



MARKET  
SURVEILLANCE  
ADMINISTRATOR

# MSA Compliance Review 2023

March 22, 2024

**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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## **EXECUTIVE SUMMARY**

The Market Surveillance Administrator (MSA) is a public agency established under the *Alberta Utilities Commission Act* (AUCA) whose mandate includes surveillance, investigation, and enforcement in respect of the Alberta electricity markets.

This Compliance Review 2023 is provided pursuant to section 23(2) of the *Transmission Regulation* for the calendar year 2023. The MSA will continue to provide public updates regarding its compliance activities in its routine public reporting.

### *Promotion of compliance and accountability*

The MSA's activities benefit Albertans by ensuring the Alberta electricity markets are competitive and that there is a well-functioning and dependable electricity sector. Through these activities, the MSA contributes to the reliability, affordability, efficiency, and competitiveness of the Alberta electricity sector and promotes a culture of compliance and accountability.

### *ISO rules and Alberta Reliability Standards*

Rules are established in Alberta by the Independent System Operator (ISO), operating as the Alberta Electric System Operator (AESO), in consultation with market participants and submitted to the Alberta Utilities Commission (AUC) for approval (ISO rules). The purpose of ISO rules is to promote orderly and predictable actions and to facilitate the operation of the Alberta interconnected electric system (AIES) and associated markets.

As set out in the *Transmission Regulation*, the AESO, in consultation with the electricity industry, reviews North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) standards to assess and recommend to the AUC whether those standards are applicable to Alberta. If approved, these standards become Alberta Reliability Standards (ARS), and the AESO and market participants must comply with ARS, as applicable. ARS are comprised of Operations and Planning (O&P) and Critical Infrastructure Protection (CIP) standards.

The purpose of ARS is to ensure that the AESO and those market participants involved in grid operations in Alberta (e.g., owners and operators of generating units, aggregated generating facilities, distribution systems and transmission facilities) are appropriately implementing procedures, communication, coordination, training, and maintenance, among other practices, to support the reliability of the AIES. Given the scope of the AESO's responsibilities, the majority of ARS apply to the AESO, a smaller fraction of ARS apply to both market participants and the AESO, and some apply to only market participants.

### *Enforcement framework*

The AESO has a mandate to conduct compliance monitoring of market participants. The AESO identifies suspected contraventions of ISO rules and ARS by market participants and refers these to the MSA. The AESO also self-reports its own suspected contraventions of ISO rules and ARS

to the MSA. Further, the MSA identifies potential contraventions through its own surveillance activities.

The MSA Compliance Process encourages the self-reporting of non-compliance with ISO rules and ARS with the prospect of favourable treatment, including forbearance or reduced penalties, in order to promote self-monitoring and robust compliance programs.

After reviewing self-reported and referred matters, the MSA determines the appropriate disposition in accordance with the MSA Compliance Process. The MSA may impose a specified penalty where appropriate, in accordance with AUC Rules 019 for contraventions of ISO rules and 027 for contraventions of ARS. If a person disputes a notice of specified penalty, the matter is adjudicated following a hearing before the AUC. The MSA may also forbear if the circumstances warrant. The MSA may enter into a settlement agreement concerning a contravention, which is subject to AUC approval. Alternatively, the MSA may request a hearing before the AUC, in which case the AUC determines whether a contravention has occurred and, if a contravention is found, the appropriate penalty.

### *2023 Outcomes*

In 2023, the overall number of ISO rules matters received increased compared to 2022.<sup>1</sup> Self-reported matters from market participants continued to represent a large majority of the matters assessed, indicating that market participants continue to actively monitor for and self-disclose non-compliance. The distribution of contraventions across ISO rules was broadly similar to previous years, with ISO rules that govern the most frequent day-to-day market activities accounting for the majority of matters. More than half of the matters addressed with notices of specified penalty were for first contraventions within a 12-month period, which suggests that there were few persistent compliance problems with ISO rules.

The number of ARS matters received and addressed by the MSA in 2023 was lower than in 2022. CIP ARS matters continue to represent most ARS matters. The MSA continues to monitor these matters closely and to promote appropriate mitigation activities.

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<sup>1</sup> A matter is considered addressed once a disposition has been issued. Accordingly, a matter is not always addressed in the same year that it was received by the MSA or that the associated conduct occurred.

## **2023 NUMBERS AT A GLANCE**

- 298 ISO rules matters were addressed in 2023, compared to 372 matters addressed in 2022.
- 100 ISO rules matters were addressed with notices of specified penalty, totalling \$173,250 in financial penalties. No specified penalties were disputed or unpaid.
- Self-reporting accounted for 81% of ISO rules matters addressed in 2023, down from 87% in 2022.
- 56 O&P ARS matters were addressed in 2023, compared to 80 matters addressed in 2022.
- 16 O&P ARS matters were addressed with notices of specified penalty, totalling \$55,000 in financial penalties. No specified penalties were disputed or unpaid.
- 162 CIP ARS matters were addressed in 2023, compared to 243 matters addressed in 2022.
- 57 CIP ARS matters were addressed with notices of specified penalty, totalling \$162,000 in financial penalties. No specified penalties were disputed or unpaid.
- Self-reporting accounted for 57% of total ARS matters addressed in 2023, down from 76% in 2022.

## **1 INTRODUCTION**

The MSA has a broad mandate of surveillance, investigation, and enforcement in respect of the Alberta electricity markets. Through enforcement of ISO rules and ARS, the MSA contributes to the reliability and competitiveness of the AIES and promotes a culture of compliance and accountability among the AESO and market participants.

Market participants play a crucial role in promoting compliance; as such, the MSA encourages market participants to self-report instances of non-compliance. The MSA may grant forbearance if the circumstances warrant.

The MSA works collaboratively with the AESO and WECC regarding compliance issues. These entities also provide the MSA with subject matter expertise and technical assessments for matters under consideration, upon MSA request. This collaboration continues to pay dividends, ensuring rigorous enforcement decisions are made by the MSA.

The MSA Compliance Process sets out how compliance enforcement of ISO rules and ARS is performed within the mandate of the MSA. The MSA continuously evaluates its processes considering industry and regulatory developments, with a view to identifying efficiencies and making improvements.

## **2 ALBERTA UTILITIES COMMISSION RULES DEVELOPMENTS**

The AUC rules governing the MSA's application of specified penalties for contraventions of ISO rules and ARS are, respectively, Rule 019 and Rule 027. There have been no revisions to Rule 019 or Rule 027 since the publication of MSA Compliance Review 2022.

## **3 ISO RULES**

### **3.1 Activity levels**

The MSA has ISO rules enforcement responsibilities regarding the compliance of market participants and the AESO. In 2023, the MSA addressed 298 ISO rules matters and had 323 matters unresolved at the end of the year. Of the 298 matters, 100 (34%) resulted in a notice of specified penalty, 182 (61%) resulted in forbearance by the MSA, and 16 (5%) were issued a no contravention disposition. The MSA brought two settlements related to ISO rule contraventions to the AUC for approval in 2023, which are summarized in section 3.2 below. None of the notices of specified penalty issued by the MSA in 2023 were disputed or remained unpaid at the time of publication of this review.

Figure 1 indicates the number of ISO rules matters received in 2023 was significantly higher than last year, with a return to volume not observed since 2019. Variation in self-reporting can be attributed to market participants entering the market, changes to ISO rules, or persistent compliance issues. The number of unresolved matters at the end of 2023 was 323, up from 65 last year, as demonstrated in Figure 2.

Figure 1: ISO rules compliance matters received<sup>2</sup>

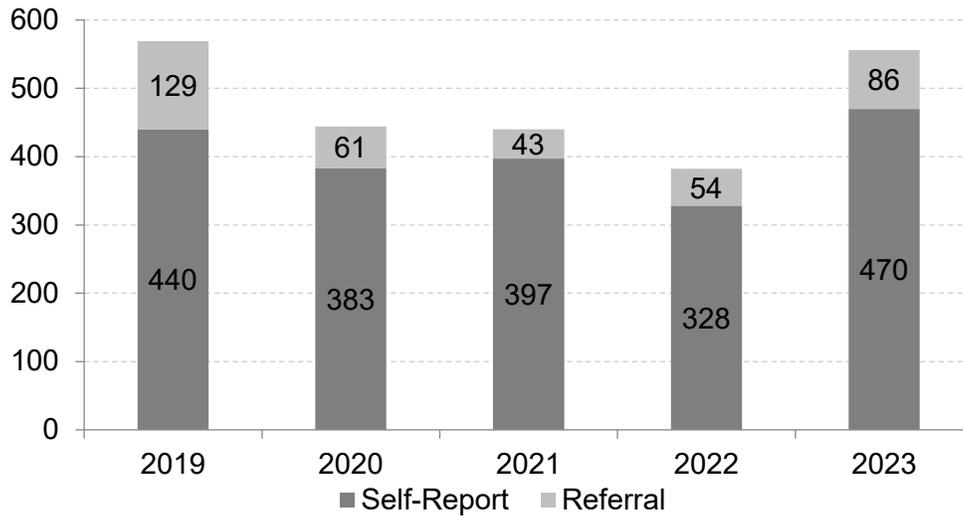
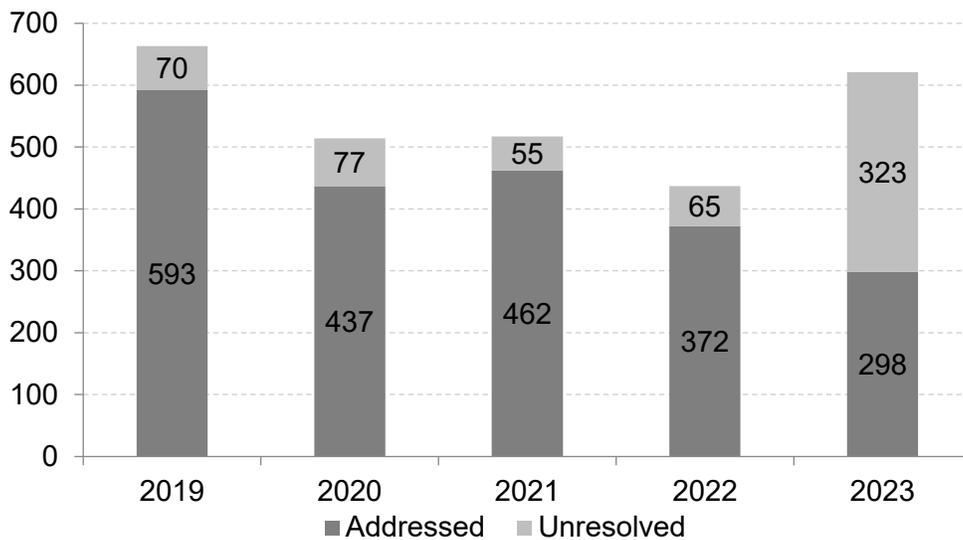


