MARKET SURVEILLANCE ADMINISTRATOR

Enforcement Activities: Q2 2025

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Taking action to promote effective competition and a culture of compliance and accountability in Alberta's electricity and retail natural gas markets

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1. REGULATORY AND ENFORCEMENT MATTERS

1.1. Spinning reserve technical requirements and performance standards investigation

1.1.1. Overview

In December of 2023, the Market Surveillance Administrator (MSA) concluded an investigation which resulted in Alberta Utilities Commission Decision 28217-D01-2023,[1] wherein the MSA learned that to comply with ISO Rule 205.5, *Spinning Reserve Technical Requirements and Performance Standards* (ISO Rule 205.5), Megapack lithium-ion batteries (Megapacks) supplied by Tesla Energy (Tesla) require specific settings to always be enabled.

ISO Rule 205.5 requires a dispatched asset for spinning reserve to provide an immediate, automatic, and sustained response to any deviation of the system frequency outside the prescribed deadband. Moreover, an asset qualified by the AESO to provide spinning reserve must have a governor system without characteristics which prevent the asset from providing the required immediate, automatic, and sustained frequency response.

Given other battery assets in Alberta rely on Megapacks, the MSA was concerned similar issues to those addressed in Decision 28217-D01-2023 may have occurred elsewhere and commenced an investigation. The scope of the investigation encompassed the development and qualification of battery assets that provide spinning reserve, as well as the sale and provision of spinning reserves and the frequency response from these assets.

1.1.2. Settings required to provide spinning reserve and Telsa Megapack firmware

An asset which provides spinning reserve must have no time delays, ramp characteristics, or other control settings that prevent the asset from providing an immediate and sustained response to frequency deviations outside the prescribed 60 ± 0.036 Hz deadband (Deadband). Further, the pool participant must ensure that while its asset is under dispatch to provide spinning reserve, the change in real power of the spinning reserve resource is continuously proportional to the measured system frequency, in accordance with the droop setting described in ISO Rule 205.5.

Although the settings required to provide spinning reserve are not enabled by default on Megapacks, appropriate settings can be toggled on in the Megapack's Real Time Automation Control to enable frequency support and ensure compliance with ISO Rule 205.5. On all Megapacks, the parameters for the Deadband and related settings must be adjusted from factory defaults to the parameters required to comply with ISO Rule 205.5 (collectively, the "Frequency Support Settings").

[1] Decision 28217-D01-2023 Market Surveillance Administrator - Application for Approval of a Settlement Agreement Between the Market Surveillance Administrator, Canadian Hydro Developers Inc. and TransAlta Corporation, September 14, 2023 (Decision 28217-D01-2023)

1.1.3. Tesla Megapack firmware and default settings

On February 6, 2021, the AESO observed a drop in the Alberta Interconnected Electric System frequency below the Deadband. During this event, a participant's assets (comprised of Tesla Megapacks) were contracted to provide spinning reserve but failed to respond to the drop in system frequency.

To assess if any Frequency Support Settings were reset to their default state, an inquiry was raised with Tesla regarding any firmware or software updates completed. Tesla confirmed it updated the Tesla Site Controller (TSC) software but indicated that the Frequency Support Settings would have remained unchanged. However, upon further investigation, the participant and agent discovered that the Deadband settings were changed back to Tesla defaults after an outage to the TSC and needed to be restored.

Despite the restoration of the Deadband settings, the asset again failed to properly respond to frequency excursions. Although the asset initially provided frequency support in response to the frequency excursions, unit generation decreased to 0 MW when the AIES system frequency fell below 59.5 Hz.

It was determined that Tesla's firmware update reset the "frequency ride through settings". Frequency ride through settings are set by Tesla and are not readable or configurable by the operator. While modified frequency ride through settings that overrode default values were provided to and implemented by Tesla during commissioning of the asset, these settings were subsequently overridden by the firmware update. The effect was to cause an instantaneous trip on the asset if the AIES system frequency dropped below 59.5 Hz.

1.1.4. Management of assets by agent

For the assets of interest, the participant (through its agent) uses a supervisory control and data acquisition (SCADA) system for real-time monitoring and operation of all the participant's battery assets, including frequency support. In addition, a control narrative was mutually developed for the battery assets, which governs their individual operation.

During the period investigated by the MSA, no alarm was triggered in the SCADA system when the Frequency Supports Settings were disabled. The main SCADA screen provided automatic real-time updates regarding frequency support status, although those updates were not available during communications losses. In those circumstances, the proper procedure established between parties was for the agent to reach out to the participant to troubleshoot the communications issue and confirm frequency support status as needed. This established procedure was not consistently adhered to by the agent.

During several frequency excursions, the battery asset's Frequency Support Settings were not properly enabled. For a number of these events, the agent advised the MSA it had manually turned off the Frequency Support Settings.

