



DECEMBER 2025

# Energy Matters

2025 REPORT

A|S|C  
Alberta Securities Commission







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We are pleased to share the Alberta Securities Commission's (**ASC**) 2025 Energy Matters Report (**Report**).

Our goal is to provide reporting issuers and their advisers with practical guidance to assist in ensuring balanced, reliable and timely disclosure. The experienced and knowledgeable team of engineers, geologists and other energy professionals in our Energy Group continue to serve as experts within the Canadian Securities Administrators (**CSA**) in relation to oil and gas reserves and other resources disclosure regulated under National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* (**NI 51-101**). A significant aspect of this report is guidance in relation to disclosure under NI 51-101.

We have also taken the opportunity this year to again share certain technical, sustainability, market capitalization and financing data that we track, including data on public and private financings over the past 10 years. We use this information to identify trends, focus our efforts and prioritize our resources, and hope that it may also prove useful to market participants.

With an "All things Energy" mandate, the Energy Group has in recent years expanded its scope to consider disclosure issues relating to the energy sector more broadly, focusing on areas relevant to Alberta's capital market. This has included carbon capture use and storage, renewable (nuclear, wind, solar, geothermal, biomass) energy development, the production of lithium (from brines), helium and hydrogen, and environmental and climate-related disclosure. This year, the Report also includes a spotlight on those Alberta reporting issuers engaged in the mining sector.

Consistent with the group's broader energy mandate and capitalizing on existing synergies, leadership of our climate-related disclosure efforts is being transitioned to the Energy Group, with our legal and analyst teams continuing to provide important support. This leadership will include providing subject matter expertise in assessing climate-related disclosure for all reporting issuers, not just those engaged in the energy sector. Reflective of that, this year's Report has been expanded to include a survey of environmental-related disclosure, including climate-related disclosure, not just by reporting issuers in the energy sector, but by **all** Alberta-based reporting issuers.

In 2025, similar to 2024, we noted that many reporting issuers that had in past years published sustainability reports have again chosen to not publish one. In some instances, those issuers cite concerns with the *Competition Act* (Canada). We have heard from a number of institutional investors that the information in the sustainability reports is important to them, so we are pleased that the federal government is pursuing proposed amendments to that legislation. We note that the liability regime contemplated remains different than that under securities legislation. We will be assessing to understand the implications for voluntary sustainability disclosure to investors.



We also note that the Government of Alberta has passed amendments to securities legislation that will allow the ASC, by rule, to tailor existing defences/safe harbours to civil liability under securities legislation, including respecting climate-related disclosure. This will allow the ASC to continue to ensure that reporting issuers act responsibly in providing disclosure to investors, but also recognize the unique challenges that can arise in relation to climate-related disclosure (e.g. disclosure of events that are to occur many years in the future).

Lastly, I wanted to highlight that we have developed a number of videos to assist issuers with understanding their disclosure and compliance obligations. Those videos are available on the ASC website in the “[Issuer and Insider Toolkit](#)” section and include two videos that relate specifically to NI 51-101.

If you have any questions, please do reach out to us.

We hope you will join us for the webinar planned for January 29, 2026.

Yours truly,

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Each year the ASC issues four reports: the Annual Report, the Alberta Capital Market Report, the Energy Matters Report and the Corporate Finance Disclosure Report. These reports are created to provide timely and relevant information for market participants and reporting issuers. These reports can be found at [www.asc.ca](http://www.asc.ca).



# 1. Introduction

## 1.1 GENERAL

The Alberta Securities Commission (**ASC**) administers Alberta's securities laws and is a member of the Canadian Securities Administrators (**CSA**), the council of the securities regulators of Canada's provinces and territories. Alberta's securities laws are comprised of the *Securities Act* (Alberta) (**Act**) and the rules, regulations and decisions made under the Act, which are intended to foster a fair and efficient capital market and protect investors. ASC staff endeavour to ensure investors have access to balanced, accurate, relevant and reliable information to make informed investment decisions.

The ASC is the lead regulator within the CSA concerning oil and gas and certain other energy-related disclosure. It is the Energy Group within the Corporate Finance division that is responsible for the technical aspects of this effort. The group is staffed with experts that review both energy-related technical disclosure and environmental-related disclosure that is attributed to reporting issuers (**RIs**) for which the ASC is the principal regulator (**AB RIs**).