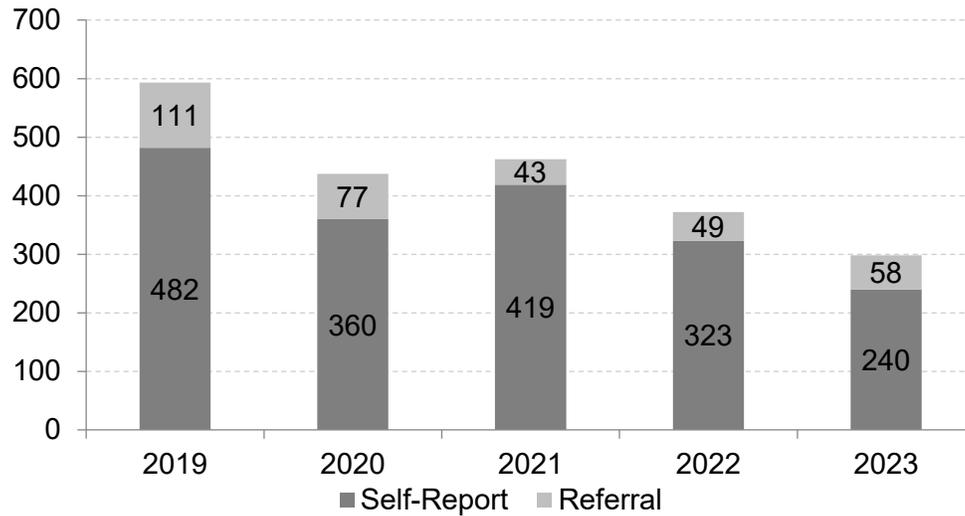
Figure 2: ISO rules matters addressed or unresolved at the end of the year



In 2023, the MSA addressed 240 ISO rules matters that were received via self-report and 58 matters that were received through AESO referrals (81% and 19% of total matters addressed, respectively). The number of referred matters both received and addressed in 2023 was higher compared to 2022, as seen in Figure 1 and Figure 3.

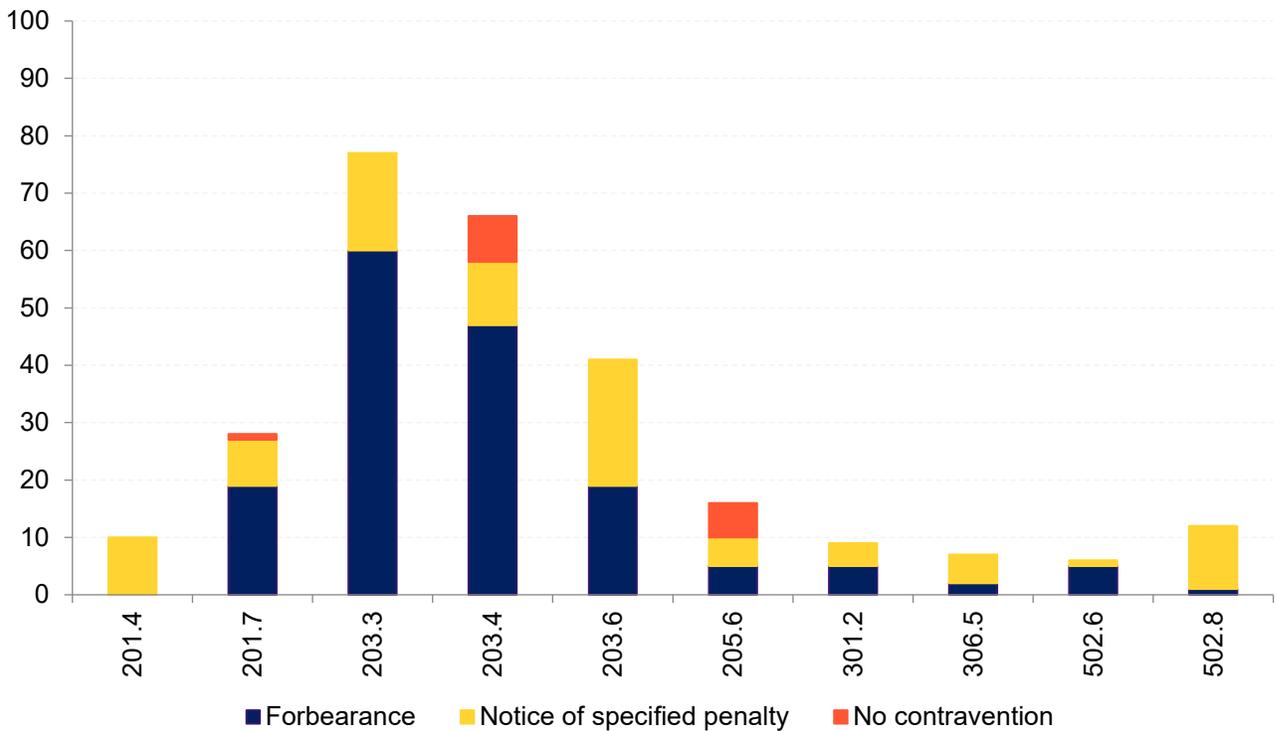
<sup>2</sup> Differences in Figure 1 and Figure 2 compared with previous years' Compliance Review can be attributed to changes in the number of MSA matters associated with a referral, or the recategorization of a matter to an investigation.

Figure 3: ISO rules matters addressed, self-reports versus AESO referrals



As observed in Figure 4 and Figure 5, most matters reviewed by the MSA relate to ISO rules governing the most common day-to-day market activities. These include the submission of energy restatements (section 203.3), delivery of energy in response to a dispatch (section 203.4), submissions related to interchange transactions (section 203.6), and acknowledging dispatches (section 201.7).

Figure 4: ISO rules compliance outcomes in 2023<sup>3</sup>

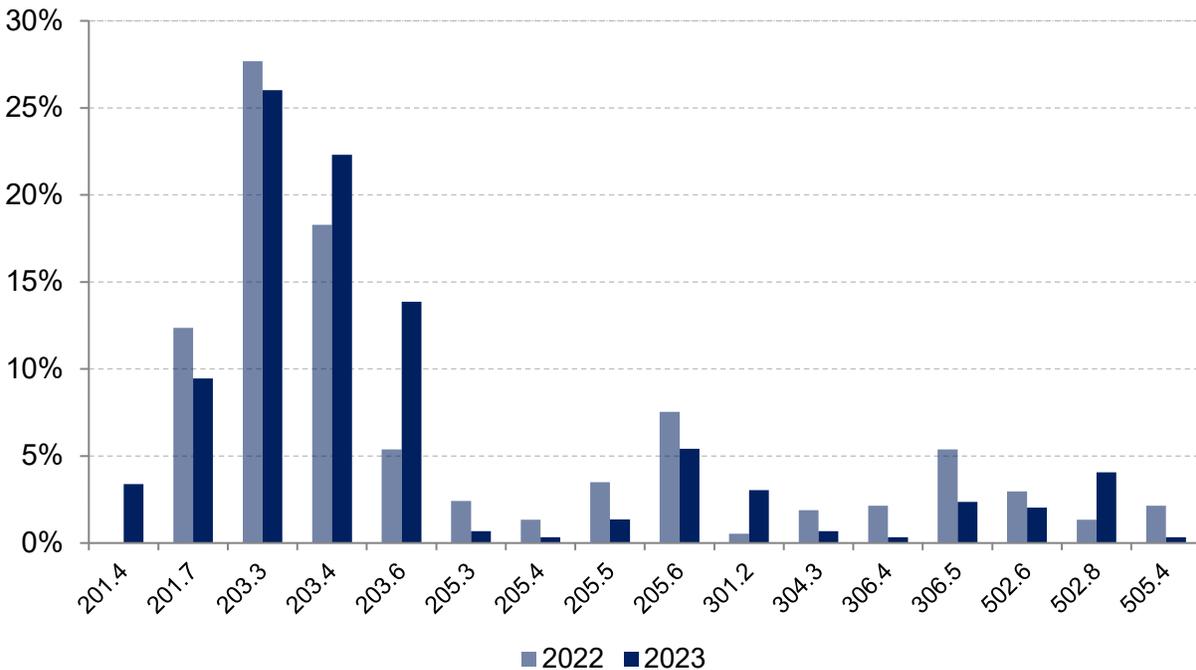


The sections of ISO rules listed in Figure 4 and Figure 5 fall into the following categories:

- 201 General (Markets)
- 203 Energy Market
- 205 Ancillary Services Market
- 301 General (System Reliability and Operations)
- 306 Outages and Disturbances
- 502 Technical Requirements

<sup>3</sup> For ISO rules that had at least five matters addressed in 2023. Outcomes for all ISO rules matters are presented in Table A1. The MSA may issue a no contravention disposition when the specific conduct at issue has not contravened the requirements of the ISO rules or meets a specific compliance exception outlined in the ISO rules. None of the no contravention outcomes in 2023 were the result of a difference in interpretation with AESO referral findings.

