

MSA Compliance Review 2020

April 16, 2021

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 2020 is provided pursuant to section 23(2) of the *Transmission Regulation* for the calendar year 2020. The MSA will continue to provide public updates regarding its compliance activities in its Quarterly Reports.

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, efficiency, and competitiveness of the Alberta electricity markets 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 or not 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., generating units, distribution systems, transmission operators) 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, and a smaller (but in some cases overlapping) fraction of ARS apply to both market participants and the AESO.

Enforcement framework

The AESO has a mandate to conduct compliance monitoring of market participants. The AESO applies its technical and operational expertise to identify suspected ISO rules and ARS contraventions 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.

The MSA Compliance Process encourages the self-reporting of non-compliance with ISO rules and ARS with the prospect of favourable treatment 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 determine to pursue a specified penalty where appropriate, in accordance with AUC Rules 019 (ISO rules) and 027 (ARS). If a party disputes a notice of specified penalty, the matter is settled by way of a hearing before the AUC. The MSA may also forbear if the conditions for forbearance are satisfied. In the event that neither forbearance nor a specified penalty is appropriate, the MSA may enter into a settlement agreement concerning a contravention or request a hearing before the AUC. In the case of the latter two, the AUC approves the outcome.

2020 Outcomes

In 2020, the overall number of ISO rules matters addressed¹ decreased compared to 2019. 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 is indicative of the fact there were few persistent compliance problems with ISO rules.

The number of ARS matters addressed by the MSA in 2020 was considerably higher than in 2019, driven by the large volume of ARS matters that remained unresolved at the end of 2019. CIP ARS matters now represent a majority of ARS matters. Aggregated reporting regarding these matters is provided for 2018, 2019, and 2020. In recognition of the potential security risks and in alignment with current international practice, market participant names are not provided regarding CIP ARS matters. The MSA continues to monitor these matters closely and to promote appropriate mitigation activities.

¹ A matter is considered to be 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.

2020 NUMBERS AT A GLANCE

- 437 ISO rules matters were addressed in 2020, down from 593 matters addressed in 2019.
- Self-reporting accounted for 82% of ISO rules matters addressed in 2020, slightly up from 81% in 2019.
- 98 ISO rules matters were addressed with notices of specified penalty for contraventions of ISO rules, totalling \$157,750 in financial penalties. No specified penalties were disputed or unpaid.
- 115 O&P ARS matters were addressed in 2020, up from 19 matters addressed in 2019. 46% of the O&P ARS matters addressed in 2020 were received prior to 2020.
- 16 O&P ARS matters were addressed with notices of specified penalty, totalling \$39,000 in financial penalties. No specified penalties were disputed or unpaid.
- 554 CIP ARS matters were addressed in 2020, up from 107 matters addressed in 2019. 84% of the CIP ARS matters addressed in 2020 were received prior to 2020.
- 268 CIP ARS matters were addressed with notices of specified penalty, totalling \$509,500 in financial penalties. No specified penalties were disputed or unpaid.
- Self-reporting accounted for 75% of total ARS matters addressed in 2020, up from 54% in 2019.

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. When self-reporting, market participants may set out a case for forbearance by the MSA if they are able to demonstrate how section 23.1 of the *Transmission Regulation* has been satisfied.

The MSA works collaboratively with the AESO and WECC regarding compliance issues, including the referral of suspected contraventions to the MSA. 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.

2 MSA COMPLIANCE PROCESS DEVELOPMENTS

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 in light of industry and regulatory developments, with a view to identifying efficiencies and making improvements.

2.1 2020 MSA Compliance Process consultation and revision

On August 7, 2020, the MSA announced that it was considering a broad and collaborative consultation regarding potential revisions to the MSA Compliance Process and invited initial feedback from stakeholders.² Following a review of this feedback, six key topic areas were identified, and the MSA requested stakeholder comments on these topic areas on September 9, 2020.³ Nine stakeholders provided comments in response to this request.⁴ The MSA then produced a draft revised MSA Compliance Process and compliance forms and requested comments on October 23, 2020.⁵ The revised MSA Compliance Process and compliance forms were then presented and discussed during an MSA virtual stakeholder session held on October 29, 2020. Comments were received from seven stakeholders regarding the revised process and forms, which were made available in a notice issued on November 16, 2020.⁶ After consideration

² MSA notice re [MSA Compliance Process consultation and MSA proposals to amend AUC Rules](#) (August 7, 2020)

³ MSA notice re [MSA Compliance Process consultation](#) (September 9, 2020)

⁴ MSA notice re [MSA Compliance Process consultation – stakeholder comments \(revised\)](#) (September 25, 2020)

⁵ MSA notice re [MSA Compliance Process consultation – revised draft and request for comments](#) (October 23, 2020)

⁶ MSA notice re [MSA Compliance Process consultation – stakeholder comments on draft](#) (November 16, 2020)

of these comments, the final versions of the revised MSA Compliance Process and forms were released on December 4, 2020.⁷

Throughout this consultation, efforts were made to clarify communication protocols, self-reporting requirements, the enforcement process and outcomes (including forbearance), and compliance forms, as well as opportunities to provide information. Significant efforts were made to reduce red tape and to increase the efficiency of the MSA Compliance Process and associated compliance forms.

2.2 COVID-19 and compliance

Starting in March 2020, in recognition of the impact of the COVID-19 pandemic, the MSA implemented⁸ and subsequently extended⁹ a framework under which the effects of the pandemic are considered an acceptable reason for non-compliance with ISO rules and ARS, on a case-by-case basis. The purpose of this framework is to assist market participants during the pandemic while ensuring compliance with ISO rules and ARS is appropriately maintained.

3 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. Both of these rules were subject to important consultation and revision in the past year.

3.1 AUC Rule 019

Prior to its revision in 2021, Rule 019 was last amended in late 2015.¹⁰ On August 7, 2020, the MSA sent a proposal to the AUC regarding amendments to Rule 019 designed to simplify and reduce the costs of its administration.¹¹ The MSA proposed that Rule 019 apply to all ISO rules and that the specified penalty tables be collapsed into a single existing category. On December 17, 2020, the AUC announced a consultation proposing to adopt the MSA's recommendations.¹² The AUC approved the amendments and a new version of Rule 019 came into effect on March 1, 2021.¹³

⁷ MSA notice re [Final MSA Compliance Process](#) (December 4, 2020)

⁸ MSA notice re [The Coronavirus and Specified Penalties](#) (March 30, 2020)

⁹ MSA notice re [COVID-19 compliance update](#) (June 22, 2020), MSA notice re [COVID-19 compliance update and extension](#) (August 20, 2020), MSA notice re [COVID-19 compliance update and extension to March 31, 2021](#) (December 17, 2020), and MSA notice re [COVID-19 compliance update and extension to June 30, 2021](#) (February 25, 2021)

¹⁰ AUC [Bulletin 2015-18](#) (November 12, 2015)

¹¹ MSA notice re [MSA Compliance Process consultation and MSA proposals to amend AUC Rules](#) (August 7, 2020)

¹² AUC [Bulletin 2020-41](#) (December 17, 2020)

¹³ AUC [Bulletin 2021-03](#) (February 26, 2021)

3.2 AUC Rule 027

Prior to its revision in 2020, Rule 027 was last amended in early 2017, in advance of the introduction of CIP ARS.¹⁴ On October 29, 2019, the MSA requested that the AUC consider amendments to Rule 027.¹⁵ The first proposed amendment was the potential for the MSA to be permitted to rely on the Sanction Guidelines and Table of Compliance Elements established by the NERC. The second proposed amendment was the conditions under which notices of specified penalty concerning contraventions of the CIP ARS should be published, given the potentially sensitive information contained in these documents.

On January 31, 2020, the AUC announced a consultation regarding the possible adoption of the NERC Sanction Guidelines and the Table of Compliance Elements.¹⁶ On May 26, 2020, the AUC announced that, as a result of the COVID-19 pandemic, it had not yet determined the next steps to resume the consultation.¹⁷ In the same notice, the AUC announced that it had updated the existing specified penalties listed in Rule 027 with an effective date of June 1, 2020,¹⁸ following a consultation that was announced on April 14, 2020.¹⁹ Rule 027 was amended effective July 1, 2020 to include additional changes to the specified penalty table.²⁰

On August 7, 2020, the MSA issued a notice indicating that, aside from clarifying the publication of notices of specified penalty regarding contraventions of CIP ARS, the MSA no longer saw a need to pursue the other possible amendments to Rule 027 that it raised in the past.²¹ This was formally conveyed to the AUC in a letter that was sent the same day and also appended to the MSA's notice. On October 21, 2020, a new version of Rule 027 became effective that excluded CIP ARS matters from the requirements obliging the MSA to publicly post notices of specified penalty.²² Accordingly, the MSA continues to refrain from posting these notices. Rule 027 was subsequently amended once more, effective November 19, 2020, to reflect one additional change to the specified penalty table.²³

¹⁴ AUC [Bulletin 2017-01](#) (February 15, 2017)

¹⁵ MSA [Submission Related to the Commission's 2019–2022 Strategic Plan](#) (October 29, 2019)

¹⁶ AUC [Bulletin 2020-03](#) (January 31, 2020)

¹⁷ AUC [Bulletin 2020-21](#) (May 26, 2020)

¹⁸ Ibid.