The Energy Group functions as subject matter experts in relation to National Instrument 51-101 *Standards of Disclosure For Oil and Gas Activities* (**NI 51-101, Instrument**) and its associated guidance, and provides its expertise to other CSA jurisdictions. The Energy Group also provides leadership and subject matter expertise within the ASC for environmental-related disclosure, primarily pertaining to greenhouse gas (**GHG**) emissions and has recently taken on co-leading the CSA Climate-related Disclosure Committee along with staff of the Ontario Securities Commission (**OSC**).

The Energy Group's specific responsibilities include:

- Review of the following for compliance:
  - Oil and gas disclosure, including reserves and resources other than reserves and other oil and gas information, from issuers that report under NI 51-101;
  - Other energy-related technical disclosure from energy industry-related RIs for which the ASC is the principal regulator; and
  - Environmental-related disclosure.
- Maintenance of NI 51-101 and its related guidance, including recommendations concerning amendments to NI 51-101;
- Co-leading the CSA Climate-related Disclosure Committee, whose policy project efforts were paused in April 2025 and is currently actively monitoring developments pertaining to climate-related disclosures;<sup>1</sup>
- Oversight of climate-related disclosure attributed to AB RIs to identify and address instances of misleading information;
- Identification and monitoring of energy industry-related trends, technologies and developments as part of its "All things Energy" mandate; and
- Engagement with Alberta capital market participants through ASC advisory committees, publications, webinars, presentations, inquiries and other outreach.

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<sup>1</sup> <https://www.securities-administrators.ca/news/csa-updates-market-on-approach-to-climate-related-and-diversity-related-disclosure-projects/>



Encompassed within its “All things Energy” mandate, the Energy Group is focused on the following subject matter:

- Oil and gas activities as defined in NI 51-101;
- Oil and gas midstream (including pipelines) and oil and gas services;
- Petrochemicals;
- Renewable electricity via wind, solar, hydro, biomass and geothermal;
- Renewable hydrocarbons, also referred to as “green hydrocarbons” and “biofuels”;
- Exploration, development and transportation of helium;
- Production and transportation of hydrogen;
- Carbon capture and storage (**CCS**), carbon capture, utilization and storage (**CCUS**), their related technologies and other emissions-reduction technologies;
- Electrical generation and transmission;
- Energy minerals and elements, including coal, uranium and lithium (including its recovery from brines);
- Energy storage;
- Energy industry-related services;
- Nuclear energy;
- Disclosure of GHG emissions and certain other environmental-related information;
- Energy industry-related environmental liabilities; and
- Capital markets activity relating to:
  - Energy industry-related AB RIs;
  - AB RIs that disclose under National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (**NI 43-101**) (**(mining RIs)**);
  - Sustainable finance activity (also referred to as “transition” and “green” finance).

The Report addresses the following:

- Oil and gas disclosure from RIs engaged in oil and gas activities;
- Activities concerning Alberta mining RIs;
- The CSA Climate-related Disclosure Committee’s interim activities;
- Results from our environmental sustainability monitoring reviews, which have been expanded to include all AB RIs;
- The Alberta capital market mainly in relation to energy-related matters; and
- Energy Group activities.

The 2021, 2022 and 2023 editions of the Energy Matters Report included results of tracking voluntary disclosure concerning GHG emissions and other environmental-related sustainability matters for energy-related RIs and mining RIs, for which the ASC is the principal regulator. The 2024 Energy Matters Report (**2024 Report**) did not include this information, as it was intended to be included in a separate report that was ultimately not published due to challenges in providing year-to-year comparative data—a result of many sustainability reports not being published. This edition has been expanded and now reports on this information, in respect of all AB RIs.

Please refer to section 8 of the Report for the Energy Group’s contact information. Additionally, a glossary of selected terms related to oil and gas activities is located in section 9.

We hope you find the Report informative and look forward to hearing from you.



