - Available as both current and historical report
 - MCSINR and Secondary Offer Price Limit Report
 - Is viewable on the ETS main landing/trading page
- All requirements for the AESO to report and notify pool participants under Section 206.1 of the ISO Rules are done through these ETS reports
- Additional notification methods being explored

Monthly Cumulative Settlement Interval Net Revenue

Monthly Cumulative Settlement Interval Net Revenue

Report Time: Wednesday, June 05 2024 04:05:49 PM

Date (HE)	Monthly Cumulative Settlement Interval Net Revenue (\$)	1/6 Annualized Unavoidable Costs (\$)	Secondary Offer Price Limit Triggered
06/05/2024 17	-	10,388,536.85	Yes
06/05/2024 16	-	10,388,536.85	Yes
06/05/2024 15	10,510,148.61	10,388,536.85	Yes
06/05/2024 14	10,492,022.70	10,388,536.85	Yes
06/05/2024 13	10,475,950.78	10,388,536.85	Yes
06/05/2024 12	10,463,111.55	10,388,536.85	Yes
06/05/2024 11	10,458,571.52	10,388,536.85	Yes
06/05/2024 10	10,454,031.49	10,388,536.85	Yes
06/05/2024 09	10,433,301.17	10,388,536.85	Yes
06/05/2024 08	10,400,983.33	10,388,536.85	Yes
06/05/2024 07	10,388,536.85	10,388,536.85	No
06/05/2024 06	2,028,799.45	10,388,536.85	No
06/05/2024 05	2,000,589.59	10,388,536.85	No
06/05/2024 04	1,974,084.68	10,388,536.85	No
06/05/2024 03	1,975,820.14	10,388,536.85	No
06/05/2024 02	1,977,555.60	10,388,536.85	No
06/05/2024 01	1,978,560.75	10,388,536.85	No
06/04/2024 24	1,982,516.67	10,388,536.85	No
06/04/2024 23	1,968,268.59	10,388,536.85	No
06/04/2024 22	1,941,360.94	10,388,536.85	No
06/04/2024 21	1,906,006.42	10,388,536.85	No
06/04/2024 20	1,877,581.77	10,388,536.85	No
06/04/2024 19	1,849,371.91	10,388,536.85	No
06/04/2024 18	1,829,053.14	10,388,536.85	No

Secondary Offer Price Limit

Report Time: Wednesday, June 05 2024 04:28:35 PM

Effective Begin (HE)	Effective End (HE)	Secondary Offer Price Limit in Effect	Secondary Offer Price Limit (\$)	Public Notification Time
06/06/2024 10	-	Yes	125.00	06/05/2024 16:11
06/05/2024 12	06/06/2024 09	Yes	128.50	06/05/2024 08:24
06/01/2024 01	06/05/2024 11	No	-	-

MCSINR and Secondary Offer Price Limit Report



MCSINR and Secondary Offer Price Limit Report ?

Report Time: Wednesday, June 05 2024 04:29:17 PM

Date (HE)	Monthly Cumulative Settlement Interval Net Revenue (\$)	1/6 Annualized Unavoidable Costs (\$)	Secondary Offer Price Limit (\$)
06/05/2024 22	-	10,388,536.85	125.00
06/05/2024 21	-	10,388,536.85	125.00
06/05/2024 20	-	10,388,536.85	125.00
06/05/2024 19	-	10,388,536.85	128.50
06/05/2024 18	-	10,388,536.85	128.50
06/05/2024 17	-	10,388,536.85	128.50
06/05/2024 16	10,545,609.14	10,388,536.85	128.50
06/05/2024 15	10,510,148.61	10,388,536.85	128.50
06/05/2024 14	10,492,022.70	10,388,536.85	128.50
06/05/2024 13	10,475,950.78	10,388,536.85	128.50
06/05/2024 12	10,463,111.55	10,388,536.85	128.50
06/05/2024 11	10,458,571.52	10,388,536.85	N/A

Secondary Offer Cap Trigger and Restatement Example

June 1, 00:00

- 1/6th annualized unavoidable cost is calculated to be \$10,388,536.85

June 1, 00:00 to June 20, 10:15

- MCSINR is calculated hourly

June 20, 10:15 (HE11)

- MCSINR is calculated for settlement interval HE10 and has surpassed \$10,388,536.85
- A secondary offer price limit is posted as \$125 for settlement intervals more than two hours from the time of posting
 - Current settlement interval (HE11)
 - Settlement intervals within two hours (HE12 and HE13)
 - First settlement interval the secondary offer price limit is applicable (HE14) 13:00
- Applicable pool participants have until 11:00 to update thermal offers