¹⁹ AUC [Bulletin 2020-14](#) (April 14, 2020)

²⁰ AUC [Bulletin 2020-23](#) (June 30, 2020)

²¹ MSA notice re [MSA Compliance Process consultation and MSA proposals to amend AUC Rules](#) (August 7, 2020)

²² AUC [Bulletin 2020-32](#) (October 21, 2020)

²³ AUC [Bulletin 2020-37](#) (November 19, 2020)

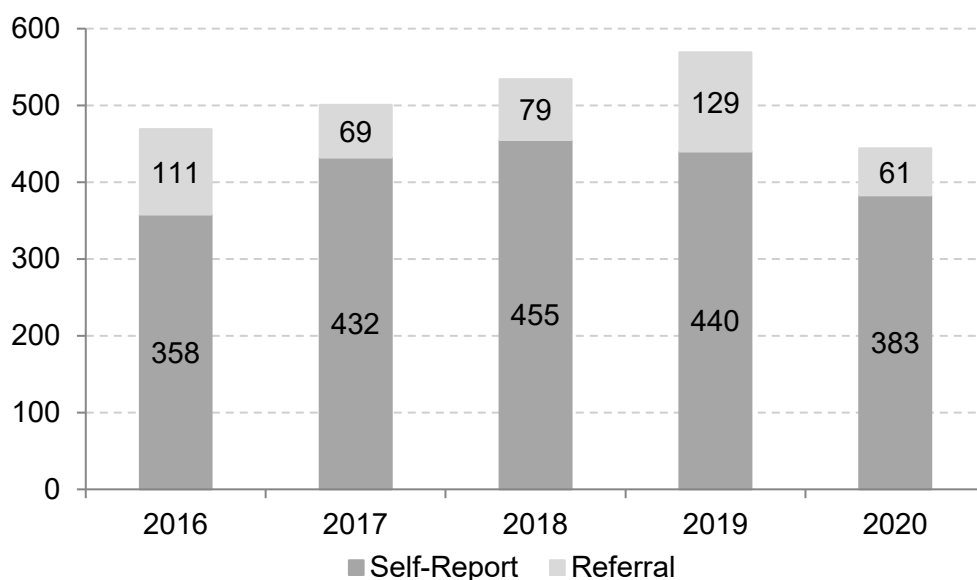
4 ISO RULES

4.1 Activity levels

In 2020, the MSA addressed 437 ISO rules matters and had 77 matters unresolved at the end of the year. Of the 437 matters, 98 (22%) resulted in a notice of specified penalty, 321 (73%) resulted in forbearance by the MSA, and 18 (4%) were withdrawn or issued a no contravention disposition.²⁴ No matters were brought before the AUC for a hearing or other proceeding, and none of the notices of specified penalty were disputed or remained unpaid.

In 2019, the MSA addressed 593 ISO rules matters and had 70 matters unresolved at the end of the year. Of the 593 matters, 181 (31%) resulted in a notice of specified penalty, 346 (58%) resulted in forbearance by the MSA, and 66 (11%) were rejected, withdrawn, or issued a no contravention disposition. As Figure 1 indicates, the number of ISO rules matters received in 2020 decreased compared to previous years and notably declined from the 5-year high in 2019. Accordingly, the number of matters addressed in 2020 decreased compared to the previous year, as demonstrated in Figure 2.

Figure 1: ISO rules compliance matters received



²⁴ A self-reported matter may be rejected if it is not complete or pertains to conduct not self-identified by the market participant. Market participants may request that a self-report be withdrawn. 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.

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

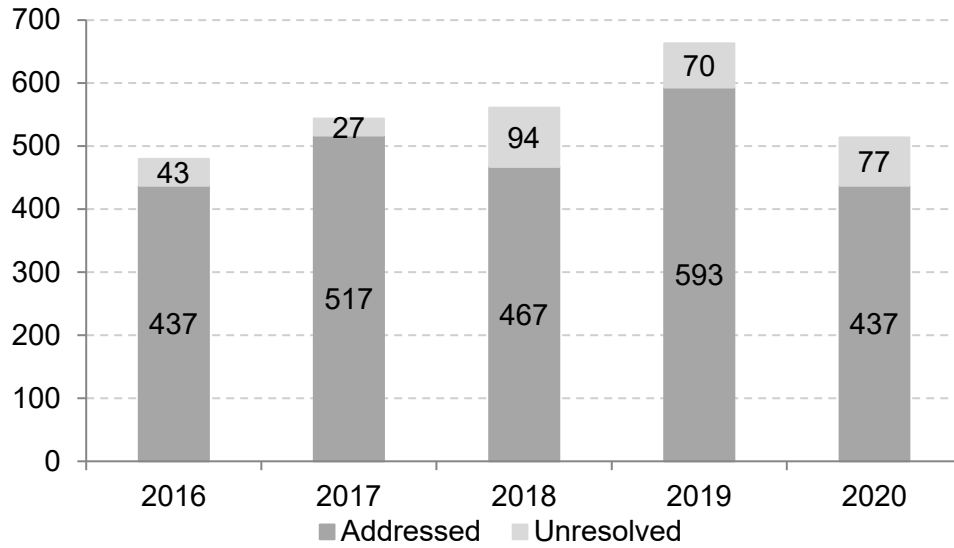
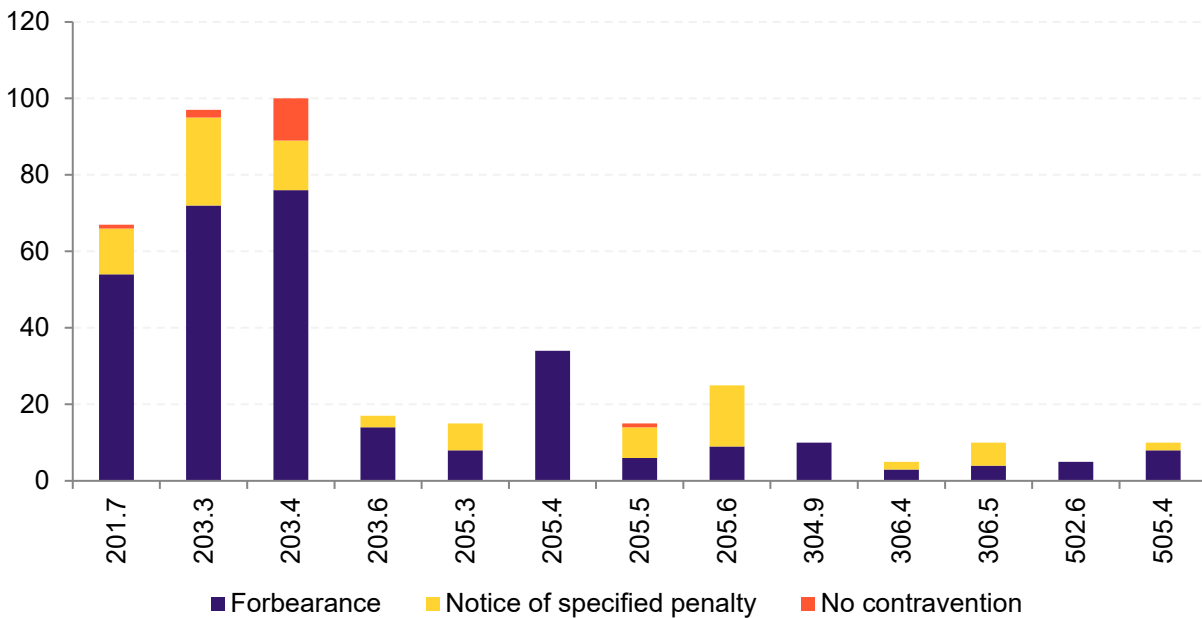


Figure 3: ISO rules compliance outcomes in 2020²⁵



²⁵ For ISO rules that had at least five matters addressed in 2020. Outcomes for all ISO rules matters are presented in Table A1.

The sections of ISO rules listed in Figure 3 fall into the following categories:

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

In 2020, the MSA addressed 98 ISO rules matters with notices of specified penalty involving 38 market participants, resulting in financial penalties totalling \$157,750. In 2019, the MSA addressed 181 matters with notices of specified penalty involving 51 market participants, totalling \$326,000. As indicated in Figure 4 and Table A2, contraventions of ISO rules sections 203.3 and 205.6 were associated with the highest penalty amounts, totalling \$44,500 and \$40,500, respectively. Penalty amount totals are inherently related to the count of penalties issued, in combination with the penalty category, penalty escalation, and self-disclosure discount in accordance with AUC Rule 019.

As indicated in Figure 5 and Table A2, 13 market participants were issued \$3,000 each or more in total notices of specified penalty over this period. The percentage of matters addressed with a notice of specified penalty for a first contravention within the previous 12 months declined to 54% in 2020 from 63% in 2019. Despite this decrease, the high proportion of first contraventions remains a positive indicator that there remain few persistent compliance problems with ISO rules in 2020. Among the remaining matters addressed with specified penalties issued in 2020, 29% were second contraventions, 8% were third contraventions, and 9% were the fourth or subsequent contraventions within the previous 12 months. Higher frequency contraventions receive greater specified penalties as per AUC Rule 019.