## 1.2 OVERVIEW

Canada's safe, secure, reliable and environmentally-responsible energy is an essential component of the world's energy system. It is the world's fourth largest producer of oil, the fifth largest producer of natural gas and one of the largest producers of uranium and hydroelectricity. Canada is at the forefront of technological development involving enhanced oil recovery, CCS, CCUS and other emissions reduction technology, recovery of lithium from brines, and renewable electricity. The Canadian energy industry continues to demonstrate significant technical expertise, innovation and leadership as it responds to challenges associated with energy diversification, energy security and increasing scrutiny and accountability relating to environmental aspects of sustainability.

This last year, the Energy Group continued its efforts to review general and required annual oil and gas disclosure from RIs engaged in oil and gas activities to assess compliance with securities law disclosure requirements, including NI 51-101 and its related forms. The Instrument sets out the general disclosure standards and specific annual disclosure requirements for RIs engaged in oil and gas activities. Under section 2.1 of NI 51-101, RIs engaged in oil and gas activities are required to file the following with the securities regulatory authority on an annual basis:

- Form 51-101F1 *Statement of Reserves Data and Other Oil and Gas Information* (**Form 51-101F1**);
- Form 51-101F2 *Report on [Reserves Data][,] [Contingent Resources Data] [and] [Prospective Resources Data] by Independent Qualified Reserves Evaluator or Auditor* (**Form 51-101F2**); and
- Form 51-101F3 *Report of Management and Directors on Oil and Gas Disclosure* (**Form 51-101F3**).

In addition, specific circumstances may require the filing of:

- Form 51-101F4 *Notice of Filing of 51-101F1 Information*; or
- Form 51-101F5 *Notice of Ceasing to Engage in Oil and Gas Activities*.

NI 51-101 requires disclosure to be prepared in accordance with the Canadian Oil and Gas Evaluation Handbook (**COGE Handbook**), referred to as NI 51-101's "technical standard." The COGE Handbook is maintained and distributed by the Society of Petroleum Evaluation Engineers (**SPEE**) (Calgary Chapter) ([www.speecanada.org](http://www.speecanada.org)). It is amended from time to time and RIs engaged in oil and gas activities must ensure that their disclosure complies with amendments upon their publication.

Disclosure reviewed by staff subsequent to the 2024 Report was generally compliant with securities law disclosure requirements, including NI 51-101 and its related forms, as well as the COGE Handbook. The Report contains observations and analyses concerning the following that have been identified for improvement:

- **Qualified reserves evaluators and qualified reserves auditors**
  - Specified disclosure is required to be prepared or audited by a qualified reserves evaluator or qualified reserves auditor; we discuss instances where this has not occurred and provide information to assist RIs in achieving compliance.
- **Development timing for undeveloped reserves**
  - Disclosure regarding item 5.1 of Form 51-101F1 is required to discuss plans (including timing) for developing proved undeveloped and probable undeveloped reserves; this disclosure is often inadequate.
- **Disclosure in financial statements and accompanying notes that is intended to satisfy certain Form 51-101F1 requirements**
  - Certain Form 51-101F1 items can be satisfied by including the specified information in financial statements and accompanying notes for the most recent financial year ended, and directing readers to that information; this disclosure often does not satisfy these items.

- **Reserves reconciliations**

- Item 4.1 of Form 51-101F1 requires the disclosure of an annual reconciliation of an RI's reserves; we discuss common errors and deficiencies.

Also included in the Report is data, analysis and discussion concerning NI 51-101 disclosure, such as oil and gas reserves estimates that are required to be disclosed under section 2.1 of NI 51-101, information related to these estimates, and resources other than reserves optionally disclosed under Part 7 of Form 51-101F1. Information concerning the activities of Alberta mining RIs is also included.

We provide an update on the CSA climate-related disclosure project and include a section that presents results from our environmental sustainability monitoring reviews conducted on disclosure from all AB RIs. These assess such things as whether or not certain disclosure has been made with respect to GHG emissions, targets and plans and other environmental-related sustainability matters, how the disclosure was prepared, its method of disclosure, and other baseline information.

Finally, the Report contains data and commentary concerning the Alberta capital market pertaining to energy-related matters and includes RI statistics, select market data and capital raising activities. Information concerning sustainable financings concerning energy-related RIs is also provided.