Figure 5: 2022 and 2023 addressed ISO rules matters<sup>4</sup>



Twenty-five different sections of the ISO rules were addressed in self-reports and referrals in 2023,<sup>5</sup> compared to 26 sections in 2022. There were increases in the share of section 203.6 (+8%) and 203.4 (+4%) matters and decreases in the share of section 201.7 and 306.5 matters (-3%).

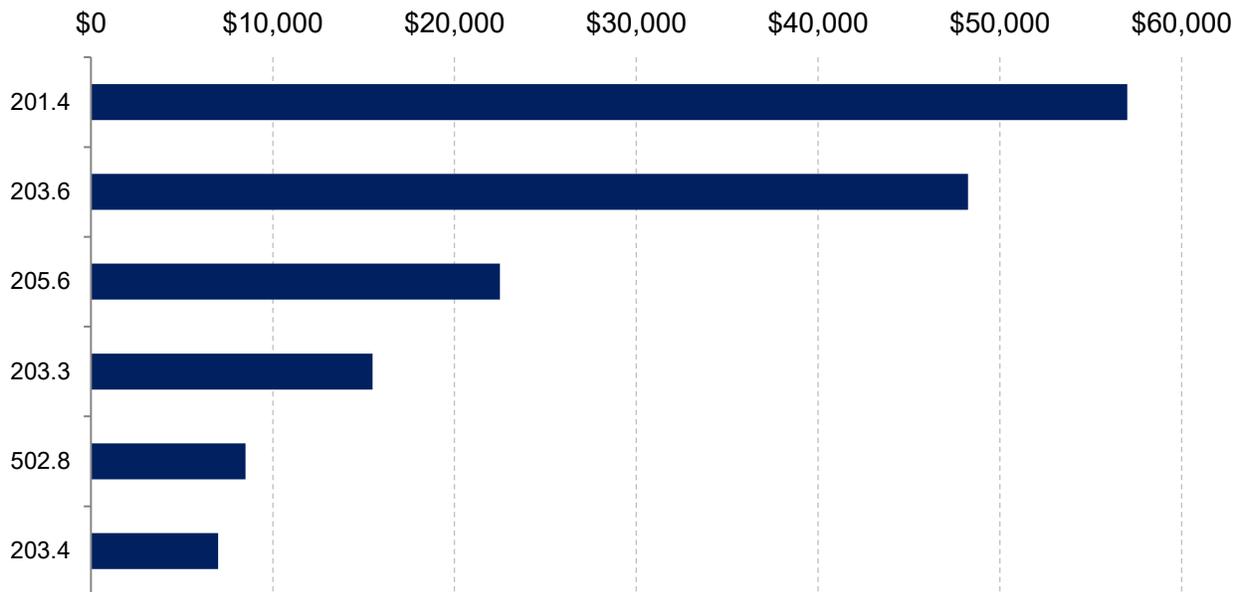
In 2023, the MSA addressed 100 ISO rules matters with notices of specified penalty issued to 40 market participants, resulting in financial penalties totalling \$173,250. In 2022, the MSA addressed 91 ISO rules matters with notices of specified penalty issued to 40 market participants, resulting in financial penalties totalling \$143,500. Of the 240 self-reported ISO rules matters addressed in 2023, 44 (18%) were addressed with notices of specified penalty, while 56 of the 58 (97%) addressed matters referred by the AESO were issued a notice of specified penalty.

As indicated in Figure 6 and Table A2, contraventions of ISO rules section 201.4 were associated with the highest penalty amounts, totalling \$57,000. Penalty amount totals are directly related to the number of penalties issued, as well as the penalty escalation and self-disclosure discount set out in AUC Rule 019.

<sup>4</sup> Only sections of the ISO rules with at least five addressed matters in one year are displayed.

<sup>5</sup> See Table A1 for more detail.

Figure 6: Total specified penalties for contraventions of ISO rules in 2023<sup>6</sup>

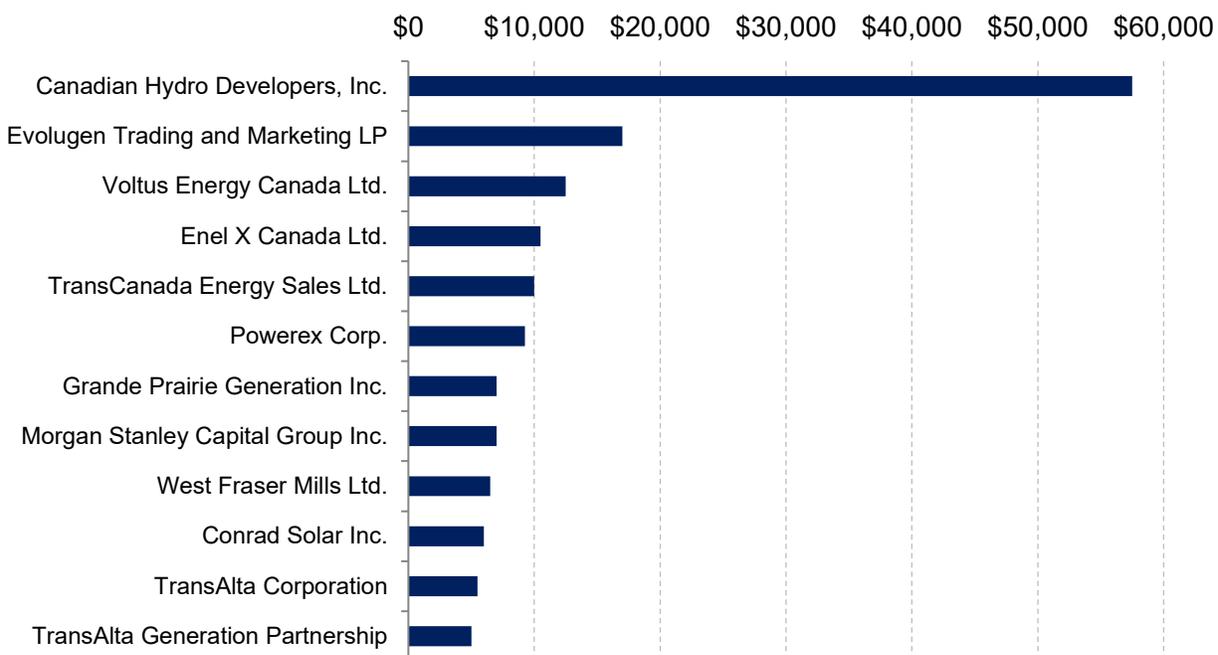


As indicated in Figure 7 and Table A2, 12 market participants were issued \$5,000 or more in total penalties over this period. The percentage of matters addressed with a notice of specified penalty for a first contravention within the previous 12 months decreased to 58% in 2023 from 63% in 2022. The high proportion of first contraventions remains a positive indicator that there are few persistent compliance problems with ISO rules in 2023. Among the remaining matters addressed with specified penalties issued in 2023, 17% were second contraventions, 10% were third contraventions, and 15% were fourth or subsequent contraventions within the previous 12 months. Six market participants received penalties escalated to the fourth contravention or higher. Higher frequency contraventions receive greater specified penalties as per AUC Rule 019.

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<sup>6</sup> Only sections of the ISO rules with penalties totalling \$5,000 or more are included in this figure. See Table A2 for more detail.

Figure 7: Total specified penalties for contraventions of ISO rules by market participant in 2023<sup>7</sup>



## 3.2 AUC Approved Settlements

### 3.2.1 SUM1 frequency response<sup>8</sup>

In August 2021, the AESO referred two suspected contraventions of ISO Rule 205.5 *Spinning Reserve Technical Requirements and Performance Standards* (ISO Rule 205.5) by Canadian Hydro Developers Ltd. (Canadian Hydro) in relation to the Summerview1 battery storage asset (SUM1). The AESO suspected Canadian Hydro contravened ISO Rule 205.5 based on two instances where the Alberta Interconnected Electric System (AIES) frequency dropped below the prescribed deadband, but SUM1 did not increase its real power output in proportion to the drop in system frequency.

Following an investigation, the MSA was satisfied that, contrary to ISO Rule 205.5, TransAlta Corporation (TransAlta), as the operator of SUM1, and Canadian Hydro failed to ensure SUM1 was equipped with a governor that had control settings providing an immediate, automatic and sustained response to frequency deviations on the AIES. The MSA also found that, contrary to ISO Rule 205.5, when SUM1 was dispatched to provide spinning reserve, SUM1 failed to provide the immediate, automatic, and sustained response to drops in system frequency below the deadband required by ISO Rule 205.5.

<sup>7</sup> Only sections of the ISO rules with penalties totalling \$5,000 or more are included in this figure. See Table A2 for more detail.