Figure 4: Total specified penalties for contraventions of ISO rules in 2020²⁶

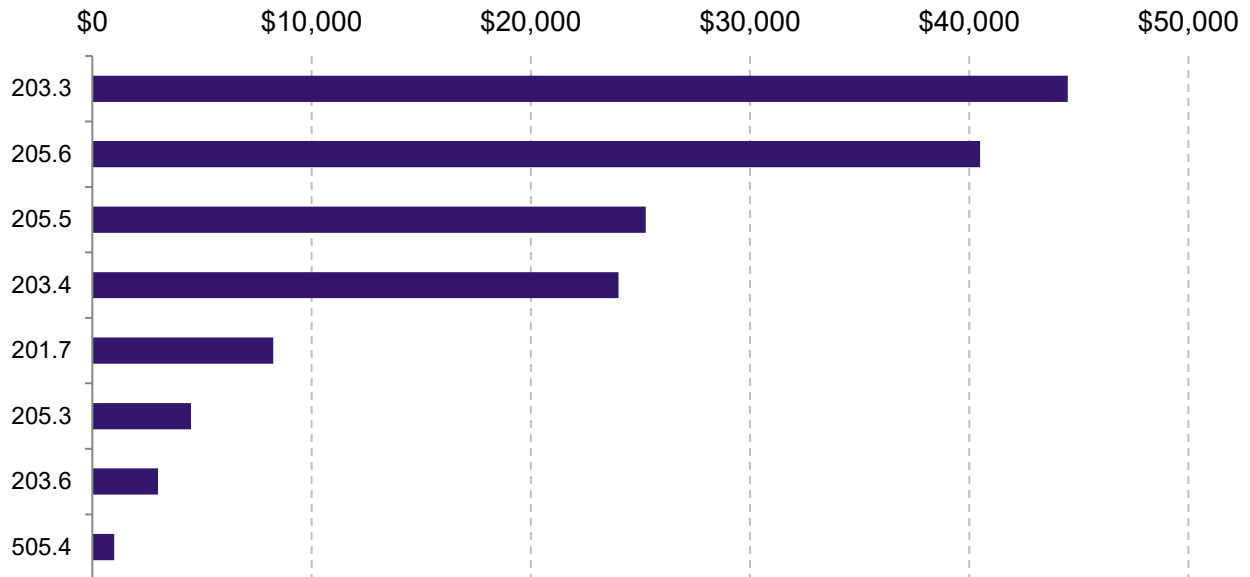
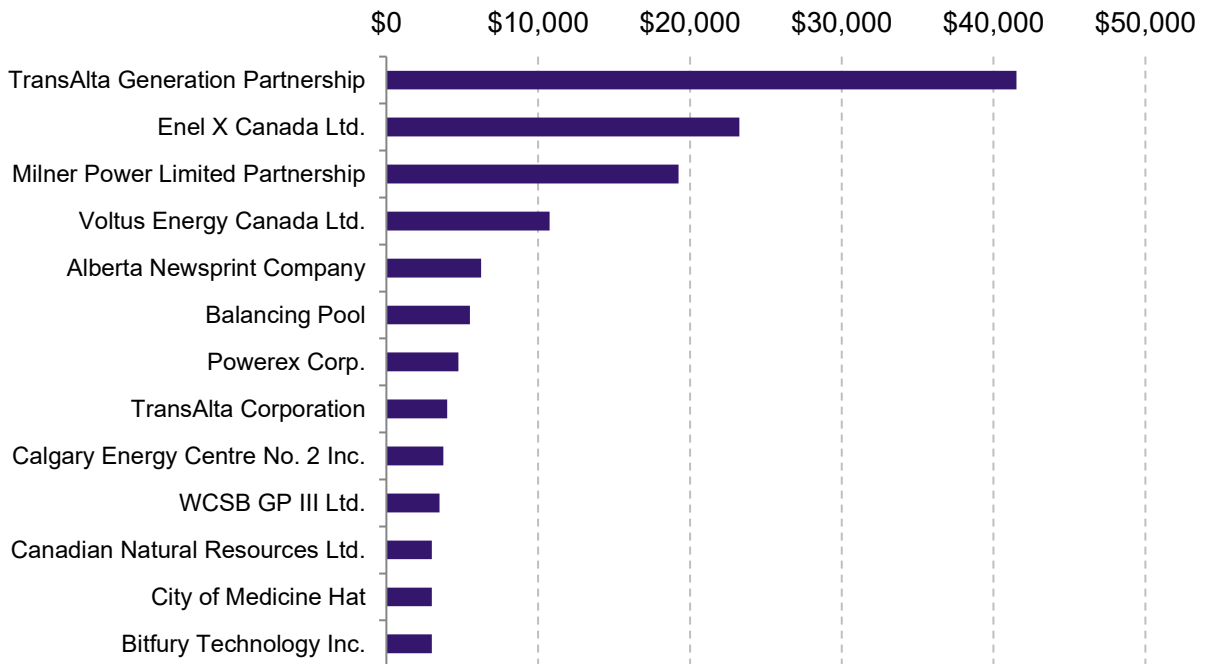


Figure 5: Total specified penalties for contraventions of ISO rules by market participant in 2020²⁷

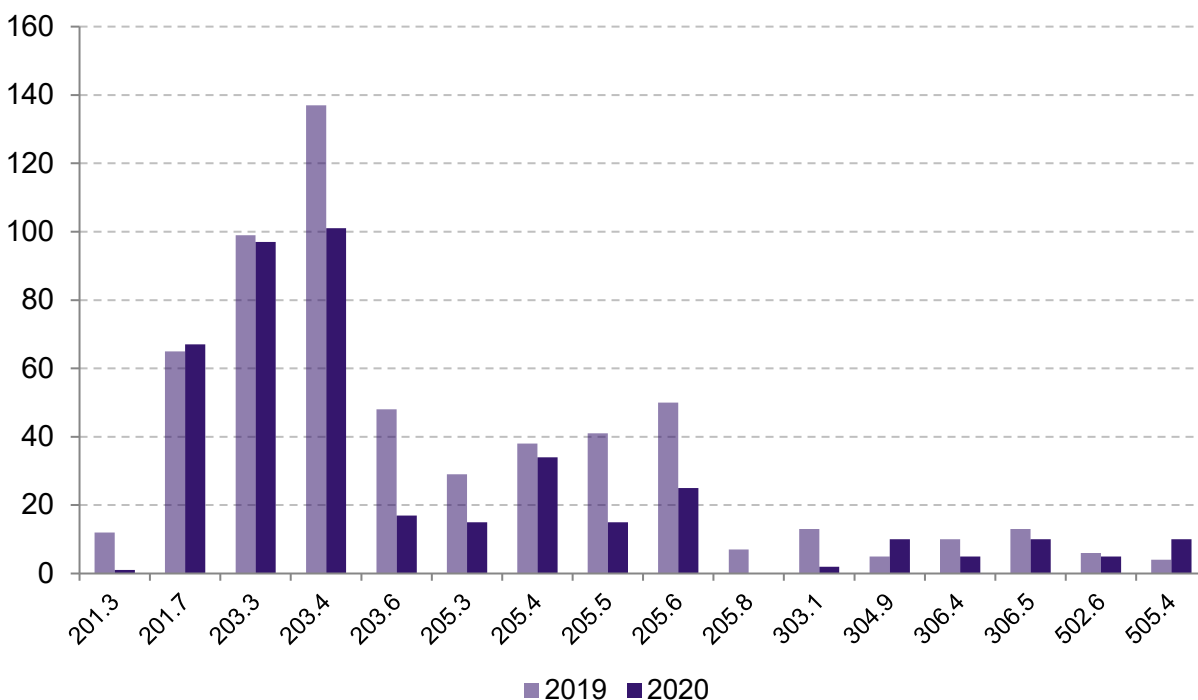


²⁶ Only sections of the ISO rules with penalties totalling at least \$1,000 are included in this figure. See Table A2 for more detail.

²⁷ Only sections of the ISO rules with penalties totalling at least \$3,000 are included in this figure. See Table A2 for more detail.

In 2020, 32 different sections of ISO rules were addressed in self-reports and referrals,²⁸ compared to 26 sections in 2019. There were no significant changes in the sections of ISO rules matters that were addressed between 2019 and 2020; however, there were increases in the share of section 201.7 (+4%) and 203.3 (+6%) matters and a decrease in the share of section 203.6 (-4%) matters. As seen in Figure 6, the majority of 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 or operating reserves in response to a dispatch or directive (sections 203.4 for energy and 205.4 through 205.6 for operating reserves), and acknowledging dispatches (section 201.7).

Figure 6: 2019 and 2020 addressed matters²⁹



The sections of ISO rules presented in Figure 6 are contained within the following categories:

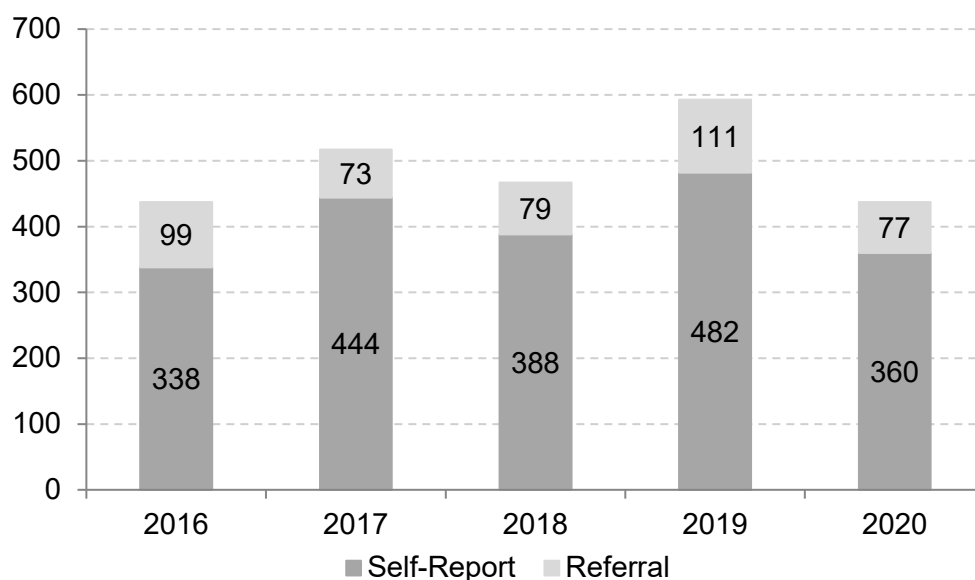
- 201 General (Markets)
- 203 Energy Market
- 205 Ancillary Services Market
- 303 Interties
- 304 Routine Operations
- 306 Outages and Disturbances
- 502 Technical Requirements
- 505 Legal Owners of Generating Facilities

²⁸ See Table A1 for more detail.

²⁹ Only sections of the ISO rules with at least five addressed matters in one year are displayed.

In 2020, the MSA addressed 360 ISO rules matters that were received via self-report and 77 matters that were received through AESO referrals (82% and 18% of total matters addressed, respectively). The number of referred matters both received and addressed in 2020 was smaller than in 2019, as seen in Figure 7. There was a change in the proportion of sections of referred matters that were addressed in 2020. The share of sections 201.3, 203.4, and 205.3 referrals decreased from 2019 to 2020. Conversely, the share of referred matters relating to sections 203.3 and 306.5 increased from 2019 to 2020.

Figure 7: ISO rules matters addressed, self-reports versus AESO referrals



Of the 360 self-reported ISO rules matters addressed in 2020, 37 (10%) were addressed with notices of specified penalty, while 61 of the 77 (79%) matters referred by the AESO were addressed with notices of specified penalty.