### 1.3 ENERGY GROUP YEAR IN REVIEW

Since the 2024 Report, the Energy Group completed 121 screening reviews of the required annual oil and gas filings per section 2.1 of NI 51-101 for RIs engaged in oil and gas activities. This included filings for 94 AB RIs and 27 for RIs where another Canadian jurisdiction was the principal regulator, which represents 90 per cent and 56 per cent of these RIs, respectively. While the intention is to complete one review for each RI engaged in oil and gas activities, some RIs had not completed their annual oil and gas filings at the end of September 2024 (excluding those subject to a cease trade order), while others had an exemption from this requirement.

Staff also completed 379 environmental sustainability monitoring reviews concerning disclosure of GHG emissions and certain other environmental-related sustainability matters – one review for each RI (excluding those subject to a cease trade order) for which the ASC was the principal regulator (excluding funds that report under National Instrument 81-106 *Investment Fund Continuous Disclosure*.) These reviews focused on basic information, such as the presence of specific disclosure, the timing and frequency of the disclosure and how it was prepared.

From the beginning of October 2024 to the end of September 2025, staff reviewed 15 prospectuses from energy industry-related RIs, including 12 for AB RIs, two for which the BC Securities Commission (BCSC) was the principal regulator and one for which the OSC was the principal regulator. Fourteen of the prospectuses were for RIs engaged in oil and gas activities and one was for an RI involved in oil and gas midstream.

Staff conducted approximately 820 press release screening reviews and 11 full press release reviews, all of which were for AB RIs. In addition, staff completed 44 other disclosure reviews to the end of September 2025. Further information on review types is contained in section 2 of the Report.



Figure 1: Number of completed disclosure reviews

REVIEW TYPE	JURISDICTION	2025 YTD*	2024	2023	2022	2021	2020	2019	2018
Prospectus – oil & gas	AB	5	11	8	13	21	3	5	12
	Other	1	4	2	6	3	0	1	2
Prospectus – other energy	AB	0	0	2	6	8	–	–	–
	Other	0	0	3	5	4	–	–	–
Annual oil & gas filing screening	AB	94	107	104	108	113	129	132	138
	Other	27	26	24	25	29	41	45	57
Press release screening	All	682	741	737	1,652	1,766	–	–	–
Press release	AB	8	7	4	6	38	21	26	15
	Other	1	1	1	5	3	2	5	0
Other	AB	24	30	24	11	29	12	20	37
	Other	6	5	20	4	9	0	3	1
Environmental sustainability monitoring	AB	379	238	243	164	190	–	–	–
	Other	0	0	0	52	0	–	–	–

“–” Not tracked

\* Information is included to the end of September for the current year, referred to as “YTD,” and subsequently updated to the full year in future reports, with the exception of Sustainability technical screening, which are conducted between October 1 and September 30.

As part of its ongoing commitment to engagement with capital market participants, the ASC published the 2024 Report in December 2024. It was emailed to approximately 1,542 subscribers. In January 2025, staff hosted the 2025 Energy Matters Information Session webinar. The event had 371 registered participants and 152 attendees. See the [Events & Presentations](#) section of [asc.ca](https://asc.ca) for information on past and future ASC events.

## 2. Oil and gas disclosure commentary

### 2.1 INTRODUCTION

This section discusses specific types of oil and gas disclosure from RIs engaged in oil and gas activities that staff have identified for improvement. It also includes data, analysis and discussion concerning oil and gas reserves estimates required to be disclosed under section 2.1 of NI 51-101 and resources other than reserves optionally disclosed under Part 7 of Form 51-101F1. The content is based primarily on our reviews of disclosure from October 1, 2024 to September 30, 2025, representing oil and gas activities that mainly occurred in 2024 (accounting for variability in financial year-end dates for RIs).

The Energy Group applies a rigorous review process to assess compliance with oil and gas securities law disclosure requirements. While this process primarily focuses on AB RIs, staff also routinely review disclosure from RIs for which other Canadian jurisdictions are the principal regulator. This is done in an effort to assist these jurisdictions, help ensure consistency of expectations across Canada, improve disclosure and ensure the ASC is aware of oil and gas-related disclosure across the CSA.