<sup>8</sup> First published in [MSA Quarterly Report for Q3 2023](#), page 98

The contraventions of ISO Rule 205.5 arose because two settings necessary to allow SUM1 to meet the requirements of ISO Rule 205.5 were not enabled in the software which controls SUM1. Because the necessary settings were not enabled, SUM1 was incapable of providing the required frequency response from October 27, 2020 to June 1, 2021. During this period, Canadian Hydro offered spinning reserve from SUM1 on the WattEx Exchange and derived revenue of \$1,931,204.68 from the sale of spinning reserve, net of recoveries for directive/dispatch non-compliance and costs to charge SUM1 following responses to directives. The MSA found that, by offering spinning reserve while SUM1 was incapable of meeting the requirements of ISO Rule 205.5, TransAlta misrepresented the availability of ancillary services from SUM1, contrary to subsection 2(d) of the *Fair, Efficient and Open Competition Regulation* AR 20.

TransAlta and Canadian Hydro fully and completely co-operated with the MSA in the course of the investigation. After it received the MSA's summary of facts and findings, TransAlta implemented a program of corrective actions to prevent similar contraventions from occurring.

The MSA, TransAlta, and Canadian Hydro reached a comprehensive settlement agreement which provided for:

- a) payment of an Administrative Monetary Penalty (AMP) of \$2,470,204.68, composed of:
  - i) \$1,931,204.68 as disgorgement of the estimated economic benefit to Canadian Hydro of;
  - ii) \$39,000 in interest on the benefit wrongly taken in the amount; and
  - iii) \$500,000 as an additional administrative monetary penalty;
- b) payment of the MSA's costs, in the amount of \$65,000; and
- c) an order directing TransAlta and Canadian Hydro to meet with the MSA to share and discuss their progress in meeting the program of corrective actions and permitting the MSA to seek a further order from the Alberta Utilities Commission (Commission) if it determined TransAlta had not made adequate progress toward implementing its program of corrective actions.

The Commission approved the Settlement Agreement in *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*, a copy of which is available [here](#).

### 3.2.2 HR Milner outage reporting<sup>9</sup>

Following an investigation, the MSA was satisfied that Milner Power II Limited Partnership, by its General Partner Milner Power II Inc. (Milner) contravened ISO Rule 306.5 Generation Outage Reporting and Coordination (ISO Rule 306.5), section 6 of the Electric Utilities Act SA 2003 c E-5.1 (EUA), and subsections 2(d), 2(e), and 4(2) of the Fair Efficient and Open Competition Regulation AR 159/2009 (FEOC Reg) (collectively, the Contraventions).

The MSA also investigated possible contraventions of the FEOC Reg by Maxim Power Corp. (Maxim), and concluded that Maxim and its trading staff did not improperly trade forward market products and, at all times, acted in good faith and for no improper purposes with respect to their trades of forward market products.

Subsection 4(2) of the FEOC Reg requires electricity market participants to provide outage records to the AESO as soon as reasonably practicable in a form and manner and containing the contents required by the AESO. ISO Rule 306.5 prescribes the requirements for the submission of outages to the AESO, and requires pool participants to submit: (i) the dates, times, durations, and impact to the affected asset's MW capability of planned outages through ETS; and (ii) any revisions to planned outages to the AESO as soon as reasonably practicable.

In breach of ISO Rule 306.5 and FEOC Reg subsection 4(2), Milner unintentionally did not remove an outage that was planned for October 2021 as soon as reasonably practicable. In breach of ISO Rule 306.5 and FEOC Reg subsection 4(2), Milner did not submit an outage planned for November 2021 as soon as reasonably practicable. By its conduct and omissions, Milner breached subsections 2(d) and 2(e) of the FEOC Reg and, in doing so, breached its obligation under section 6 of the EUA.

Maxim Power Corp. (Maxim) and Milner fully co-operated with the MSA's investigation. After they received the MSA's summary of facts and findings in its investigation, Maxim and Milner took remedial steps to prevent a recurrence of the contraventions. The MSA, Maxim, and Milner reached a comprehensive settlement agreement which provided for:

- a) Milner's payment of an administrative penalty of \$20,000, and
- b) Milner's of the MSA's costs in the amount of \$20,000.

The Commission approved the settlement agreement in Decision 28589-D01-2023 Market Surveillance Administrator - Application for Approval of a Settlement Agreement with Maxim Power Corp. and Milner Power II Limited Partnership, a copy of which is available [here](#).

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<sup>9</sup> First published in [MSA Quarterly Report for Q4 2023](#), page 95

## **4 ALBERTA RELIABILITY STANDARDS**

### **4.1 Monitoring and enforcement of the AESO's compliance**

The MSA has ARS enforcement responsibilities regarding the compliance of market participants and the AESO. The majority of ARS are applicable to the AESO, given the scope of its responsibilities and its mandate to maintain system stability and reliability. WECC assists the MSA in its monitoring of the AESO's compliance with ARS, pursuant to a services agreement.<sup>10</sup>

As a guide to monitoring the AESO's compliance with ARS, the MSA and WECC use the Compliance Monitoring Program developed by the AESO to monitor market participants. Efforts are made to maintain consistency, where possible, with the program WECC applies to other entities. Each year the MSA works with WECC to develop a plan to monitor the AESO's compliance with ARS. The plan sets out the scope of compliance monitoring, including audits and self-certification. In 2024, the AESO will perform its annual self-certification of ARS compliance as well as an on-site compliance monitoring audit for CIP ARS.

### **4.2 Activity levels: Operations and Planning**

The MSA addressed 56 O&P ARS matters in 2023. At the end of 2023, 44 O&P ARS matters remained under review. Of the 56 matters addressed in 2023, 37 (66%) resulted in forbearance, 16 (29%) resulted in a notice of specified penalty, and three (5%) resulted in no contravention.<sup>11</sup>

As indicated in Figure 8, the MSA opened 75 O&P ARS matters in 2023, compared with 80 in 2022. In 2023, the number of O&P ARS matters addressed was lower compared to 2022, as seen in Figure 9 and Figure 10. The number of O&P ARS matters varies from year to year due to the three-year audit cycle.

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<sup>10</sup> WECC is the regional entity responsible for assuring the reliability of the bulk electric system in the Western Interconnection. See [MSA WECC Services Agreement](#) (April 30, 2010).

<sup>11</sup> None of the no contravention outcomes in 2023 were the result of a difference in interpretation with AESO referral findings.