While attempting to meet an AESO directive to provide spinning reserve, the agent's personnel thought the unit output was restrained by these settings and to achieve the full amount of the directive, frequency support was turned off temporarily. For each occasion, the settings were manually re-enabled shortly thereafter. When the agent turned off frequency support, it did so without seeking or receiving authorization from the participant.

1.1.5. Investigation outcomes

Notices of Specified Penalty totaling $142,500 were issued to the participant for settlement intervals where an asset breached the response requirement and was unable to provide the frequency response as directed. Notices of Specified Penalty were not issued, in this case, for breaches of the governor requirement.

1.2. Rate of Last Resort provider exit fee investigation

In Q1 2025, the MSA became aware that a Rate of Last Resort (RoLR) provider may have collected exit fees from regulated rate customers that switched to a competitive retailer. RoLR providers are prohibited from "collect[ing] fees related to the entry to, or exit from, the regulated rate tariff by an eligible customer".[2] Collecting exit fees from regulated rate customers could disincentivize those customers from switching to competitive retailers, limiting competition in the distribution service area.

Accordingly, the MSA initiated an investigation of the RoLR provider pursuant to section 39(1)(b) of the *Alberta Utilities Commission Act*. As a result of the MSA's investigation, the MSA determined the RoLR provider had not collected exit fees from regulated rate customers. The MSA subsequently discontinued the investigation and recommended the RoLR provider remove language in its RoLR terms and conditions that might suggest RoLR customers would be charged exit fees for switching to a competitive retailer. No further enforcement action was taken against the RoLR provider.

[2] *Rate of Last Resort Regulation* AR 262/2005, s. 19(1)(a).

2. ISO RULES ENFORCEMENT

The ISO rules promote orderly and predictable actions by market participants and facilitate the operation of the Alberta Interconnected Electric System (AIES). The MSA enforces the ISO rules and endeavours to promote a culture of compliance and accountability among market participants, thereby contributing to the reliability and competitiveness of the Alberta electric system. If the MSA is satisfied a contravention has occurred and determines that a notice of specified penalty (NSP) is appropriate, then AUC Rule 019 guides the MSA on how to issue an NSP.

From April 1 to June 30, 2025, the MSA closed 134 ISO rules compliance matters, as reported in Table 1. An additional 188 matters were carried forward to the next quarter. During this period 38 matters were addressed with NSPs, totalling $245,750 in financial penalties, with details provided in Table 2.

Table 1: ISO rules compliance outcomes from April 1 to June 30, 2025

ISO rule	Forbearance	Notice of specified penalty	Dismissed	No contravention	Total
103.1	2	-	-	-	2
201.3	-	1	-	-	1
201.7	8	2	-	-	10
203.1	-	1	-	-	1
203.3	11	3	-	-	14
203.4	28	4	1	3	36
203.6	3	2	-	-	5
205.3	2	2	-	1	5
205.4	-	1	-	-	1
205.5	-	3	-	-	3
205.6	2	3	-	2	7
205.9	-	2	-	-	2
301.2	2	5	-	1	8
304.7	1	-	-	-	1
306.4	2	-	-	-	2
306.5	-	2	-	-	2
501.10	2	-	-	-	2
502.4	1	-	-	-	1
502.5	2	-	-	-	2
502.6	-	2	-	-	2
502.8	13	1	-	-	14
502.16	2	1	-	-	3
503.3	1	-	-	-	1
503.13	1	-	-	-	1
503.16	2	3	-	-	5
503.19	1	-	-	-	1
503.20	1	-	-	-	1
505.4	1	-	-	-	1
Total	**88**	**38**	**1**	**7**	**134**

Table 2: Specified penalties issues from April 1 to June 30, 2025, for contraventions of the ISO rules

Market participant	Total specified penalty amounts by ISO rule ($)																	Total ($)	Matters
	201.3	201.7	203.1	203.3	203.4	203.6	205.3	205.4	205.5	205.6	205.9	301.2	306.5	502.6	502.8	502.16	503.16		
AECG Forty Mile Wind LP			500										500					1,000	2
AltaGas Ltd.				500														500	1
ATCO DB Solar GP Services Ltd.															500			500	1
BER Hand Hills wind LP					250													250	1
Canadian Hydro Developers, Inc.	250										250							500	2
Capital Power (G3) Limited Partnership							250											250	1
Cardston Spring Coulee Solar Limited Partnership												500						500	1
CI IV Buffalo Plains LP																	500	500	1
EDF Renewables Development Inc.				750														750	1
Enel X Canada Ltd.										250								250	1
Enfinite Corporation											250							250	1
Enfinite Generation Corporation									142,500									142,500	3
Garden Plain I LP																	500	500	1
Halkirk I Wind Project LP					250							2,500						2,750	2
Heartland Generation Ltd.				250										500				750	2
International Paper Canada Pulp Holdings ULC													500					500	1
Irrican Power Ltd.														500				500	1
NAT-1 Limited Partnership					1,500													1,500	1
Oldman 2 Wind Farm Limited																500		500	1
Paintearth Wind Project Limited Partnership												1,500						1,500	1
Pembina Pipeline Corporation										500								500	1
Powerex Corp.						250												250	1
TA Alberta Hydro LP							250	250										500	2
Tourmaline Oil Corp.		83,500																83,500	2
TransAlta Generation Partnership					500													500	1
Vitol Inc.						250												250	1
Voltus Energy Canada Ltd.										2,500								2,500	1
Winnifred Wind Project L.P.												1,000					500	1,500	3
Total	**250**	**83,500**	**500**	**1,500**	**2,500**	**500**	**500**	**250**	**142,500**	**3,250**	**500**	**5,500**	**1,000**	**1,000**	**500**	**500**	**1,500**	**245,750**	**38**