5 ALBERTA RELIABILITY STANDARDS

5.1 Monitoring and enforcement of the AESO's compliance with ARS

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.³⁰

To monitor the AESO's compliance with ARS, the MSA and WECC use the Compliance Monitoring Program that the AESO has developed to monitor market participants as a guide.

³⁰ 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).

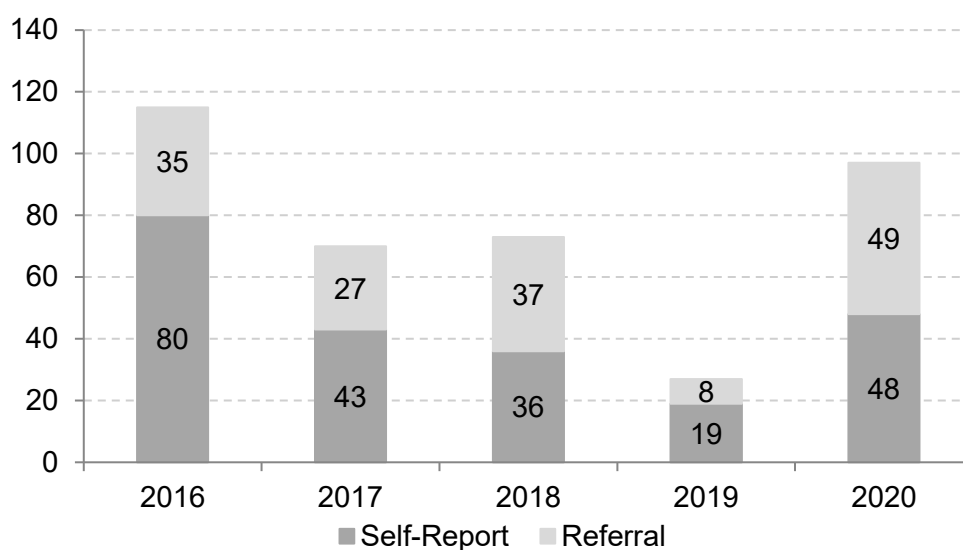
Efforts are made to maintain consistency, where possible, with the program WECC applies to other entities. Each year the MSA works with WECC to develop a plan to monitor the AESO's compliance with ARS. The plan sets out the scope of compliance monitoring, including audits and self-certification. As a result of the COVID-19 pandemic, the scheduled audit of the AESO's compliance with O&P ARS was delayed from 2020 until 2021. Accordingly, audits of the AESO's compliance with both O&P and CIP ARS are scheduled to occur in 2021.

5.2 Activity levels: Operations and Planning

The MSA addressed³¹ 115 O&P ARS matters in 2020, including 53 matters carried over from 2018 and 2019. At the end of 2020, 35 O&P ARS matters remained under review. Of the 115 matters addressed in 2020, 92 (80%) resulted in forbearance, 16 (14%) resulted in a notice of specified penalty, and 7 (6%) were rejected, or issued a no contravention disposition.

In 2020, there was a significant increase in the number of O&P ARS matters addressed compared to 2019, as seen in Figure 9 and Figure 10. This was a result of the increase in matters received in 2020 and the resolution of matters that remained unresolved at the end of 2019. The number of O&P ARS matters varies from year to year due to the three-year audit cycle. As indicated below in Figure 8, the MSA opened 97 O&P ARS matters in 2020, compared with 27 in 2019.

Figure 8: O&P ARS matters received



³¹ For this report (and future MSA publications), the method of reporting addressed ARS matters has been modified to align with ISO rules reporting. Previously, all associated mitigation plan activities had to be completed before an ARS matter would be considered addressed. Now, all matters are considered addressed when a disposition has been issued.

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

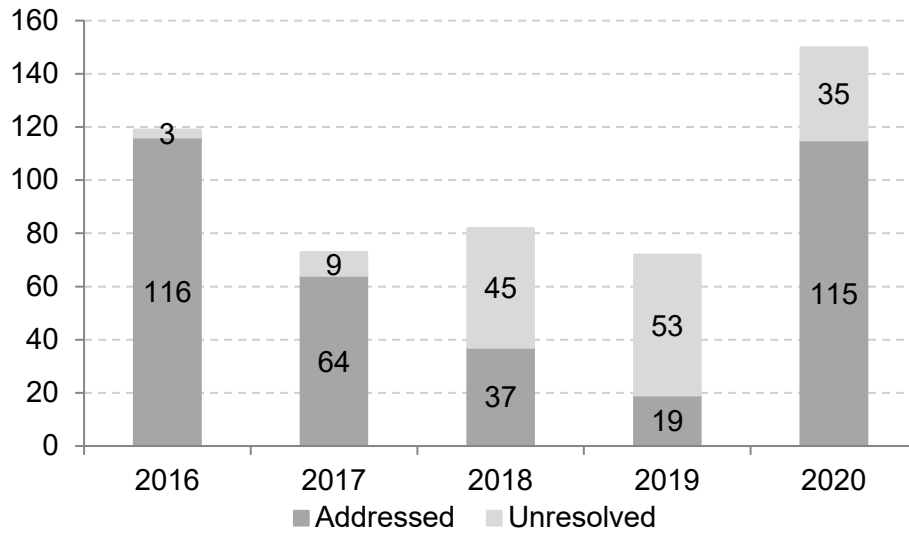


Figure 10: O&P ARS matters addressed, self-reports and AESO referrals

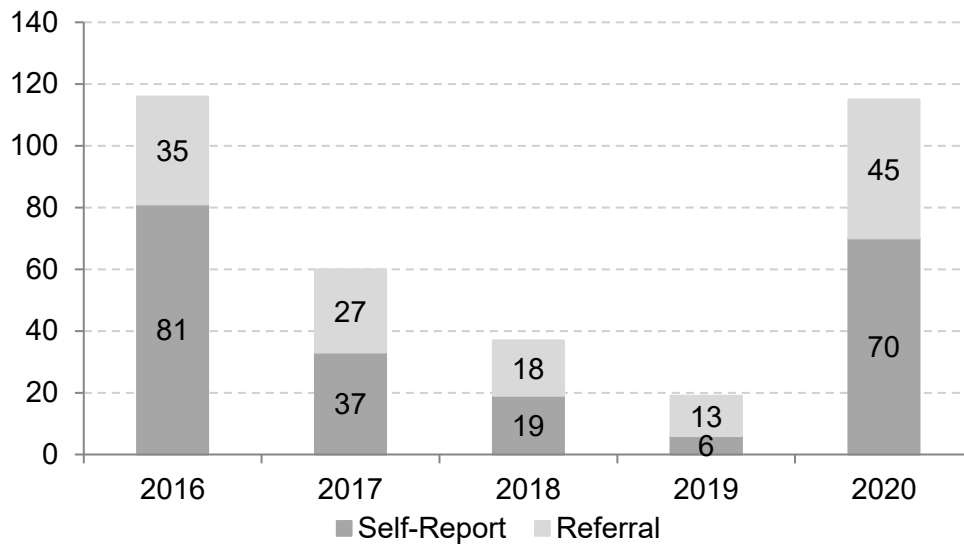
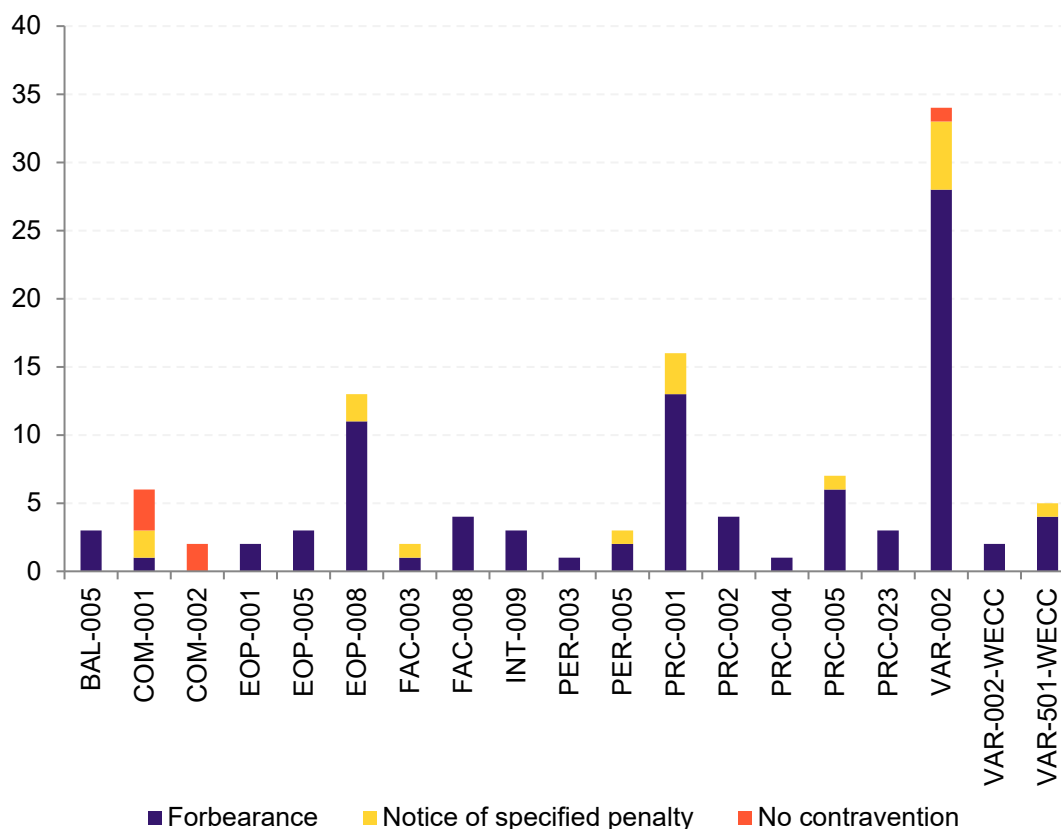