Figure 8: O&P ARS matters received

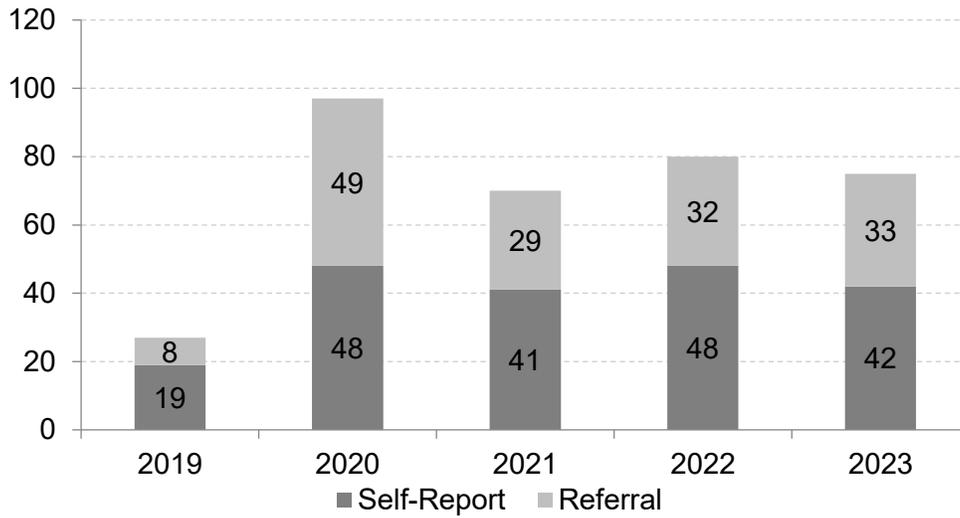


Figure 9: O&P ARS matters addressed or unresolved at the end of the year

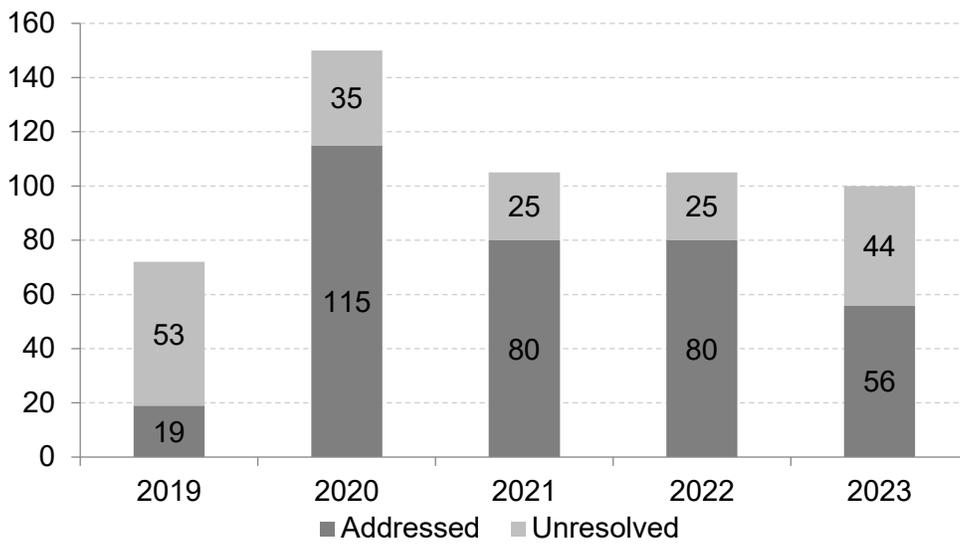
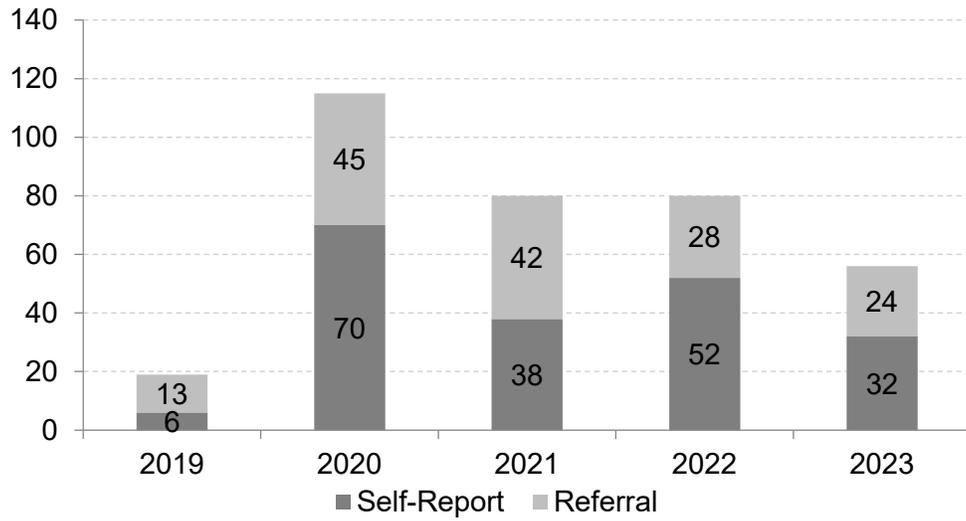
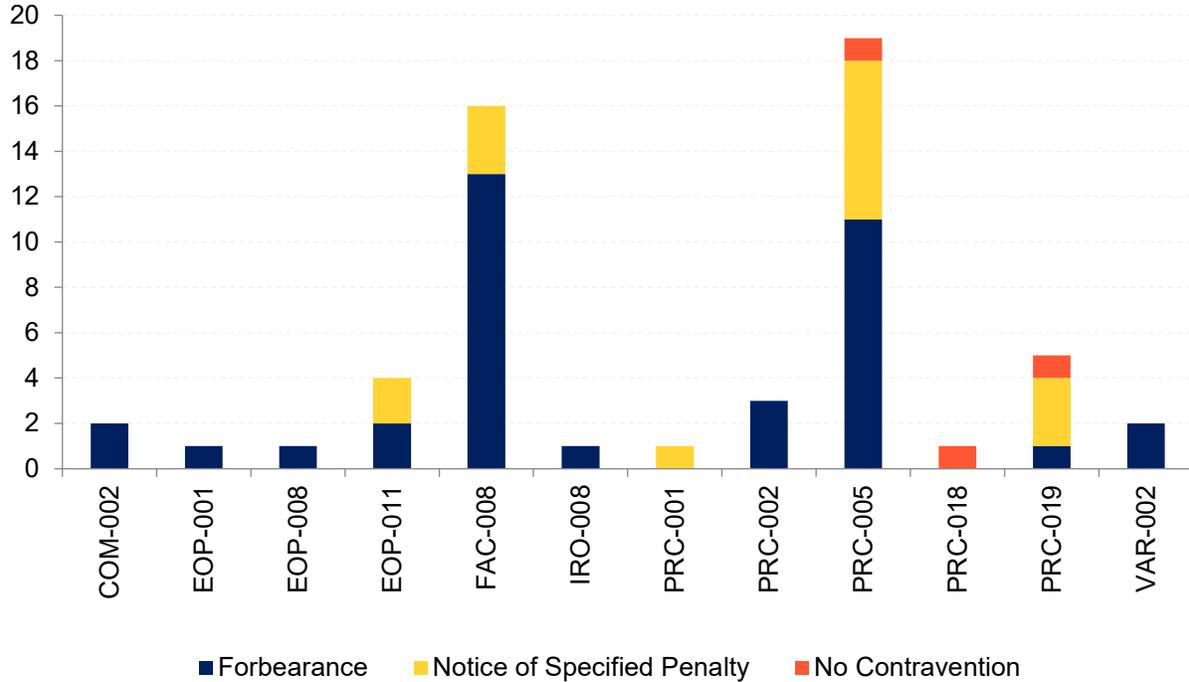


Figure 10: O&P ARS matters addressed, self-reports and AESO referrals



As demonstrated by Figure 11 and Figure 12, the most frequent O&P ARS contraventions addressed this year continue to be related to FAC-008 and PRC-005.

Figure 11: O&P ARS compliance outcomes in 2023<sup>12</sup>

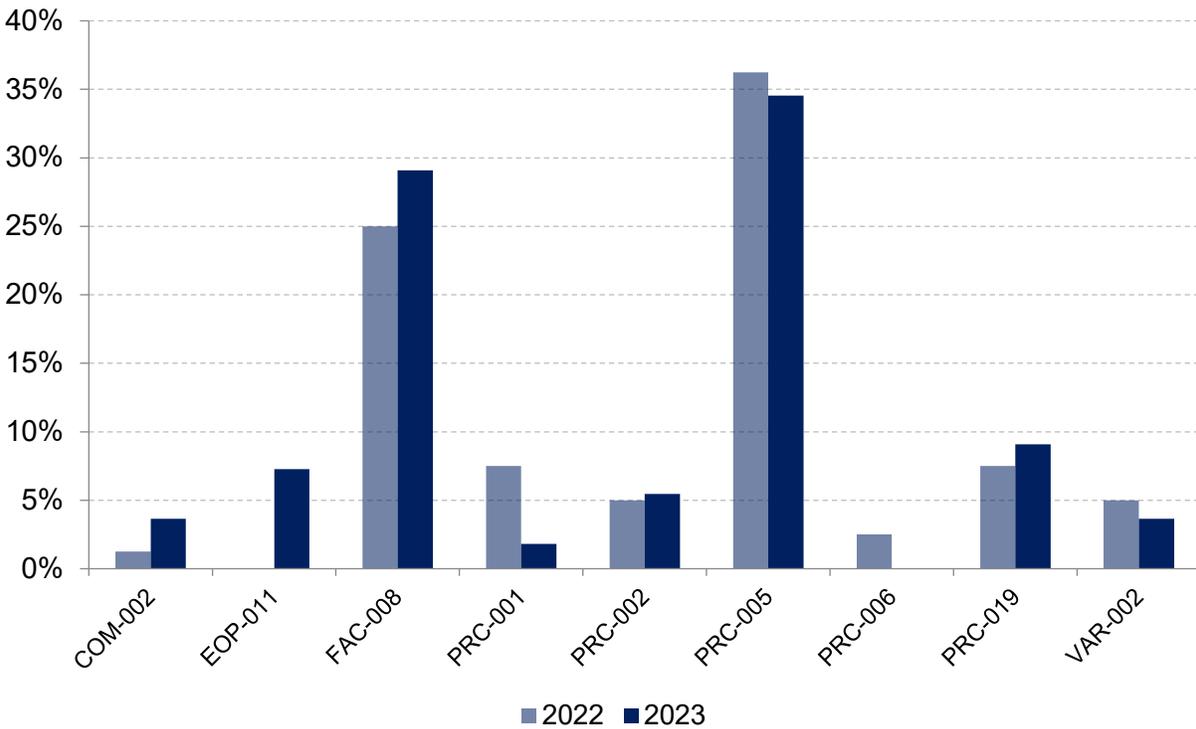


The ARS listed in Figure 11 and Figure 12 fall into the following categories:

- COM Communications
- EOP Emergency Preparedness and Operations
- FAC Facilities Design, Connections, and Maintenance
- IRO Interconnection Reliability Operations and Coordination
- PRC Protection and Control
- VAR Voltage and Reactive

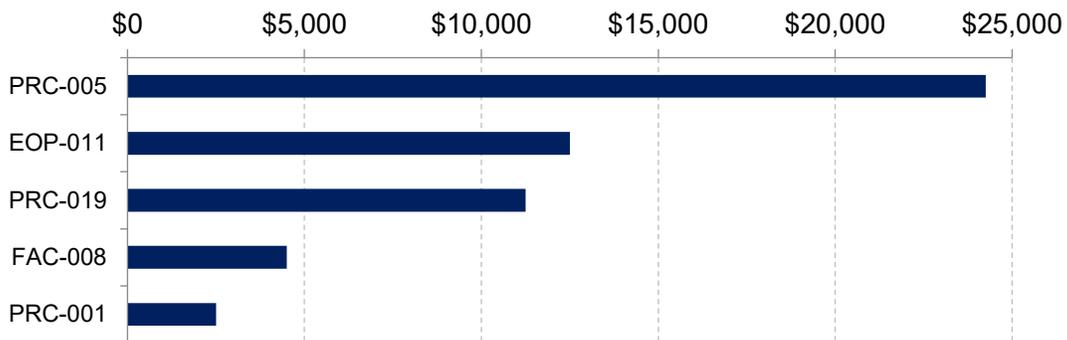
<sup>12</sup> See Table A3 for more detail.

Figure 12: 2022 and 2023 addressed O&P ARS matters<sup>13</sup>



In 2023, 16 matters involving five ARS were addressed with notices of specified penalty, resulting in financial penalties totalling \$55,000. In 2022, seven matters involving four ARS were addressed with notices of specified penalty, resulting in total penalties of \$33,375. Figure 13 and Figure 14 show the total penalty amount in 2023 by ARS and by market participant.