The ISO rules listed in Table 2 fall into the following categories:

103 Administration
201 General (Markets)
202 Dispatching the Markets
203 Energy Market
205 Ancillary Services Market
206 Interim Market Power Mitigation
301 General (System Reliability and Operations)
302 Transmission Constraint Management
304 Routine Operations
306 Outages and Disturbances
501 General
502 Technical Requirements
503 Technical and Operating Requirements
504 Legal Owners of Transmission Facilities and Load Facilities
505 Legal Owners of Generating Facilities

3. ARS ENFORCEMENT

The MSA assesses market participant compliance with Alberta Reliability Standards (ARS) and issues NSPs where appropriate.

The ARS ensure the various entities involved in grid operation have practices in place, including procedures, communications, coordination, training, and maintenance to support the reliability of the AIES. ARS apply to both market participants and the AESO. ARS are divided into two categories: Operations and Planning (O&P) and Critical Infrastructure Protection (CIP). The MSA's approach to compliance with ARS focuses on promoting awareness of obligations and a proactive compliance stance. The MSA's process, in conjunction with AUC rules, provides incentives for robust internal compliance programs, and self-reporting.

In accordance with AUC Rule 027, NSPs for CIP ARS contraventions are not made public, nor is any information related to the nonpayment or dispute of a CIP ARS NSP. CIP matters often deal with cyber security issues and there is concern that granular public reporting may itself create a security risk. As such, the MSA only reports aggregated statistics regarding CIP ARS outcomes.

From April 1 to June 30, 2025, the MSA addressed 18 O&P ARS compliance matters (Table 3). 48 O&P ARS matters were carried forward to the quarter. During this period, nine matters were addressed with NSPs, totalling $44,250 in financial penalties (Table 4). For the same period, the MSA addressed 10 CIP ARS compliance matters, as reported in Table 5, and two matters were addressed with NSPs, totalling $12,000 in financial penalties. 148 CIP ARS matters were carried forward to next quarter.

Table 3: O&P ARS compliance outcomes from April 1 to June 30, 2025

Reliability standard	Forbearance	Notice of specified penalty	Total
BAL-005	-	2	2
FAC-008	-	1	1
PER-006	-	3	3
PRC-001	1	-	1
PRC-002	4	-	4
PRC-005	3	3	6
PRC-025	1	-	1
Total	9	9	18

Table 4: Specified penalties issued from April 1 to June 30, 2025, for contraventions of O&P ARS

Market participant	Total specified penalty amounts by ARS ($)				Total ($)	Matters
	BAL-005	FAC-008	PER-006	PRC-005		
Alberta Electric System Operator	15,000				15,000	2
ATCO Electric Ltd.		1,500			1,500	1
Garden Plain I LP			1,500		1,500	1
Heartland Generation Ltd.				2,500	2,500	1
Suncor Energy Inc.				3,750	3,750	1
TA Alberta Hydro LP			2,500	12,500	15,000	2
TransCanada Energy Ltd.			5,000		5,000	1
Total	15,000	1,500	9,000	18,750	44,250	9

The ARS outcomes listed in Table 3 and Table 4 are contained within the following categories:

BAL Resource and Demand Balancing
FAC Facilities Design, Connections, and Maintenance
PER Personnel Performance, Training, and Qualifications
PRC Protection and Control

Table 5: CIP ARS compliance outcomes from April 1 to June 30, 2025

Reliability standard	Forbearance	No contravention	Notice of specified penalty	Total
CIP-002	3	-	-	3
CIP-003	3	-	-	3
CIP-007	1	-	1	2
CIP-010	-	-	1	1
CIP-012	-	1	-	1
Total	7	1	2	10

The ARS outcomes listed in Table 5 are contained within the following categories:

CIP-002 BES Cyber System Categorization
CIP-003 Security Measurement Controls
CIP-007 System Security Management
CIP-010 Configuration Change Management and Vulnerability Assessments
CIP-012 Communications between Control Centres