Figure 11: O&P ARS compliance outcomes in 2020³²

The O&P ARS listed in Figure 11 are contained within the following categories:

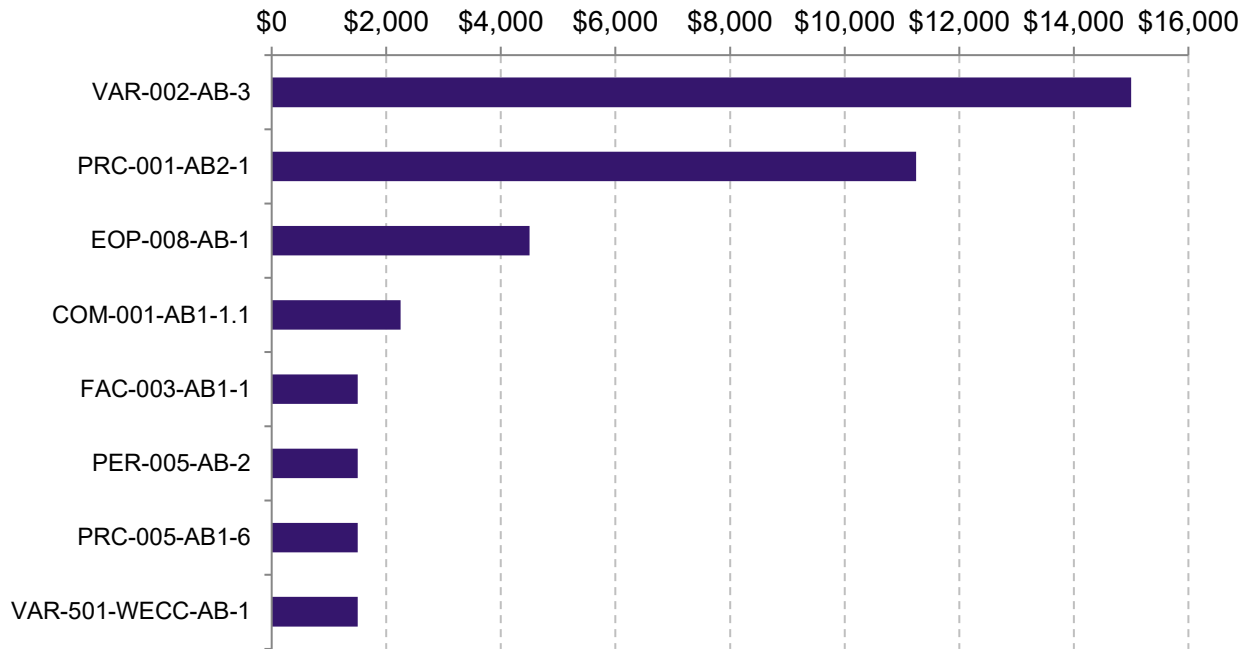
| | |
|-----|-----------------------------------------------------|
| BAL | Resource and Demand Balancing |
| COM | Communications |
| EOP | Emergency Preparedness and Operations |
| FAC | Facilities Design, Connections, and Maintenance |
| INT | Interchange Scheduling and Coordination |
| PER | Personnel Performance, Training, and Qualifications |
| PRC | Protection and Control |
| VAR | Voltage and Reactive |

As demonstrated in Figure 11, the most frequent O&P ARS contraventions addressed this year related to VAR-002, followed by PRC-001 and EOP-008. On July 1, 2019, EOP-008 (Loss of Control Centre Functionality) became effective, and the MSA began receiving matters related to this ARS in 2020.

³² See Table A3 for more detail.

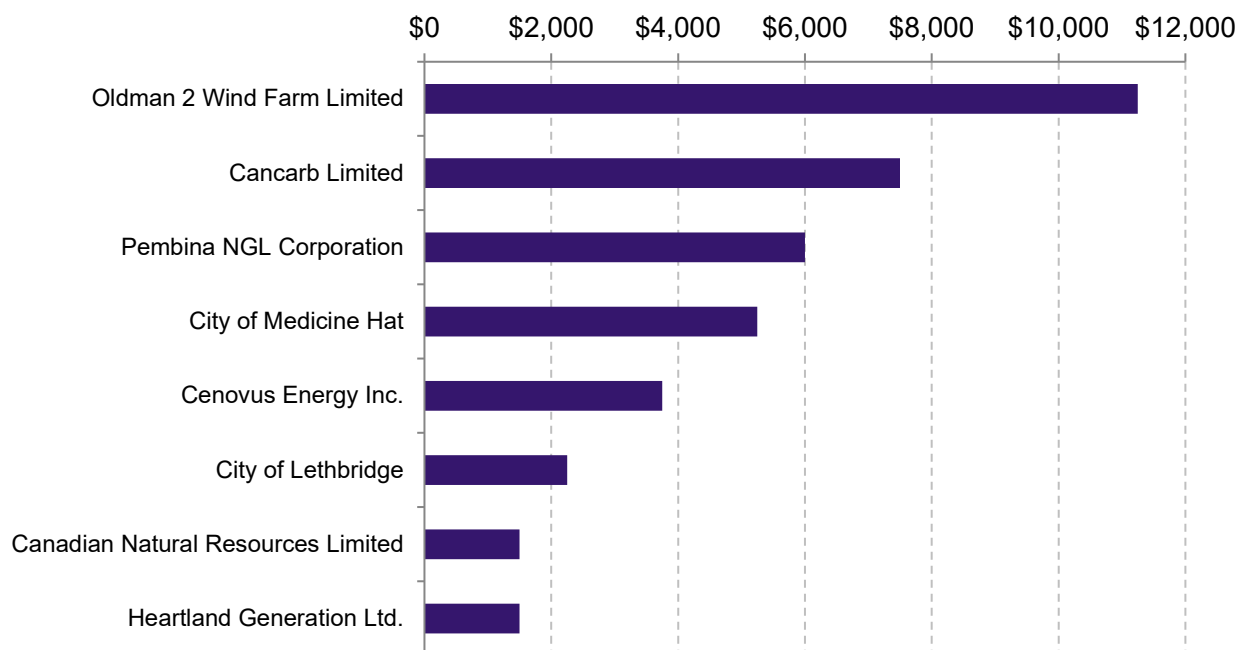
In 2020, 16 matters involving eight ARS were addressed with notices of specified penalty, resulting in financial penalties totalling \$39,000. In 2019, eight matters involving five ARS were addressed with notices of specified penalty, resulting in a total financial amount of \$54,000. Figure 12 and Figure 13 show the total penalty amount in 2020 by ARS and by market participant.

Figure 12: Total specified penalties for O&P ARS addressed in 2020³³



³³ See Table A4 for more detail.

Figure 13: Total specified penalties for contraventions of O&P ARS by market participant in 2020³⁴



5.3 Activity levels: Critical Infrastructure Protection

The MSA addressed 554 CIP ARS matters in 2020, including 466 matters carried over from 2018 and 2019. At the end of 2020, 111 CIP ARS matters remained under review. Of the 554 matters, 268 (48%) were addressed with notices of specified penalty, 237 (43%) resulted in forbearance, and 49 (9%) were rejected or issued a no contravention disposition.

While the number of CIP ARS matters received in 2020 was lower than in 2019 (Figure 14), there was a significant increase in the number of CIP ARS matters addressed in 2020 compared to 2018 and 2019 (Figure 15 and Figure 16). 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. The number of CIP ARS matters is likely to vary from year to year due to the three-year audit cycle.

³⁴ See Table A4 for more detail.