June 20, 13:00

- Secondary offer price limit of \$125 is in effect

June 20, 14:30

- Day ahead natural gas price becomes available, secondary offer price limit is set to \$150 for June 21 HE10 to June 22 HE9
- Offers for settlement intervals between June 21 HE10 and June 22 HE9 are to be restated to conform with the applicable offer price limit
Other offers remain untouched

June 21, 9:00

- Secondary offer price limit of \$150 is in effect

- The AESO is proposing new Section 206.1, Interim Secondary Offer Cap (Section 206.1) to facilitate the requirements and objectives of the *Market Power Mitigation Regulation*.
- In addition to adopting the provisions of the *Market Power Mitigation Regulation*, Section 206.1 and its associated Consolidated Authoritative Document Glossary (CADG) definition will:
 - Further clarify the applicability to be pool participants of market participants with offer control equal to or greater than five per cent
 - The method of notification will be the AESO website
 - MCSINR calculation will not occur in the last 20 minutes of a settlement interval
- Effective Dates:
 - July 1, 2024

- Section 206.1 of the ISO rules
- Associated Information Document ID #2024-004 *Secondary Offer Cap*
- Example Application of Reference Unit and Revenue
- Market Update notices posted to aeso.ca detailing new reports
- FAQ feedback

Q&A

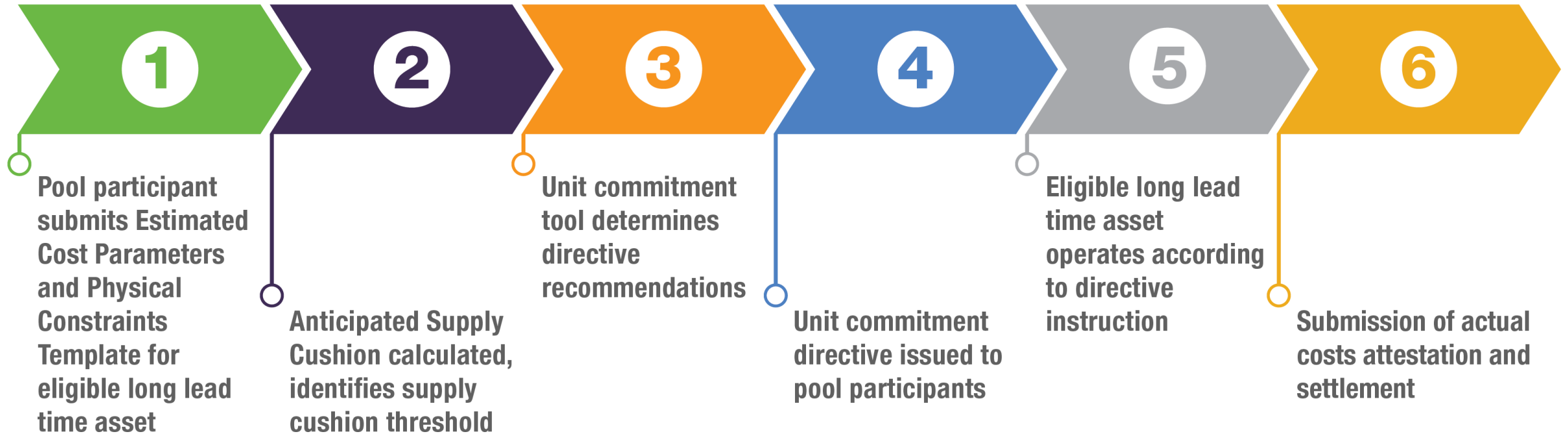
Unit Commitment

Supply Cushion Regulation

- *Supply Cushion Regulation* in effect as of March 2024; ISO rules required to be in effect by July 1, 2024
- Requires the ISO to calculate and set out the methodology for the Anticipated Supply Cushion
- Requires the ISO to issue Unit Commitment Directives to pool participants for eligible long lead time assets if supply cushion is less than 932 MW threshold
 - Determination of which eligible long lead time asset(s) to receive Unit Commitment Directives to address the supply cushion deficit based on relative economic merit and physical constraint parameters
 - Unit Commitment Directives will require available long lead time assets to come online or stay online
- Cost guarantee up to minimum stable generation level of the directed eligible long lead time asset, for the directive period, if pool revenue insufficient
- The AESO will begin to issue unit commitment directives to eligible long lead time assets, as necessary, beginning July 1, 2024.