RIs engaged in oil and gas activities are subject to NI 51-101, including its general standards and specific annual requirements. In addition, they are also subject to the applicable requirements and prohibitions of Canadian securities legislation more broadly.

#### 2.1.1 Types of reviews

The Energy Group conducts or participates in a variety of types of reviews. The type of review generally establishes what specific disclosure and support material will be incorporated into the review. Disclosure reviewed may incorporate disclosure required by section 2.1 of NI 51-101 (including the statement of the reserves data and other information specified in Form 51-101F1 and related reports), management discussion and analyses (**MD&A**), press releases, prospectuses, investor presentations, and websites, along with material used to prepare disclosure, such as evaluations of oil and gas reserves and resources other than reserves, other technical reports, and various technical documentation.

Examples of reviews we conduct or otherwise participate in are noted below, along with some associated details:

- **Screening**
  - **Oil and gas**
    - Encompasses the required annual oil and gas filings, which comprise the statement of the reserves data and other information specified in Form 51-101F1 and reports in accordance with Form 51-101F2 and Form 51-101F3.
    - Findings may result in the initiation of a compliance, technical continuous disclosure or issue-oriented review (see below).
  - **Press release**
    - Involves the press release itself being screened and incorporates other disclosure, as needed.
    - Findings may result in the initiation of a press release review (see below).
- **Cease trade order revocation**
  - Incorporates oil and gas and other energy industry-related disclosure contained in required and voluntary filings, as needed, when an RI applies for a cease trade order revocation and a review is initiated.

- **Compliance**
  - Initiated as a result of the identification of a specific issue during a different review type with a limited scope or via files referred from within the ASC or from another CSA jurisdiction.
  - Includes energy industry-related and other disclosure, as needed.
  - Depending on findings, these may result in the initiation of a technical, continuous disclosure or issue-oriented review.
- **Continuous disclosure**
  - Encompasses all energy industry-related and other disclosure contained in required and voluntary filings, as needed.
  - Findings may result in the initiation of a technical or compliance review.
- **Environmental sustainability monitoring**
  - Includes disclosure concerning GHG emissions and certain other environmental-related sustainability matters.
  - Also involves tracking of certain baseline information such as:
    - Whether or not certain sustainability disclosure has been made.
    - The timing and frequency of such disclosure.
    - How the disclosure was prepared.
    - The method of disclosure.
    - Whether or not specific information has been disclosed.
  - Findings may result in the initiation of a continuous disclosure or issue-oriented review.
- **Issue-oriented**
  - Depending on the specific identified issue, will incorporate energy industry-related technical disclosure and/or environmental-related sustainability disclosure contained in required and voluntary filings.
  - Findings may result in the initiation of a technical or compliance review.
- **Notice of intent to be qualified to file a short-form prospectus**
  - Incorporates energy industry-related and other disclosure, as needed.
- **Press release**
  - More in-depth than a press release screening review.
  - Includes other disclosure, as needed.
  - Typically results in a letter sent to the RI when an issue is identified.
  - Findings may result in the initiation of a compliance, technical, continuous disclosure or issue-oriented review.
- **Prospectus (short-form, long-form and shelf)**
  - Involves the prospectus itself, while for long-form prospectuses (e.g., initial public offerings), incorporates related evaluations of oil and gas reserves and resources other than reserves, other technical reports and various technical documentation, while these are only incorporated as needed for short-form and shelf prospectuses.
  - Incorporates other disclosure, as needed.
  - Findings during a short-form or shelf prospectus review may result in the initiation of a compliance review.
- **Technical**
  - Focuses on evaluations of oil and gas reserves and resources other than reserves, other technical reports and various technical documentation.
  - Incorporates other disclosure, as needed.
  - These may result in the initiation of a continuous disclosure review.



Outcomes of reviews will vary depending on the specific circumstances. Outcomes include:

- No action necessary.
- Advisory comment(s) intended to improve future disclosure.
- Identification of deficiencies, including errors and omissions that may be misleading, with results that depending on the nature and severity of the issue, may include one or more of the following:
  - requirement to correct and refile
  - issuer placed on defaulting issuers list
  - management cease trade order
  - cease trade order
  - referral to the ASC Enforcement division.