Figure 14: CIP ARS matters received

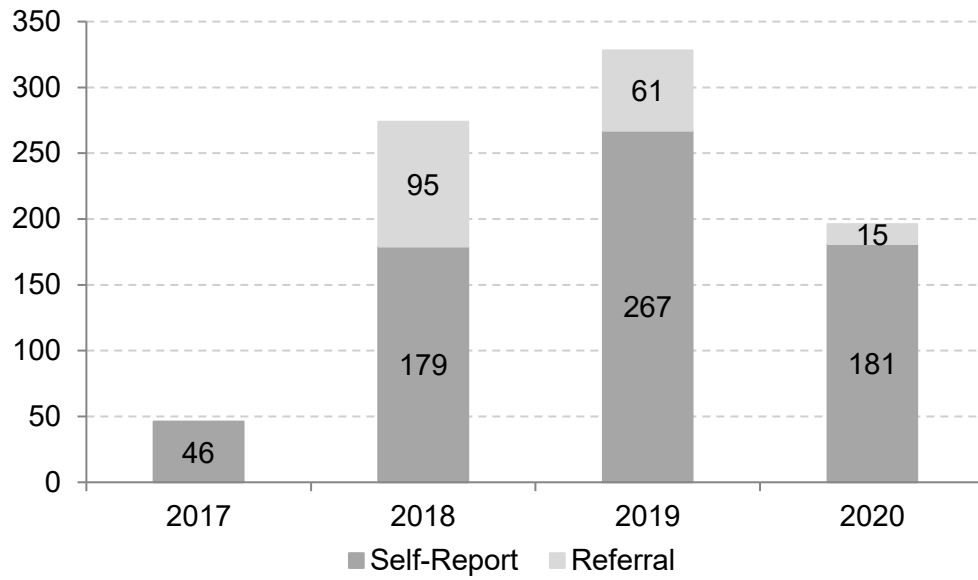


Figure 15: CIP ARS matters addressed or unresolved at the end of the year

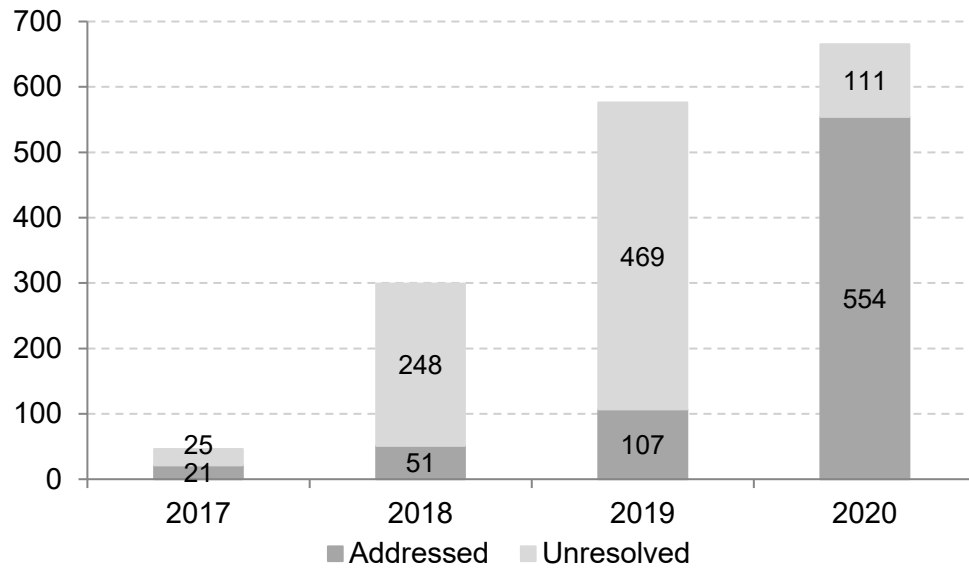


Figure 16: CIP ARS matters addressed, self-reports and AESO referrals

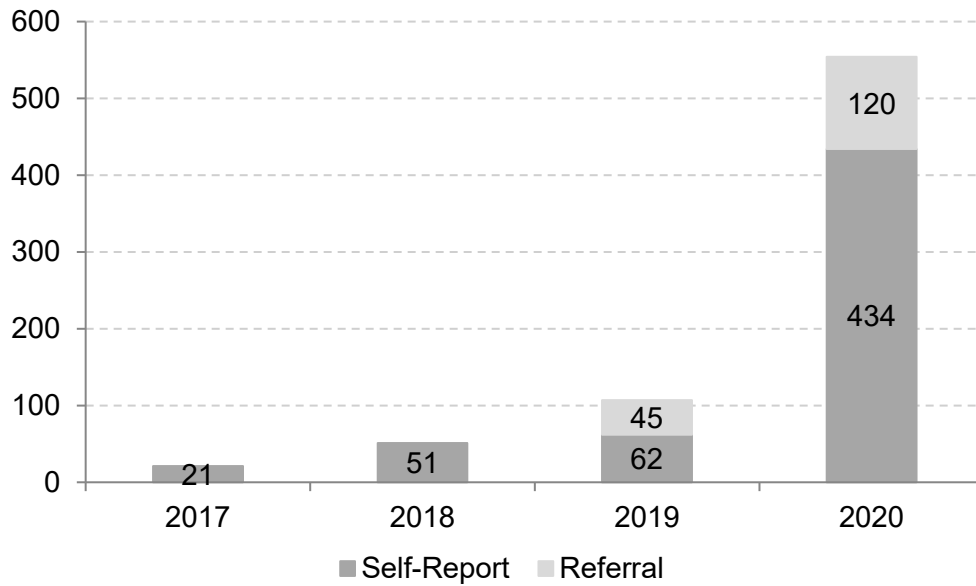
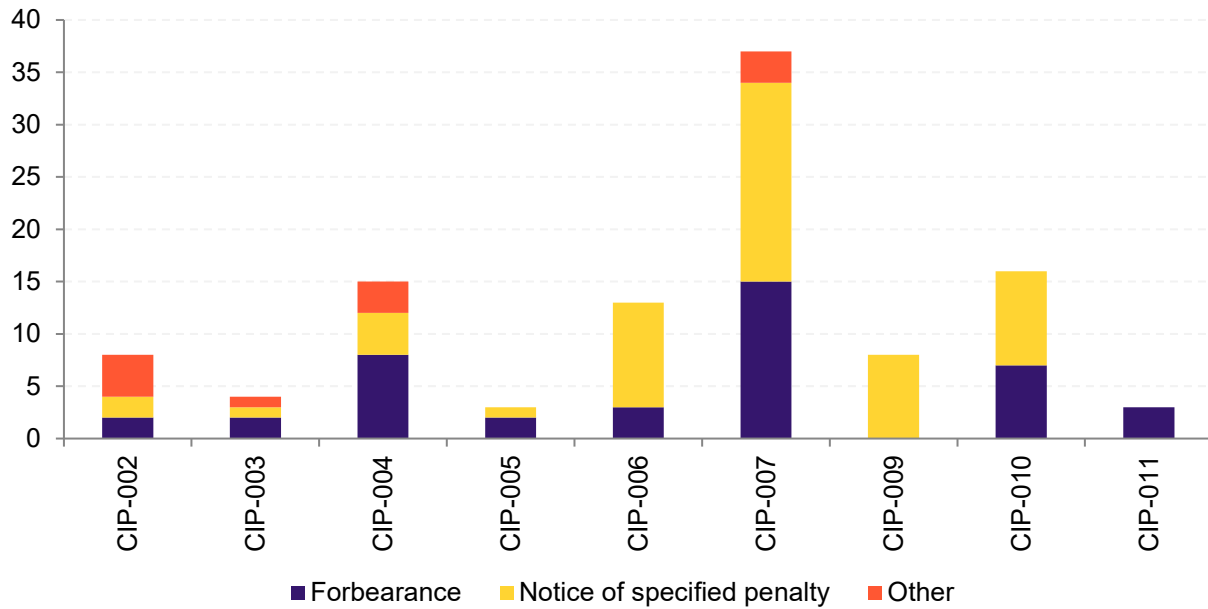
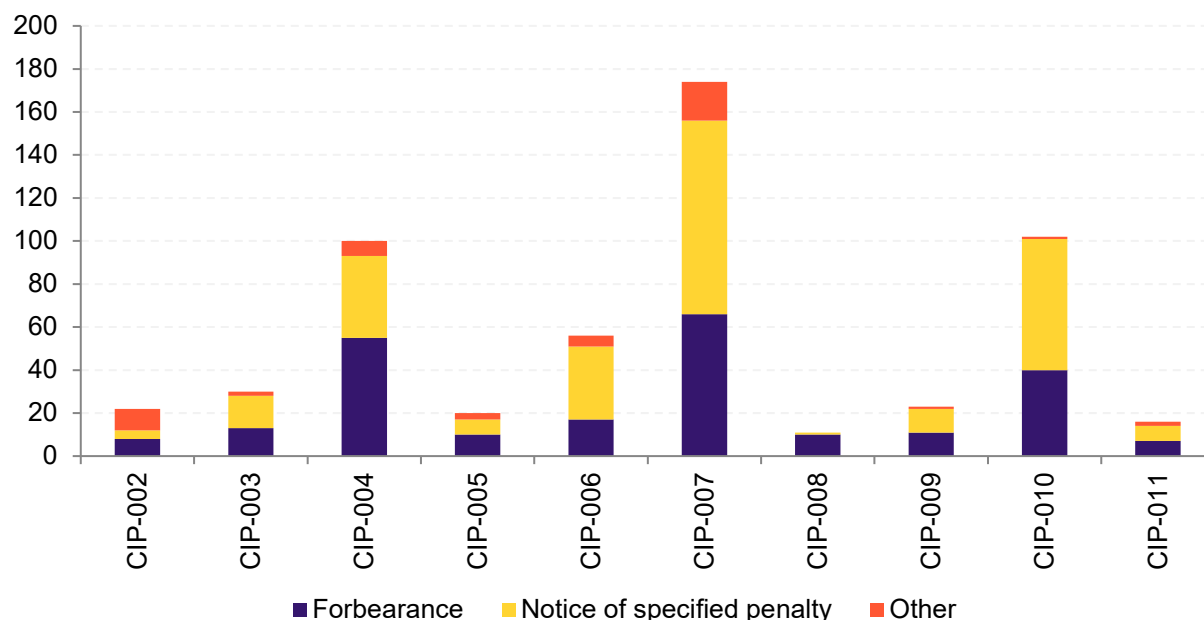


Figure 17: CIP ARS compliance outcomes in 2019³⁵



³⁵ See Table A6 for more detail.

Figure 18: CIP ARS compliance outcomes in 2020³⁶

The ARS listed in Figure 17 and Figure 18 are contained within 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 |

As demonstrated in Figure 17 and Figure 18, the most frequent CIP ARS contraventions addressed in 2019 and 2020 related to CIP-007, followed by CIP-010, CIP-004, and CIP-006. These four ARS made up 78% of the CIP ARS matters addressed in 2020. This distribution of CIP ARS matters is similar in other jurisdictions.³⁷

³⁶ See Table A7 for more detail.

³⁷ NERC [Compliance Monitoring and Enforcement Program Annual Report](#) (February 3, 2021)

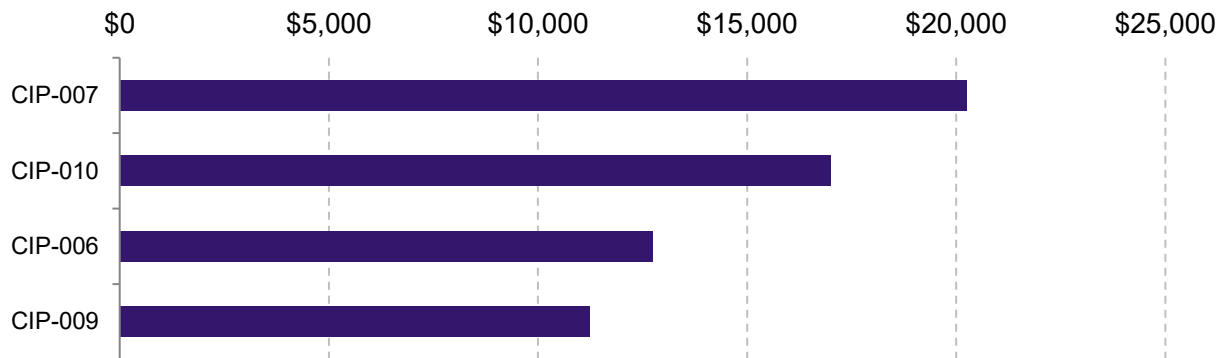
In 2020, 268 matters involving 10 CIP ARS were addressed with notices of specified penalty, resulting in a total financial amount of \$509,500. Of the matters addressed with notices of specified penalty in which AUC Rule 027 requires a determination of severity level, 56% were low severity, 25% were moderate severity, 8% were high severity, and 10% were severe severity.