- New CADG definition established: “eligible long lead time asset”
 - As defined in the *Supply Cushion Regulation*, means a source asset that requires more than one hour to synchronize to the interconnected electric system
- eligible long lead time asset is used exclusively in proposed Section 202.6 of the ISO rules
- New definition required as current CADG long lead time asset was too broad
 - long lead time asset CADG definition is maintained

UNIT COMMITMENT PROCESS OVERVIEW





Estimated Costs and Physical Constraints

- Pool participants with an eligible long lead time asset are required to submit estimated costs and physical constraints as per subsection 2(1) of Section 206.2 of the ISO rules, *Interim Supply Cushion Directives*
- Information to be submitted through a template made available by the AESO
 - Appendix to Information Document (ID #2024-005)
 - Posted to the ISO rules section of AESO webpage, in content associated with Section 206.2 aeso.ca/rules-standards-and-tariff/iso-rules/section-206-2-interim-supply-cushion-directives

- Estimated cost parameters and physical constraint template must be submitted by June 21, 2024, for existing eligible long lead time assets
- For new eligible long lead time assets, must submit within 48 hours after achieving commercial operation or after becoming an eligible long lead time asset (initial start-up time changed to a value >1 hour)
- Must ensure the information provided remains accurate and submit any changes as soon as reasonably practicable
- Template is submitted by email to ucdirectives@aeso.ca
- The AESO may request additional clarification or information from the pool participant
- Once the information is reviewed by the AESO, an email will be sent to the pool participant confirming that the updated information is being used to inform unit commitment decisions

- New CADG definitions for:
 - eligible long lead time unit,
 - emissions costs,
 - initial start-up time,
 - maximum run-up time,
 - minimum off time,
 - minimum on time,
- ID #2024-005 *Interim Supply Cushion Directives* provides additional clarity for the Estimated Cost Parameters and Physical Constraints Template
- Note that the initial start-up time will need to be submitted as per Section 203.1, *Offers and Bids for Energy*, through ETS, and within the Estimated Costs and Physical Constraints template as required by subsection 2 of Section 206.2
 - Both submissions of initial start-up time are required

- Template inputs:

Asset ID:	ABC1
Minimum stable generation (MW)	
Minimum off time (minutes)	
No load heat rate estimate (GJ/hour)	
Incremental heat rate estimate (GJ/MWh)	

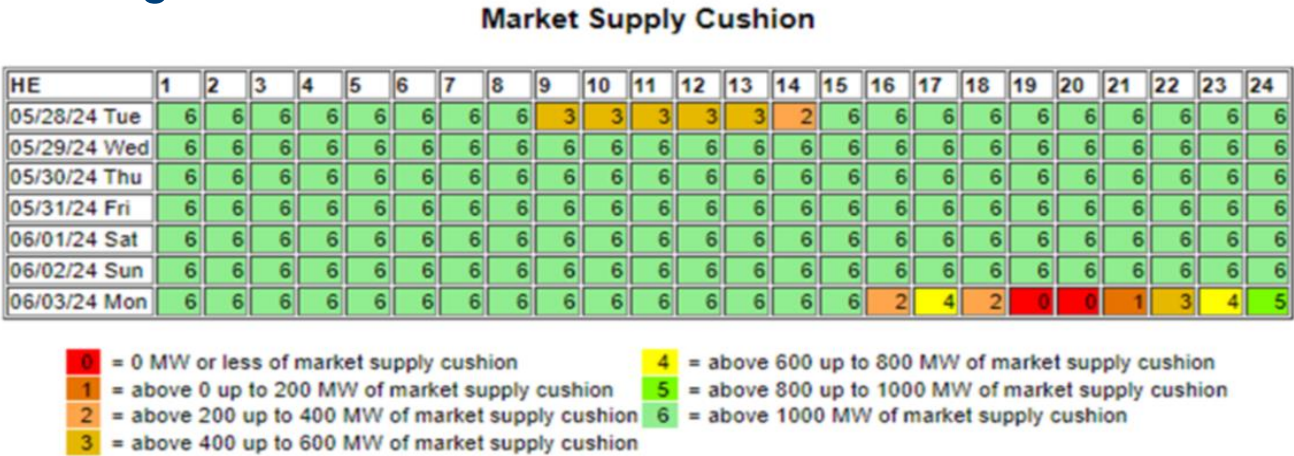
- Template inputs:

Warmth category ▾	HOT ▾	WARM ▾	COLD ▾
Lower limit (hours)	-		
Maximum run up time (minutes)			
Minimum on time (minutes)			
Initial start-up time (minutes)			
Pool trading charge cost estimate (\$)			
Loss factor charge cost estimate (%)			
Variable O&M cost estimate (\$)			
Emissions cost estimate (\$)			

- Section 206.2 of the ISO rules requires the AESO to determine the anticipated supply cushion, post the methodology, provide notice of change to the methodology, and report on the anticipated supply cushion.
- Anticipated supply cushion methodology will be included as an appendix to the Information Document supporting Section 206.2 (ID #2024-005)
 - Proposed methodology posted May 21, 2024
 - Methodology to be filed as an appendix in the expedited rule filing
- Additional explanation to the calculation is included in ID #2024-005
- The anticipated supply cushion calculation will identify the supply cushion threshold (932 MW)

- Measure of energy left in the energy market merit order
- Summarized anticipated supply cushion calculation
 - + available capability, excluding offline long lead time assets
 - + estimated wind and solar
 - + estimated on-site generation for behind-the-fence load
 - forecast of net interchange
 - forecast of Alberta Internal Load (AIL)
 - contingency reserve provided by generators
 - estimated constrained down generation
- Calculated for each settlement interval of current day, and next six days
- Frequent updates

- ETS Market Supply Cushion Report is a public report on ETS
 - www.aeso.ca: Reports > Current > “Supply Adequacy & Market Supply Cushion Report”
- The ETS Market Supply Cushion report displays the categorized results of the anticipated supply cushion calculation
- New categories developed to show additional market supply cushion levels, from 0 MW to 1000 MW+, in 200 MW increments
 - ETS report update to be released June 20, 2024, Methodology to be filed as an appendix in the expedited rule filing



- When the supply cushion is forecast to be below 932 MW, the unit commitment process is triggered
- The AESO will issue a unit commitment directive to the least cost out-of-merit eligible long lead time asset, or combination of eligible long lead time assets, taking into account physical constraints, to minimize the supply cushion deficit
 - The AESO will not issue unit commitment directives to eligible long lead time assets on outages.
- Unit commitment directive results in an eligible long lead time asset rejoining the dispatchable merit order and contributing its available capability to the anticipated supply cushion calculation

- Unit Commitment Directive requiring the eligible long lead time asset to start up:
 - When a supply cushion deficit is identified, the issuance of the directive instruction will be delayed until close to the timing determined by the initial start-up time constraint of the eligible long lead time asset receiving the unit commitment directive
 - Approximately 25 minutes in advance
- For example, the unit commitment process identifies that an eligible long lead time asset UC01 is needed to be synchronized by 18:00. The asset has a four-hour initial start-up time constraint. The unit commitment directive will be issued prior to 14:00 (approximately 13:35)
- If the supply cushion deficit is no longer present for the settlement intervals initially identified with a deficit, and a unit commitment instruction had not yet been issued, a unit commitment directive instruction will no longer be issued

- Unit Commitment Directive requiring the eligible long lead time asset to remain online:
 - Instructions for a unit commitment directive will be issued once the eligible long lead time asset's energy offers are out of merit, or a previous unit commitment instruction is over, and the asset would have otherwise been dispatched to 0 MW
 - These instructions may be sent in real-time or prior to the top of the hour in which the eligible long lead time asset was to be subject to a 0 MW dispatch

- Issued via a phone call from the AESO System Controller to the pool participant
- Accompanied by an ADaMS message summarizing the instructions for a unit commitment directive
- For the times that the eligible long lead time asset is to ramp up or operate due to a unit commitment directive, a “UC” dispatch instruction to the eligible long lead time asset’s MSG will be issued through the “TMR/UC” column in ADaMS. When a unit commitment directive is over, a UC dispatch to 0 MW will be issued
 - UC instructions will be accompanied by a “note” clarifying the instruction is for unit commitment
- ADaMS Manual will be updated to reflect the change

- Unit Commitment Directive instruction issued by AESO System Controller via phone call, and accompanied with ADaMS message summarizing the instruction:

Current Message- Last 30 Days					
Ack	Message Type	Date	Time	Message	Time of Instruction
<input type="checkbox"/>					
<input type="radio"/>	Alert	2024/06/10	07:05	Beginning at 2024/06/10 07:05 MDT, Unit Commitment Directive to MSG for UC01 with a start time of 2024/06/10 08:00 MDT in operation until 2024/06/10 12:00 MDT	2024/06/10 07:05:10 MDT