### 2.1.2 Disclosure expectations

RIs are required to ensure that their disclosure is not false or misleading and does not omit required material facts or material facts necessary to make a statement not misleading,<sup>2</sup> focuses on material information, such as that which would be likely to influence a decision by a reasonable investor to buy, hold or sell its securities,<sup>3</sup> and otherwise complies with securities law disclosure requirements.

RIs that are uncertain whether their disclosure complies with securities laws, including NI 51-101 and its technical standard, the COGE Handbook, should seek the advice of an appropriate professional adviser.

General guidance and examples of misrepresentations and misleading statements are provided in section 2(a)(i)(A) of CSA Staff Notice 51-327 *Revised Guidance on Oil and Gas Disclosure* (**CSA SN 51-327**).

Key areas of disclosure identified by staff for improvement are discussed below. This includes section 2.5 Reserves Reconciliations. Historically, staff have addressed this subject due to a multitude of related issues over the years. While the number of occurrences of any particular issue tends to fluctuate, we maintain this section to help reduce the chance of their recurrence. Therefore, this section is a helpful reference for those who prepare disclosure concerning reserves reconciliations, particularly qualified reserves evaluators and qualified reserves auditors.

<sup>2</sup> No person or company shall make a statement that the person or company knows or reasonably ought to know:

(a) in any material respect and at the time and in the light of the circumstances in which it is made,  
 (i) is misleading or untrue, or  
 (ii) does not state a fact that is required to be stated or that is necessary to make the statement not misleading,

and

(b) would reasonably be expected to have a significant effect on the market price or value of a security, a derivative or an underlying interest of a derivative.  
 (Section 92(4.1) *Securities Act* (Alberta))

<sup>3</sup> Section 1.4(2) of NI 51-101

## 2.2 QUALIFIED RESERVES EVALUATORS AND QUALIFIED RESERVES AUDITORS

**Concern: Disclosure that is not prepared by a qualified reserves evaluator or audited by a qualified reserves auditor, as required by NI 51-101.**

Staff continue to identify disclosure prepared by individuals who do not meet the requirements to be a qualified reserves evaluator (**QRE**). A less frequent, but related concern, is disclosure audited by individuals who do not meet the requirements to be a qualified reserves auditor (**QRA**). In addition, the COGE Handbook was updated in October 2025 to reflect new information concerning QREs and QRAs, making this an ideal opportunity to discuss this topic.

Since the end of September 2024, staff have identified nine instances of disclosure required to be prepared by a QRE that was not prepared by one. Seven of these instances involved disclosure from AB RIs, while two involved disclosure from RIs for which two other Canadian jurisdictions were the principal regulators. Three of these instances involved disclosure within the annual oil and gas filings required by section 2.1 of NI 51-101, including one attributed to an AB RI and two from RIs regulated by two other Canadian jurisdictions.

NI 51-101 requires specified disclosure to be prepared by QREs or audited by QRAs, as these terms are defined in NI 51-101. It also requires that those who perform the responsibilities of QREs and QRAs be qualified per NI 51-101.

Generalized experience in the practice of engineering, geology, geophysics, or other discipline of physical science, by itself, is usually not sufficient to meet NI 51-101 requirements. QREs and QRAs are considered by staff to be specialists within their respective fields, no different than any other discipline wherein individuals can acquire expertise within a specific, narrow area of study, within a broader discipline.

Being qualified under another regulatory instrument or standard to perform similar tasks does not mean an individual will automatically meet the requirements pertaining to QREs and QRAs under NI 51-101. Terms such as qualified person, competent person and technical person are not recognized by nor used in NI 51-101, and are not synonymous nor substitutable with QRE and QRA.

RIs must ensure that any individual they appoint to perform the tasks of a QRE or QRA for the purposes of NI 51-101, satisfies the requirements of NI 51-101. To assist RIs in complying with their disclosure obligations, we discuss in this section the roles of QREs and QRAs with respect to NI 51-101 and provide further information regarding their respective qualifications.