In 2019, 54 matters involving nine CIP ARS were addressed with notices of specified penalty, resulting in a total financial amount of \$79,625. All matters addressed with notices of specified penalty in which AUC Rule 027 requires a determination of severity level were low severity.

Figure 19 and Figure 20 below present the total penalty amounts by standard in both years.

In 2018, all 51 CIP ARS matters were addressed with forbearance.³⁸

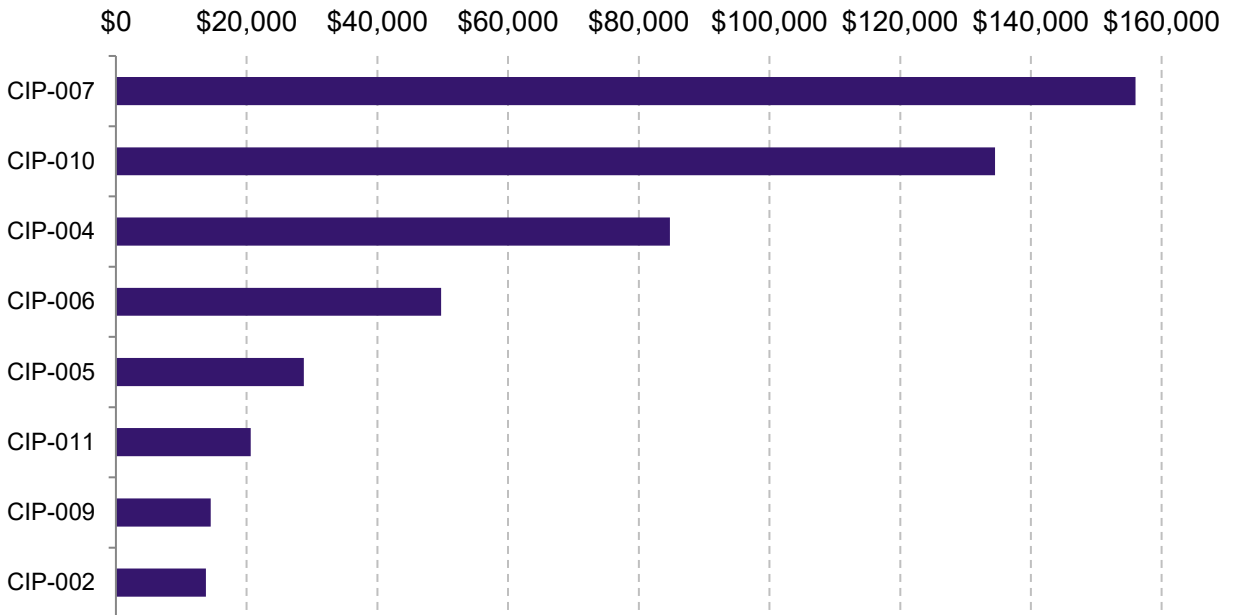
Figure 19: Total specified penalties for CIP ARS addressed in 2019³⁹



³⁸ See Table A5 for more detail.

³⁹ Only ARS with penalties totalling at least \$10,000 are included in this figure.

Figure 20: Total specified penalties for CIP ARS addressed in 2020⁴⁰



⁴⁰ Only ARS with penalties totalling at least \$10,000 are included in this figure.

REFERENCES

Legislation

Alberta Utilities Commission Act

http://www.qp.alberta.ca/1266.cfm?page=A37P2.cfm&leg_type=Acts&isbncln=9780779785322

Electric Utilities Act

http://www.qp.alberta.ca/1266.cfm?page=E05P1.cfm&leg_type=Acts&isbncln=9780779813551

Hydro and Electric Energy Act

http://www.qp.alberta.ca/1266.cfm?page=H16.cfm&leg_type=Acts&isbncln=9780779814848

Transmission Regulation

http://www.qp.alberta.ca/1266.cfm?page=2007_086.cfm&leg_type=Regs&isbncln=9780779782314

Alberta Utilities Commission

AUC Rules

<http://www.auc.ab.ca/Pages/Rules/rules-home.aspx>

Alberta Electric System Operator

AESO Compliance Monitoring

<https://www.aeso.ca/rules-standards-and-tariff/compliance-monitoring/>

Alberta Reliability Standards

<https://www.aeso.ca/rules-standards-and-tariff/alberta-reliability-standards/>

ISO Rules

<https://www.aeso.ca/rules-standards-and-tariff/iso-rules/>

Market Surveillance Administrator

MSA Compliance Process

<https://www.albertamsa.ca/assets/Documents/2020-12-04-MSA-Compliance-Process.pdf>

MSA WECC Services Agreement

<https://www.albertamsa.ca/assets/Documents/Services-Agreement-MSA-WECC-Signed.pdf>

MSA Reports

[https://www.albertamsa.ca/documents?category\[\]=Annual+Report+to+the+Minister&category\[\]=Compliance+Review&category\[\]=MSOC&category\[\]=Quarterly+Reports&category\[\]=Other+Reports](https://www.albertamsa.ca/documents?category[]=Annual+Report+to+the+Minister&category[]=Compliance+Review&category[]=MSOC&category[]=Quarterly+Reports&category[]=Other+Reports)

APPENDIX A: DATA SUPPLEMENT

Table A1: ISO rules compliance outcomes in 2020

| ISO rules | Forbearance | Notice of specified penalty | No contravention | Withdrawn | Total |
|--------------|-------------|-----------------------------|------------------|-----------|------------|
| 103.1 | 2 | - | - | - | 2 |
| 103.3 | 1 | - | - | - | 1 |
| 201.1 | 1 | - | - | - | 1 |
| 201.3 | 1 | - | - | - | 1 |
| 201.4 | - | 1 | - | - | 1 |
| 201.7 | 54 | 12 | 1 | - | 67 |
| 202.4 | 1 | 1 | - | 1 | 3 |
| 203.1 | 1 | 1 | - | - | 2 |
| 203.3 | 72 | 23 | 2 | - | 97 |
| 203.4 | 76 | 13 | 11 | 1 | 101 |
| 203.6 | 14 | 3 | - | - | 17 |
| 204.3 | 2 | - | - | - | 2 |
| 205.1 | - | 1 | - | - | 1 |
| 205.3 | 8 | 7 | - | - | 15 |
| 205.4 | 34 | - | - | - | 34 |
| 205.5 | 6 | 8 | 1 | - | 15 |
| 205.6 | 9 | 16 | - | - | 25 |
| 301.2 | 1 | - | - | - | 1 |
| 303.1 | 2 | - | - | - | 2 |
| 304.4 | 1 | - | - | - | 1 |
| 304.7 | 1 | - | - | - | 1 |
| 304.9 | 10 | - | - | - | 10 |
| 306.4 | 3 | 2 | - | - | 5 |
| 306.5 | 4 | 6 | - | - | 10 |
| 306.7 | - | - | 1 | - | 1 |
| 501.1 | 1 | - | - | - | 1 |
| 502.1 | 1 | - | - | - | 1 |
| 502.2 | 1 | - | - | - | 1 |
| 502.4 | 1 | 1 | - | - | 2 |
| 502.6 | 5 | - | - | - | 5 |
| 505.4 | 8 | 2 | - | - | 10 |
| 9.1.5 | - | 1 | - | - | 1 |
| Total | 321 | 98 | 16 | 2 | 437 |

The sections of ISO rules listed in Table A1 and Table A2 are contained within the following categories:

- 103 Administration
- 201 General (Markets)
- 202 Dispatching the Markets
- 203 Energy Market
- 204 Dispatch Down Service Market
- 205 Ancillary Services Market
- 301 General (System Reliability and Operations)
- 303 Interties
- 304 Routine Operations
- 306 Outages and Disturbances
- 501 General (Facilities)
- 502 Technical Requirements
- 505 Legal Owners of Generating Facilities
- 9 Transmission

Table A2: Specified penalties issued between January 1, 2020 and December 31, 2020 for contraventions of ISO rules

| Market Participant | Total specified penalty amounts by ISO rule (\$) | | | | | | | | | | | | | | | Total (\$) | Matters | |
|-----------------------------------------------------------------|--------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|------------|---------|-------|
| | 201.4 | 201.7 | 202.4 | 203.1 | 203.3 | 203.4 | 203.6 | 205.1 | 205.3 | 205.5 | 205.6 | 306.4 | 306.5 | 502.4 | 505.4 | | | 9.1.5 |
| Air Liquide Canada Inc. | 500 | | | | | | | | 500 | | | | | | | | 1,000 | 2 |
| Alberta Electric System Operator | | | | | | | | | | | | | | 250 | | | 250 | 1 |
| Alberta Newsprint Company | | | | | 1,250 | 5,000 | | | | | | | | | | | 6,250 | 2 |
| Alberta Pacific Forest Industries Inc. | | | | | | 1,250 | | | | | | | | | | | 1,250 | 1 |
| Alberta Power (2000) Ltd. | | 500 | | | | | | | | | | | | | | | 500 | 1 |
| AltaGas Ltd. | | 500 | | | 1,500 | | | | | | | | | | | | 2,000 | 2 |
| AltaLink L.P., by its general partner, AltaLink Management Ltd. | | | | | | | | | | | | 250 | | | | | 250 | 1 |
| ATCO Power (2010) Ltd. | | | | | 750 | | | | | | | | | | | | 750 | 1 |
| Balancing Pool | | | | | | 5,000 | | 500 | | | | | | | | | 5,500 | 5 |
| Bitfury Technology Inc. | | | | | | | | 500 | | 2,500 | | | | | | | 3,000 | 2 |
| Calgary Energy Centre No. 2 Inc. | | | | | 3,750 | | | | | | | | | | | | 3,750 | 2 |
| Canadian Natural Resources Ltd. | | | | | 1,500 | 1,500 | | | | | | | | | | | 3,000 | 2 |
| Capital Power (G3) Limited Partnership | | | | | | | | 250 | | | 250 | | | | | | 500 | 2 |
| City of Medicine Hat | | | | | 2,500 | | | | | 500 | | | | | | | 3,000 | 2 |
| Dow Chemical Canada ULC | | | | | | 750 | | | | | | | | | | | 750 | 1 |
| Enel X Canada Ltd. | | | | | | | | | | | 23,250 | | | | | | 23,250 | 6 |
| ENMAX Power Corporation | | | | | | | | | | | | 250 | | | | | 250 | 1 |
| EPCOR Distribution & Transmission Inc. | | | | | | | | | | | | | | | | 500 | 500 | 1 |
| Halkirk I Wind Project LP | | 500 | | | | | | | | | | | | | | | 500 | 1 |
| Heartland Generation Ltd. | | | | | | | | | 250 | | | | | | | | 250 | 1 |
| Horseshoe Power GP Ltd. | | 2,000 | | | | | | | | | | | | | | | 2,000 | 3 |