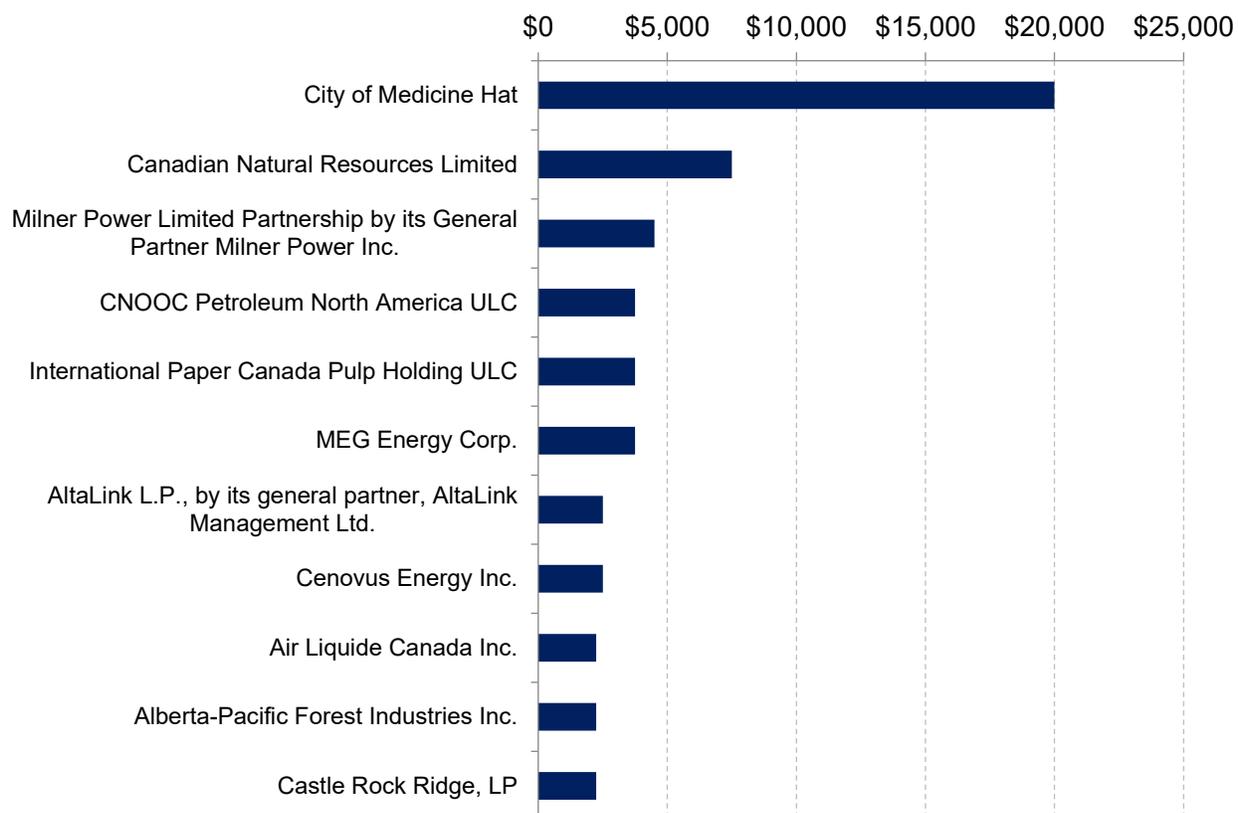
Figure 13: Total specified penalties for O&P ARS addressed in 2023<sup>14</sup>



<sup>13</sup> Only O&P ARS with at least five addressed matters in one year are displayed.

<sup>14</sup> See Table A4 for more detail.

Figure 14: Total specified penalties for contraventions of O&P ARS by market participant in 2023<sup>15</sup>



### 4.3 Activity levels: Critical Infrastructure Protection

The MSA addressed 162 CIP ARS matters in 2023. At the end of 2023, 107 CIP ARS matters remained under review. Of the 162 matters, 57 (35%) were addressed with notices of specified penalty, 102 (63%) resulted in forbearance, two (1%) were issued a no contravention disposition, and one (1%) was rejected.<sup>16</sup>

As indicated in Figure 15, the MSA opened 185 CIP ARS matters in 2023, compared with 250 in 2022. The number of CIP ARS matters is likely to vary from year to year due to the three-year audit cycle. In 2023, the number of addressed CIP ARS matters decreased compared to 2022, as seen in Figure 16 and Figure 17.

<sup>15</sup> See Table A4 for more detail.

<sup>16</sup> The MSA may issue a no contravention disposition when the specific conduct at issue has not contravened the requirements of the ARS. None of the no contravention outcomes in 2023 were the result of a difference in interpretation with AESO referral findings. A self-reported matter may be rejected if it is not complete or pertains to conduct not self-identified by the market participant.

Figure 15: CIP ARS matters received<sup>17</sup>

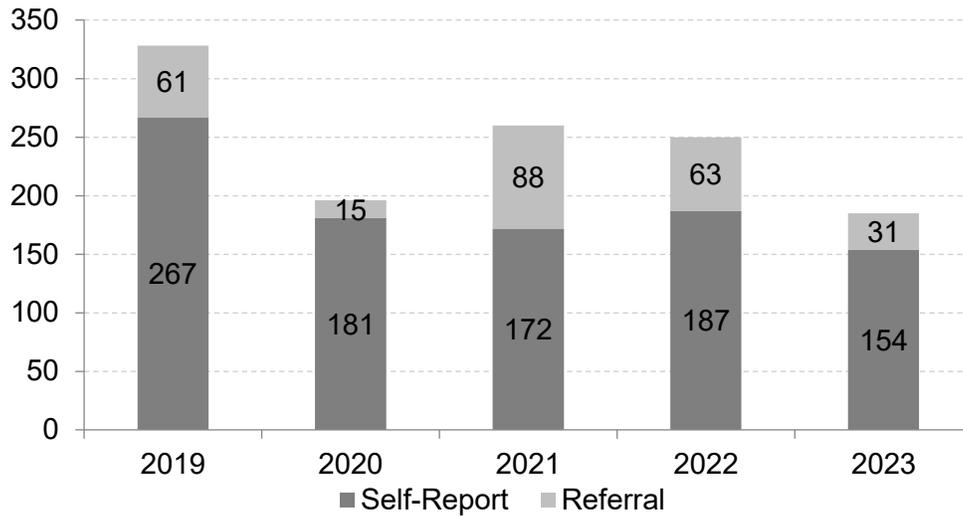
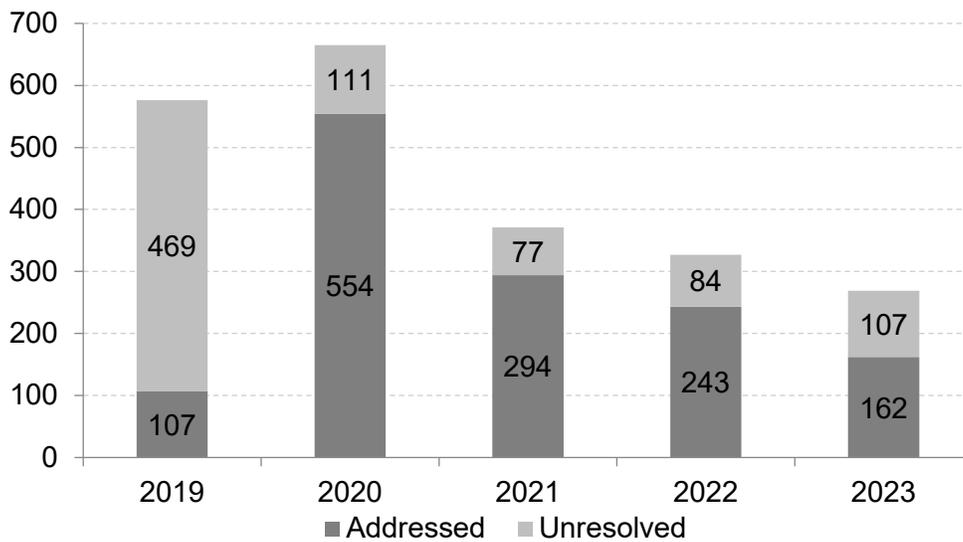


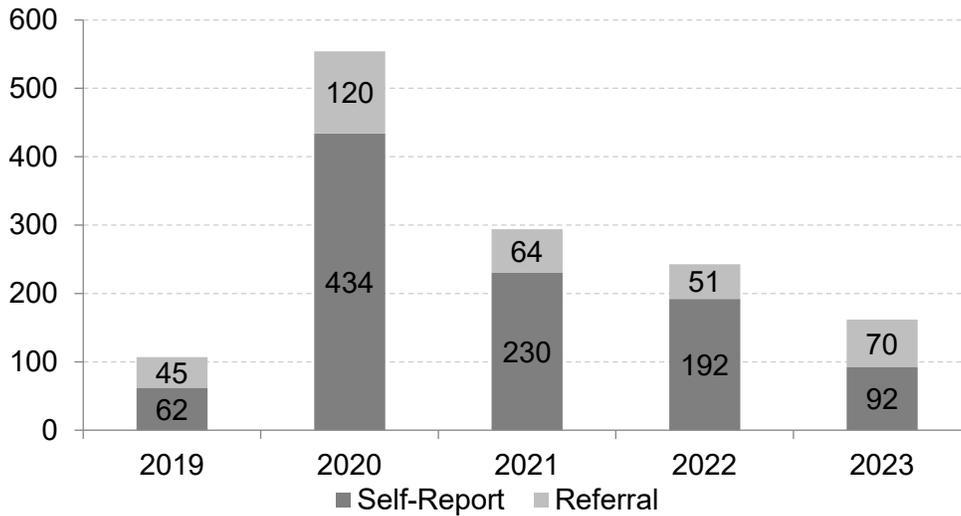
Figure 16: CIP ARS matters addressed or unresolved at the end of the year<sup>18</sup>



<sup>17</sup> Differences in Figure 15 and Figure 16 compared with previous years' Compliance Review can be attributed to changes in the number of MSA matters associated with a referral.