1

- “UC dispatch” communication in ADaMS
- Issued for the times the eligible long lead time asset is to operate due to a unit commitment directive

ADAMS																			Hide		
Ack Disp	Ack Dir	Dispatch Effective		Asset	AC	Energy	DDS	SR		SUP		TMR/UC	RR	Target		Notes	Instruction Time	Dispatch		Directive	
		Date	Time					Dispatch	Directive	Dispatch	Directive			Low	High			ON	OFF	ON	OFF
<div><div></div></div>		06/10	08:00	UC01	100	0	0	0	0	0	0	20	0	20	20	TMR/UC Unit Commitment Directive in effect	06/10 07:35:00 MDT	TMR			

- The Pool Participant will receive UC dispatch instruction ~25mins before start time (asset synchronization) at the top of hour. For example, the Pool Participant would expect to receive UC dispatch instruction ~17:35 for synchronization @ 18:00
- The instruction will be to the minimum stable generation level of the asset, issued in the TMR/UC column
 - Accompanied by a “note” that clarifies the instruction is in relation to a unit commitment directive
- The pool participant must acknowledge the dispatch instruction within two minutes

- Dispatch History
 - UC dispatch instructions can be viewed in ADaMS Dispatch History
 - The instruction to MSG can be seen under the TMR/UC column

Dispatch History- Last 50 Dispatches															Current MW level	View Historical dispatches	Download Historical dispatches	Enter start-time		
Status	Dispatch Effective		Filter	AC	Energy	DDS	SR		SUP		TMR/UC	RR	Target		Notes	Instruction Time	Dispatch		Directive	
	Date	Time	All				Dispatch	Directive	Dispatch	Directive			Low	High			ON	OFF	ON	OFF
Acknowledged	06/10	08:00	UC01	100	0	0	0	0	0	0	20	0	20	20	TMR/UC Unit Commitment Directive in effect	06/10 07:35:00 MDT	TMR			

- Message History
 - Message summarizing unit commitment directive instructions can be found in the Message History

- System Unavailability:
 - In the event the ADaMS integration of unit commitment directive is unavailable for July 1st, the verbal directives issued by the AESO system controller for unit commitment will require the pool participant to additionally:
 - Enter a start time (in ADaMS) of their eligible long lead time asset according to the verbal instruction; and
 - Require MSG portion of eligible long lead time asset to be “in merit” starting from the start time of the instruction and through the period of operation set out in the instruction
 - In the event of severe IT events (i.e. Limited Market Operations, application failures), the AESO may not be able to issue unit commitment directive instructions according to the designed communication methods or timelines and/or may not be able to issue unit commitment directives for the period of the event.

- Unit commitment directives are subject to the requirements of Section 301.2 of the ISO rules, *ISO Directives*
- Through the directive, the asset will be subject to any applicable dispatch instruction(s)
 - Requirements of Section 203.4 of the ISO rules, *Delivery Requirement for Energy*
- Pool participant is not required to restate offers in response to the unit commitment directive (given ADaMS availability)
 - May restate offers as per current ISO rule requirements
- Prior to, during, and following a unit commitment directive, the eligible long lead time asset can be dispatched or directed for energy or ancillary services

- Unit commitment directives will not be cancelled or changed after being issued
- What happens if my eligible long lead time asset cannot comply with a directive?
 - Subsection 13 of ISO rule 103.12 *Compliance Monitoring* details compliance exceptions
 - Examples: Force Majeure; Safety of equipment, environment, staff, or public

- The ISO must pay the prudent incremental costs incurred from a unit commitment directive in the settlement intervals in which the eligible long lead time asset responded to the unit commitment directive
 - Up to minimum stable generation
 - Net of pool price revenue
- Payment conditional upon the pool participant submitting a written request (invoice) and an attestation

- Costs Attestation Form found in Appendix 1 of Section 206.2
- The invoice and the attestation should be submitted together
- The attestation should only be submitted once all incremental costs related to a unit commitment directive have been incurred and paid for by the market participant

Table 1
Incremental Costs Incurred in Response to a Unit Commitment Directive

Description of Cost	Dollar Amount of Cost
Actual costs of all variable charges under the ISO tariff applicable to the eligible long lead time asset, including any applicable loss factor charge or credit	[insert amount of cost]
Variable operational and maintenance charges	[insert amount of cost]
Fuel costs to start and run the eligible long lead time asset	[insert amount of cost]
Emissions costs	[insert amount of cost]
Incremental costs (sum of above four rows)	[insert amount of cost]