QREs and QRAs are fundamental to compliant NI 51-101 disclosure. For example:

- Section 5.2 of NI 51-101: If an RI discloses reserves or other information of a type specified in Form 51-101F1, the estimates of reserves or future net revenue must be prepared or audited in accordance with the COGE Handbook. The COGE Handbook extensively addresses the qualifications, experience and utilization of QREs and QRAs. This information was updated in October 2025.
- Section 5.9: Disclosure of anticipated results from resources not currently classified as reserves, which includes an estimate of a quantity in which the RI has an interest or intends to acquire an interest, or an estimated value attributable to an estimated quantity, must be prepared by or audited by a QRE or QRA.
- Section 5.10: If an RI is unable to confirm that analogous information was prepared by a QRE or QRA, the RI must provide a cautionary statement to this effect proximate to the disclosure.
- Section 3.2: An RI must appoint one or more independent QREs or QRAs and direct each to report to the board of directors, a committee of the board of directors, or those individuals whose authority and duties in respect of that RI are similar to those of a board of directors, on the reserves data, contingent resources data and prospective resources data disclosed in Form 51-101F1.

- Section 2.1: An RI must have the independent QRE or QRA execute the report that the RI files in accordance with Form 51-101F2.

An individual that represents themselves as a QRE or QRA under NI 51-101 must fully comply with the respective requirements and as necessary, demonstrate this compliance.

QRE and QRA are defined in NI 51-101.<sup>4</sup> A QRE is an individual who:

- (a) in respect of particular *reserves data, resources* or related information, possesses professional qualifications and experience appropriate for the estimation, *evaluation* and *review* of the *reserves data, resources* and related information; and
- (b) is a member in good standing of a *professional organization*; [Emphasis added]

A QRA is an individual who:

- (a) in respect of particular *reserves data, resources* or related information, possesses professional qualifications and experience appropriate for the estimation, *evaluation, review* and *audit* of the *reserves data, resources* and related information; and
- (b) is a member in good standing of a *professional organization*; [Emphasis added]

An important element of both definitions is that qualifications and experience in the estimation, evaluation and review of reserves data, resources and related information is required. The COGE Handbook provides additional information,<sup>5</sup> including:

- A QRE must have a minimum of five years of practical petroleum experience, with at least three recent years of evaluation experience during the period of practical petroleum experience, where the majority of time over those years was spent conducting evaluations of reserves and resources other than reserves.
- QREs are specialized with respect to resource evaluations.

In the context of NI 51-101, staff interpret this to mean that more than half of a qualifying individual's time over at least three recent years was spent evaluating reserves and resources other than reserves in accordance with the COGE Handbook, for disclosure under NI 51-101 or the supervision of such work. In other words, they were focused on conducting or supervising evaluations more than anything else.

While there is no widely accepted definition of "recent years" staff interpret it to generally mean within the last five years. However, a longer time period could be appropriate under certain circumstances.

A QRA must have a minimum of 10 years of practical petroleum experience, with at least five recent years of evaluation experience during the period of practical petroleum experience, where the majority of time over those years was spent conducting evaluations of reserves and resources other than reserves. Again, staff interpret this to mean that more than half of a qualifying individual's time over at least five recent years was spent evaluating reserves and resources other than reserves in accordance with the COGE Handbook, for disclosure under NI 51-101 or the supervision of such work. In other words, they were focused on conducting or supervising evaluations more than anything else.

<sup>4</sup> Section 1.1 of NI 51-101

<sup>5</sup> Section 5.4.3.1 of the COGE Handbook



If these qualifications are not satisfied, an individual will not be considered a QRE or a QRA, for the purposes of NI 51-101. Very few petroleum professionals will satisfy the QRE qualifications. Fewer still will satisfy the QRA qualifications that permit them to perform audits.<sup>6</sup> Staff encourage anyone with questions regarding QRE and QRA qualifications to contact them.