<sup>18</sup> The large number of CIP ARS matters addressed in 2020 was the result of resolving a backlog of CIP ARS matters, which had accumulated from previous years.

Figure 17: CIP ARS matters addressed, self-reports and AESO and WECC referrals

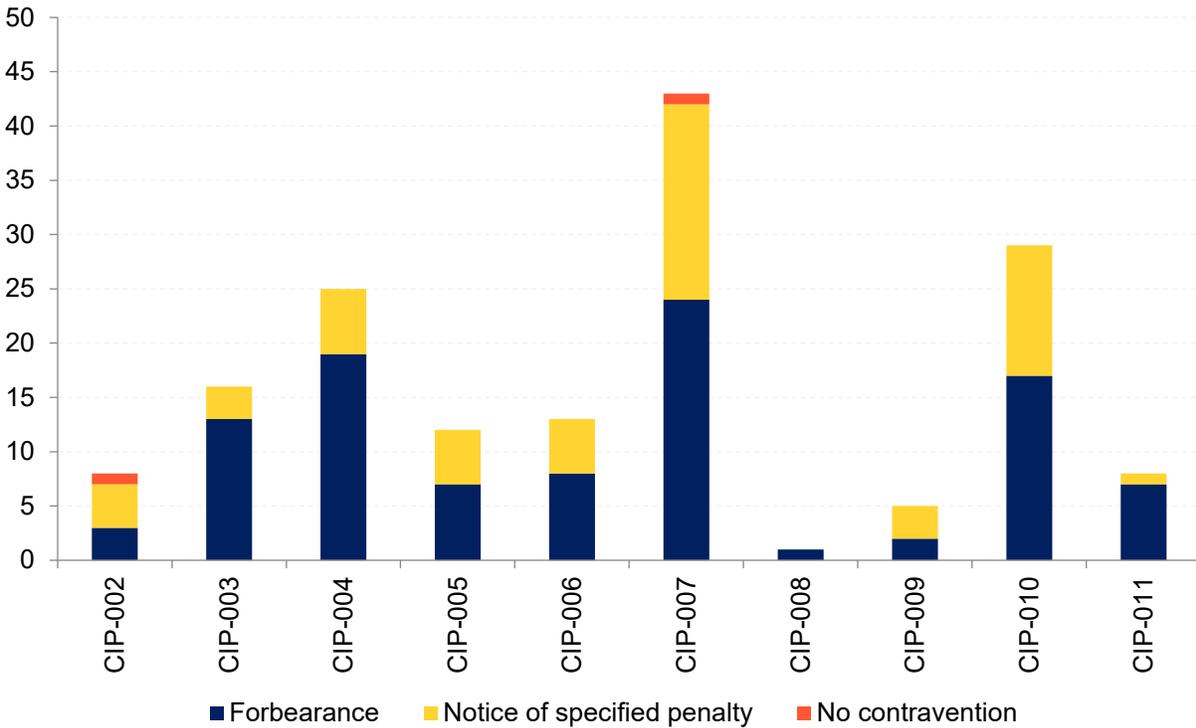


As demonstrated in Figure 18 the most frequent CIP ARS contraventions addressed in 2023 related to CIP-007, followed by CIP-010 and CIP-004. These three ARS made up 60% of the CIP ARS matters addressed in 2023 and are also the most frequently contravened CIP ARS in other jurisdictions.<sup>19</sup> Figure 19 shows that the distribution of CIP ARS matters addressed in 2023 remained comparable to the distribution in 2022.

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<sup>19</sup> NERC [Compliance Monitoring and Enforcement Program and Organization Registration and Certification Program Annual Report](#) (February 14, 2024).

Figure 18: CIP ARS compliance outcomes in 2023<sup>20</sup>

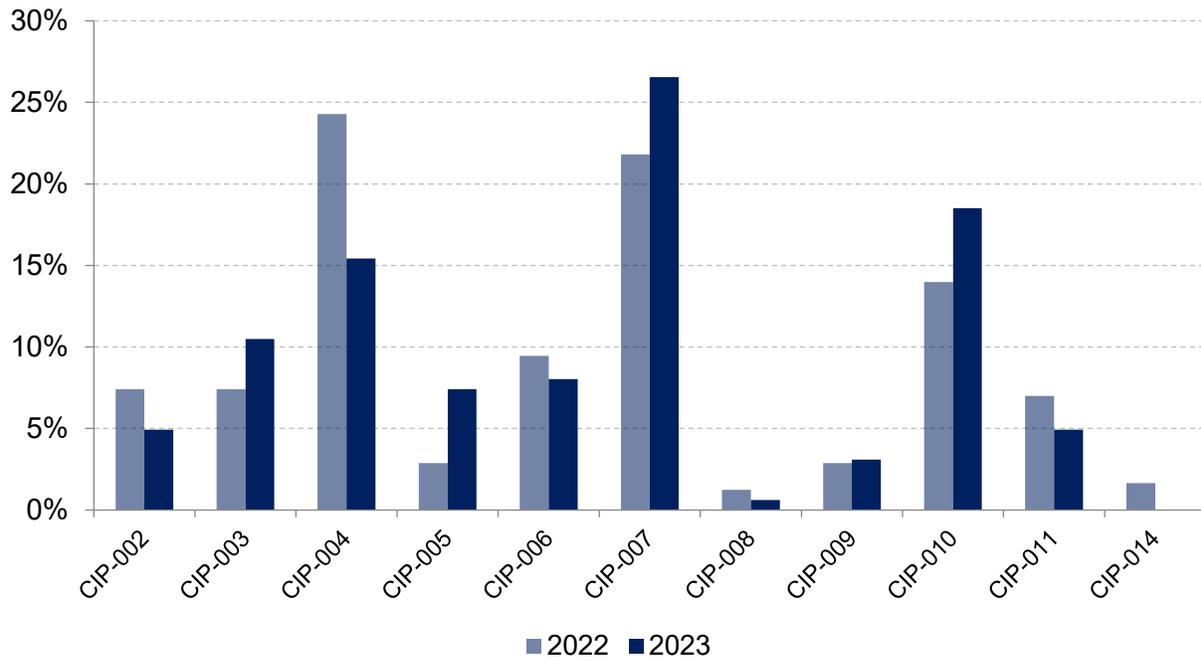


The ARS listed in Figure 18 and Figure 19 fall into the following categories:

- CIP-002 BES Cyber System Categorization
- CIP-003 Security Measurement Controls
- CIP-004 Personnel & Training
- CIP-005 Electronic Security Perimeter(s)
- CIP-006 Physical Security of BES Cyber Systems
- CIP-007 System Security Management
- CIP-008 Incident Reporting and Response
- CIP-009 Recovery Plans for BES Cyber Systems
- CIP-010 Configuration Change Management and Vulnerability Assessments
- CIP-011 Information Protection

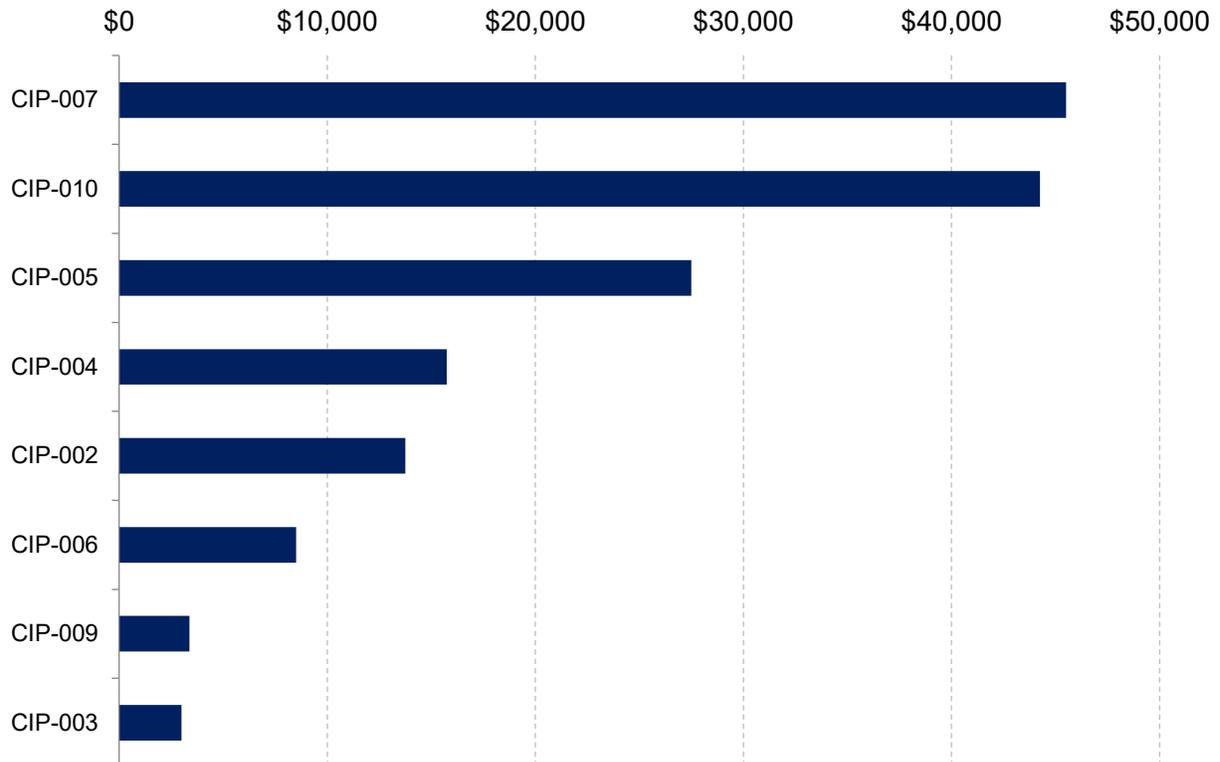
<sup>20</sup> See Table A5 for more detail. The MSA may issue a no contravention disposition when the specific conduct at issue has not contravened the requirements of the ARS. None of the no contravention outcomes in 2023 were the result of a difference in interpretation with AESO referral findings.