- Actual costs must be submitted to the AESO within two years of the unit commitment directive to receive payment
 - Allows for a sufficient period of time after costs have been incurred by the market participant to submit to the AESO for payment
- Invoice and Attestation should be submitted by email to ucdirectives@aeso.ca
- Additional information may be requested to ensure the AESO has a full and satisfactory understanding of the costs being claimed
 - This information may include a submission of the template for Actual Incremental Costs Calculation
- The template may be used by market participants to assist in the determination of Actual Costs
 - The submission of the Actual Incremental Costs Calculation Template is not required unless requested by the ISO under Section 206.2
- The template for Actual Incremental Costs Calculation can be found on the [AESO Engage webpage](#) and will be posted as an appendix to ID #2024-005

- In addition to adopting the provisions of the *Supply Cushion Regulation*, Section 206.2 and its associated CADG definitions will:
 - Define and set out submission methods to address the estimated costs and physical constraints that pool participants for eligible long lead time assets will be required to provide;
 - Set out the requirement for the AESO to publish the methodology used to determine the anticipated supply cushion; and
 - Provide details on the submission methods for actual costs related to unit commitment directives, including details on the cost attestation required to be submitted by pool participants eligible for a cost guarantee.
- Effective Dates:
 - July 1, 2024, with the exception of subsection 2 of Section 206.2, and its relevant CADG definitions, which the AESO will be requesting be brought into effect on June 21, 2024 (Estimated cost parameters and physical constraints for an eligible long lead time asset)

- Section 206.2 of the ISO rules
- Anticipated Supply Cushion Methodology
- Associated Information Document ID #2024-005
- Market Update notices posted to AESO webpage detailing:
 - [Changes to the Market Supply Cushion Report](#)
 - [Changes to the ADaMS TMR column heading](#)
- FAQ feedback

Q&A

ISO Rules

- Proposing new division of the ISO rules: Division 206, Interim Market Power Mitigation
 - Under this division:
 - Section 206.1, *Interim Secondary Offer Cap*
 - Section 206.2, *Interim Supply Cushion Directives*
- New CADG definitions:
 - reference generating unit
 - anticipated supply cushion
 - eligible long lead time asset
 - emissions costs
 - initial start-up time
 - minimum off time
 - minimum on time
 - supply cushion threshold
 - unit commitment directive
- Consequential amendments:
 - Section 202.4, *Managing Long Lead Time Assets*
 - Section 203.1, *Offers and Bids for Energy*
- The Anticipated Supply Cushion Methodology posted as an appendix to ID #2024-005

- An abbreviated consultation was completed on the proposed ISO rules
 - Some further amendments were made, or context added to IDs, because of stakeholder comments
- The AESO will be filing the ISO rules on June 14th, 2024, for approval by the Alberta Utilities Commission (AUC) on an expedited basis
 - Request for the AUC to approve the new ISO rules *in advance of an AUC rules proceeding*, as permitted under s. 20.6 of the *Electric Utilities Act*
 - After the expedited approval, an AUC proceeding will be held to consider the rules, and could ultimately lead to rule changes depending on the AUC's decision
- Effective date of the ISO rules is requested for July 1, 2024
 - Except for subsection 2 of Section 206.2, and associated CADG definitions which is effective June 21, 2024, (due date for submission of Estimated Cost Parameter and Physical Constraint template)

Next Steps

- **June 14, 2024**
 - Application for expedited approval of new and amended ISO rules filed with the AUC
 - Amended versions of the templates posted
- **June 20, 2024**
 - IT changes released:
 - **ETS:**
 - Market Supply Cushion Report updated
 - New Secondary Offer Cap Reports published (data will not be populated until July 1, 2024)
 - **ADaMS:**
 - Change of the TMR column to TMR/UC
- **June 21, 2024**
 - Proposed Estimated Cost Parameters and Physical Constraint Template due for submission to AESO (subsection 2 of Section 206.2 effective)
- **At least by June 21, 2024**
 - AUC ISO rules proceeding process begins
- **July 1, 2024**
 - ISO rule changes in effect
 - Secondary Offer Cap Reports go live
 - Unit commitment directives can be issued starting at 00:00
- **Post July 1**
 - IT changes for settlement
 - Priority enhancements

Q&A

Thank you