Table A2: Specified penalties issued between January 1, 2020 and December 31, 2020 for contraventions of ISO rules (continued)

| Market Participant | Total specified penalty amounts by ISO rule (\$) | | | | | | | | | | | | | | | | Total (\$) | Matters |
|---------------------------------------------------------------------------|--------------------------------------------------|-------|-------|-------|--------|--------|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|------------|---------|
| | 201.4 | 201.7 | 202.4 | 203.1 | 203.3 | 203.4 | 203.6 | 205.1 | 205.3 | 205.5 | 205.6 | 306.4 | 306.5 | 502.4 | 505.4 | 9.1.5 | | |
| International Paper Canada Pulp Holdings ULC | | | | | | 2,500 | | | | | | | | | | | 2,500 | 1 |
| MEG Energy Corp. | | 500 | | | | | | | | | | | | | | | 500 | 1 |
| Mercer Peace River Pulp Ltd. | | | | | 2,500 | | | | | | | | | | | | 2,500 | 1 |
| Milner Power Limited Partnership by its General Partner Milner Power Inc. | | 500 | | | 12,500 | 5,750 | | | | | | | 500 | | | | 19,250 | 6 |
| NorthPoint Energy Solutions Inc. | | | | | | | 750 | | | | | | | | | | 750 | 1 |
| Northstone Power Corp. | | | | | 1,500 | | | | | | 750 | | | | | | 2,250 | 2 |
| Oldman 2 Wind Farm Limited | | | | | | | | | | | | | 2,000 | | | | 2,000 | 2 |
| Pincher Creek Limited Partnership | | | | | | | | | | | | | 500 | | | | 500 | 1 |
| Powerex Corp. | | 3,250 | | | 750 | | 750 | | | | | | | | | | 4,750 | 4 |
| Repsol Canada Energy Partnership | | | | | 1,500 | | | | | | | | 500 | | | | 2,000 | 2 |
| Riverview Limited Partnership | | | | | | | | | | | | | 500 | | | | 500 | 1 |
| The Manitoba Hydro-Electric Board | | | | | | | 1,500 | | | | | | | | | | 1,500 | 1 |
| Tourmaline Oil Corp. | | 500 | | | | | | | | | | | | | | | 500 | 2 |
| TransAlta Corporation | | | | | 4,000 | | | | | | | | | | | | 4,000 | 5 |
| TransAlta Generation Partnership | | | 250 | | 9,000 | 750 | | 3,000 | 25,000 | 2,500 | | | | | 1,000 | | 41,500 | 22 |
| Voltus Energy Canada Ltd. | | | | | | | | | | 10,750 | | | | | | | 10,750 | 3 |
| WCSB GP III Ltd. | | | | 500 | 1,500 | 1,500 | | | | | | | | | | | 3,500 | 3 |
| Total | 500 | 8,250 | 250 | 500 | 44,500 | 24,000 | 3,000 | 250 | 4,500 | 25,250 | 40,500 | 500 | 4,000 | 250 | 1,000 | 500 | 157,750 | 98 |

Table A3: O&P ARS compliance outcomes in 2020

| Reliability standard | Forbearance | Notice of specified penalty | No contravention | Rejected | Total |
|----------------------|-------------|-----------------------------|------------------|----------|------------|
| BAL-005 | 3 | - | - | - | 3 |
| COM-001 | 1 | 2 | 3 | - | 6 |
| COM-002 | - | - | 2 | - | 2 |
| EOP-001 | 2 | - | - | - | 2 |
| EOP-005 | 3 | - | - | - | 3 |
| EOP-008 | 11 | 2 | - | - | 13 |
| FAC-003 | 1 | 1 | - | - | 2 |
| FAC-008 | 4 | - | - | - | 4 |
| INT-009 | 3 | - | - | - | 3 |
| PER-003 | 1 | - | - | - | 1 |
| PER-005 | 2 | 1 | - | - | 3 |
| PRC-001 | 13 | 3 | - | 1 | 17 |
| PRC-002 | 4 | - | - | - | 4 |
| PRC-004 | 1 | - | - | - | 1 |
| PRC-005 | 6 | 1 | - | - | 7 |
| PRC-023 | 3 | - | - | - | 3 |
| VAR-002 | 28 | 5 | 1 | - | 34 |
| VAR-002-WECC | 2 | - | - | - | 2 |
| VAR-501-WECC | 4 | 1 | - | - | 5 |
| Total | 92 | 16 | 6 | 1 | 115 |

The ARS listed in Table A3 and Table A4 are contained within the following categories:

| | |
|-----|-----------------------------------------------------|
| BAL | Resource and Demand Balancing |
| COM | Communications |
| EOP | Emergency Preparedness and Operations |
| FAC | Facilities Design, Connections, and Maintenance |
| INT | Interchange Scheduling and Coordination |
| PER | Personnel Performance, Training, and Qualifications |
| PRC | Protection and Control |
| VAR | Voltage and Reactive |

Table A4: Specified penalties issued between January 1, 2020 and December 31, 2020 for contraventions of O&P ARS

| Market participant | Total specified penalty amounts by ARS (\$) | | | | | | | | Total (\$) | Matters |
|------------------------------------|---------------------------------------------|---------|---------|---------|---------|---------|---------|--------------|------------|---------|
| | COM-001 | EOP-008 | FAC-003 | PER-005 | PRC-001 | PRC-005 | VAR-002 | VAR-501-WECC | | |
| Canadian Natural Resources Limited | | | 1,500 | | | | | | 1,500 | 1 |
| Cancarb Limited | | | | | | | 7,500 | | 7,500 | 2 |
| Cenovus Energy Inc. | | | | | 3,750 | | | | 3,750 | 1 |
| City of Lethbridge | | 2,250 | | | | | | | 2,250 | 1 |
| City of Medicine Hat | | 2,250 | | 1,500 | | 1,500 | | | 5,250 | 3 |
| Heartland Generation Ltd. | | | | | | | | 1,500 | 1,500 | 1 |
| Oldman 2 Wind Farm Limited | | | | | 3,750 | | 7,500 | | 11,250 | 4 |
| Pembina NGL Corporation | 2,250 | | | | 3,750 | | | | 6,000 | 3 |
| Total | 2,250 | 4,500 | 1,500 | 1,500 | 11,250 | 1,500 | 15,000 | 1,500 | 39,000 | 16 |

Table A5: CIP ARS compliance outcomes in 2018

| Reliability standard | Forbearance | Total |
|----------------------|-------------|-------|
| CIP-002 | 2 | 2 |
| CIP-003 | 2 | 2 |
| CIP-004 | 10 | 10 |
| CIP-005 | 3 | 3 |
| CIP-006 | 8 | 8 |
| CIP-007 | 16 | 16 |
| CIP-010 | 6 | 6 |
| CIP-011 | 4 | 4 |
| Total | 51 | 51 |

Table A6: CIP ARS compliance outcomes in 2019

| Reliability standard | Forbearance | Notice of specified penalty | No contravention | Rejected | Total |
|----------------------|-------------|-----------------------------|------------------|----------|-------|
| CIP-002 | 2 | 2 | 3 | 1 | 8 |
| CIP-003 | 2 | 1 | 1 | - | 4 |
| CIP-004 | 8 | 4 | 3 | - | 15 |
| CIP-005 | 2 | 1 | - | - | 3 |
| CIP-006 | 3 | 10 | - | - | 13 |
| CIP-007 | 15 | 19 | 3 | - | 37 |
| CIP-009 | 0 | 8 | - | - | 8 |
| CIP-010 | 7 | 9 | - | - | 16 |
| CIP-011 | 3 | 0 | - | - | 3 |
| Total | 42 | 54 | 10 | 1 | 107 |

Table A7: CIP ARS compliance outcomes in 2020

| Reliability standard | Forbearance | Notice of specified penalty | No contravention | Rejected | Total |
|-----------------------------|--------------------|------------------------------------|-------------------------|-----------------|--------------|
| CIP-002 | 8 | 4 | 8 | 2 | 22 |
| CIP-003 | 13 | 15 | 0 | 2 | 30 |
| CIP-004 | 55 | 38 | 2 | 5 | 100 |
| CIP-005 | 10 | 7 | 1 | 2 | 20 |
| CIP-006 | 17 | 34 | 3 | 2 | 56 |
| CIP-007 | 66 | 90 | 10 | 8 | 174 |
| CIP-008 | 10 | 1 | 0 | 0 | 11 |
| CIP-009 | 11 | 11 | 0 | 1 | 23 |
| CIP-010 | 40 | 61 | 0 | 1 | 102 |
| CIP-011 | 7 | 7 | 0 | 2 | 16 |
| Total | 237 | 268 | 24 | 25 | 554 |

The ARS listed in Table A5, Table A6, and Table A7 are contained within 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 |