Figure 19: 2022 and 2023 addressed matters by percentage



In 2023, 57 matters involving nine CIP ARS were addressed with notices of specified penalty, resulting in a total financial amount of \$162,000. In 2022, 35 matters involving nine CIP ARS were addressed with notices of specified penalty, resulting in a total financial amount of \$91,625. Figure 20 presents the total penalty amounts by standard in 2023. Of the matters addressed with notices of specified penalty in which AUC Rule 027 requires a determination of severity level, 67% were low severity, 19% were moderate severity, 10% were high severity, and 4% were severe severity.

*Figure 20: Total specified penalties for CIP ARS addressed in 2023<sup>21</sup>*



<sup>21</sup> Only CIP ARS with penalties totalling \$3,000 or more are included in this figure.

## APPENDIX A: DATA SUPPLEMENT

*Table A1: ISO rules compliance outcomes in 2023*

ISO rule	Forbearance	Notice of specified penalty	No contravention	Total
103.12	1	-	-	1
201.4	-	10	-	10
201.7	19	8	1	28
203.1	-	1	-	1
203.3	60	17	-	77
203.4	47	11	8	66
203.6	19	22	-	41
205.3	1	1	-	2
205.4	1	-	-	1
205.5	3	-	1	4
205.6	5	5	6	16
301.2	5	4	-	9
304.3	2	-	-	2
304.7	1	-	-	1
304.9	2	-	-	2
306.4	1	-	-	1
306.5	2	5	-	7
502.4	-	1	-	1
502.5	3	-	-	3
502.6	5	1	-	6
502.8	1	11	-	12
502.9	1	-	-	1
502.16	2	-	-	2
505.3	-	3	-	3
505.4	1	-	-	1
<b>Total</b>	<b>182</b>	<b>100</b>	<b>16</b>	<b>298</b>

The sections of ISO rules listed in Table A1 and Table A2 fall into the following categories:

- 103 Administration
- 201 General (Markets)
- 203 Energy Market
- 205 Ancillary Services Market
- 301 General (System Reliability and Operations)
- 304 Routine Operations
- 306 Outages and Disturbances
- 502 Technical Requirements
- 505 Legal Owners of Generating Facilities

Table A2: Specified penalties issued between January 1, 2023 and December 31, 2023 for contraventions of ISO rules

Market participant	Total specified penalty amounts by ISO rule (\$)														Total (\$)	Matters
	201.4	201.7	203.1	203.3	203.4	203.6	205.3	205.6	301.2	306.5	502.4	502.6	502.8	505.3		
Air Liquide Canada Inc.		500													500	1
Alberta Pacific Forest Industries Inc.					1,000										1,000	2
Alberta Power (2000) Ltd.				250											250	1
Alberta Solar One, Inc.													500		500	1
British Columbia Hydro and Power Authority													500		500	1
Canadian Hydro Developers, Inc.	57,000			500											57,500	11
Claresholm Solar LP													1,000		1,000	2
Conrad Solar Inc.								4,000					1,000	1,000	6,000	8
DAPP Power L.P.				500											500	1
East Strathmore Solar Project Inc.														500	500	1
Enel X Canada Ltd.		500						10,000							10,500	4
Enfinite Generation Corporation				500											500	1
ENMAX Generation Portfolio Inc.				250											250	1
ENMAX Kettles Hill Inc.		500													500	1
EPCOR Distribution & Transmission Inc.											250				250	1
Evolugen Trading and Marketing LP						17,000									17,000	4
Ghost Pine Windfarm, LP				500											500	1
Grande Prairie Generation Inc.				7,000											7,000	3
Hays Solar LP					250								500		750	2
Heartland Generation Ltd.						250									250	1
MAG Energy Solutions Inc.						3,750									3,750	4
MEG Energy Corp.										500					500	1
Mercer Peace River Pulp Ltd.		250													250	1
Morgan Stanley Capital Group Inc.						7,000									7,000	3
NRGreen Power Limited Partnership										500					500	1
Powerex Corp.						9,250									9,250	5
Riverview Limited Partnership				500											500	1

Table A2: Specified penalties issued between January 1, 2023 and December 31, 2023 for contraventions of ISO rules (continued)

Market participant	Total specified penalty amounts by ISO rule (\$)														Total (\$)	Matters
	201.4	201.7	203.1	203.3	203.4	203.6	205.3	205.6	301.2	306.5	502.4	502.6	502.8	505.3		
Syncrude Canada Ltd.					250							250			500	2
TA Alberta Hydro LP							250								250	1
TransAlta Corporation				500									5,000		5,500	6
TransAlta Energy Marketing Corp.						250									250	1
TransAlta Generation Partnership					5,000										5,000	5
TransCanada Energy Ltd.				500											500	1
TransCanada Energy Sales Ltd.						10,000									10,000	2
Vitol Inc.						750									750	2
Voltus Energy Canada Ltd.								12,500							12,500	3
West Fraser Mills Ltd.		2,000		4,500											6,500	6
Wild Run LP		500	500							2,000					3,000	4
Windrise Wind LP										500					500	1
Yellow Lake & Burdett Solar LP					500										500	2
<b>Total</b>	57,000	4,250	500	15,500	7,000	48,250	250	22,500	4,000	3,500	250	250	8,500	1,500	173,250	100

Table A3: O&P ARS compliance outcomes in 2023

Reliability standard	Forbearance	Notice of specified penalty	No contravention	Total
COM-002	2	-	-	2
EOP-001	1	-	-	1
EOP-008	1	-	-	1
EOP-011	2	2	-	4
FAC-008	13	3	-	16
IRO-008	1	-	-	1
PRC-001	-	1	-	1
PRC-002	3	-	-	3
PRC-005	11	7	1	19
PRC-018	-	-	1	1
PRC-019	1	3	1	5
VAR-002	2	-	-	2
<b>Total</b>	<b>37</b>	<b>16</b>	<b>3</b>	<b>56</b>

The ARS listed in Table A3 and Table A4 fall into the following categories:

- COM Communications
- EOP Emergency Preparedness and Operations
- FAC Facilities Design, Connections, and Maintenance
- IRO Interconnection Reliability Operations and Coordination
- PRC Protection and Control
- VAR Voltage and Reactive

*Table A4: Specified penalties issued between January 1, 2023 and December 31, 2023 for contraventions of O&P ARS*

Market participant	Total specified penalty amounts by ARS (\$)					Total (\$)	Matters
	FAC-008	PRC-001	PRC-005	PRC-019	EOP-011		
Air Liquide Canada Inc.			2,250			2,250	1
Alberta-Pacific Forest Industries Inc.			2,250			2,250	1
AltaLink L.P., by its general partner, AltaLink Management Ltd.		2,500				2,500	1
Canadian Natural Resources Limited			3,750	3,750		7,500	2
Castle Rock Ridge, LP	2,250					2,250	2
Cenovus Energy Inc.			2,500			2,500	1
City of Medicine Hat			7,500		12,500	20,000	3
CNOOC Petroleum North America ULC			3,750			3,750	1
International Paper Canada Pulp Holding ULC				3,750		3,750	1
MEG Energy Corp.				3,750		3,750	1
Milner Power Limited Partnership by its General Partner Milner Power Inc.	2,250		2,250			4,500	2
<b>Total</b>	4,500	2,500	24,250	11,250	12,500	55,000	16

Table A5: CIP ARS compliance outcomes in 2023

Reliability standard	Forbearance	Notice of specified penalty	No contravention	Rejected	Total
CIP-002	3	4	1	-	8
CIP-003	13	3	-	1	17
CIP-004	19	6	-	-	25
CIP-005	7	5	-	-	12
CIP-006	8	5	-	-	13
CIP-007	24	18	1	-	43
CIP-008	1	-	-	-	1
CIP-009	2	3	-	-	5
CIP-010	18	12	-	-	30
CIP-011	7	1	-	-	8
<b>Total</b>	102	57	2	1	162

The ARS listed in Table A5 fall into the following categories:

- CIP-002 BES Cyber System Categorization
- CIP-003 Security Measurement Controls
- CIP-004 Personnel & Training
- CIP-005 Electronic Security Perimeter(s)
- CIP-006 Physical Security of BES Cyber Systems
- CIP-007 System Security Management
- CIP-008 Incident Reporting and Response
- CIP-009 Recovery Plans for BES Cyber Systems
- CIP-010 Configuration Change Management and Vulnerability Assessments
- CIP-011 Information Protection