An evaluation<sup>7</sup> is:

[T]he process whereby an economic analysis is made of a *property* to arrive at an estimate of a range of net present values of the estimated *future net revenue* resulting from the *production* of the *reserves* or *resources other than reserves* associated with the *property*. [COGE Handbook]

An audit<sup>8</sup> is:

[T]he process whereby an *independent qualified reserves auditor* carries out procedures designed to allow the *independent qualified reserves auditor* to provide reasonable assurance, in the form of an opinion that the *reporting issuer's reserves data* (or specific parts thereof) have in all *material* respects, been determined and presented in accordance with the *COGE Handbook* and are, therefore, free of *material* misstatement. [...] [COGE Handbook]

The COGE Handbook<sup>9</sup> requires evaluation reports to be prepared by or under the direct supervision of a QRE. The QRE must possess appropriate professional qualifications and experience for the tasks contemplated in NI 51-101 and be a member in good standing of a professional organization.<sup>10</sup>

The main evaluation steps<sup>11</sup> include:

- Determining volumes and values;
- Classifying the volumes and values in accordance with the COGE Handbook; and
- Reporting on the results of the evaluation in accordance with regulatory requirements.

The main objective of an audit is to give an opinion on the reasonableness of an evaluation. An audit does not replicate the original evaluation in whole or in part, but instead addresses the quality of the evaluation. An audit can only be performed by a QRA<sup>12</sup> and per the definition of audit above, the QRA must be independent, as defined in section 1.1 of NI 51-101.

In addition to professional qualifications and appropriate experience, a QRE or QRA must be a member in good standing of a professional organization *at the time the evaluation or audit is performed*.<sup>13</sup> Confidence that membership in a professional organization would be granted if it were applied for is not sufficient. Neither is it to apply for membership after an evaluation or audit has been performed. Please also note that being a member of a professional organization has no bearing on whether you satisfy any of the other criteria to be considered a QRE or QRA.

<sup>6</sup> Section 5.4.3.1 of the COGE Handbook

<sup>7</sup> CSA Staff Notice 51-324 *Revised Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* (CSA SN 51-324)

<sup>8</sup> CSA SN 51-324

<sup>9</sup> Section 5.6 of the COGE Handbook

<sup>10</sup> Section 1.1(6) of Companion Policy 51-101CP *Standards of Disclosure for Oil and Gas Activities* (51-101CP)

<sup>11</sup> Section 1.1.4 of the COGE Handbook

<sup>12</sup> Section 5.3.3 of the COGE Handbook

<sup>13</sup> Section 1.1(5) of 51-101CP

NI 51-101<sup>14</sup> defines a professional organization as a self-regulating organization of engineers, geologists, other geoscientists or other professionals, whose professional practice includes reserves evaluations or reserves audits that meets certain criteria. The CSA recognizes a number of such organizations,<sup>15</sup> including the Association of Professional Engineers and Geoscientists of Alberta (**APEGA**) and SPEE, in respect of Members, Honorary Life Members and Life Members.

Please note that many professional organizations have requirements that must be met for an individual to legally practice in a particular jurisdiction. For example, Canadian provincial and territorial regulators regulate the practice of engineering and geoscience in their jurisdiction. Individuals need to ensure that these requirements are met when an evaluation or audit is performed. Otherwise, an evaluation or audit may not have been prepared or audited in accordance with the COGE Handbook and therefore not meet the requirements of NI 51-101.

RIs must satisfy themselves that any person they appoint as a QRE or QRA is qualified with respect to the reserves data to be reported on.<sup>16</sup> Executing a report prepared in accordance with Form 51-101F2 without the required qualifications and experience could be misleading. Additionally, an individual who is a member of a professional organization will have certain professional obligations to only undertake work that they are competent to perform by virtue of their qualifications and experience.<sup>17</sup>

#### KEY POINTS

- A QRE or QRA must satisfy the required professional qualifications and experience regarding the estimation, evaluation and review of reserves data, resources other than reserves and related information.
  - The qualifications and experience must relate to NI 51-101 and by extension, its technical standard, the COGE Handbook.
- A QRE or QRA must be a member in good standing of a professional organization whose practise includes reserves evaluations and reserves audits, as well as the evaluation and audit of reserves data.
  - Being a member of a professional organization has no bearing on whether you satisfy any of the other criteria to be considered a QRE or QRA.
- The preparation of an evaluation involves the determination and classification of volumes and associated values and the reporting of these results in accordance with regulatory requirements, which in the current context is NI 51-101.
- A QRA will automatically satisfy the qualifications of a QRE, while a QRE is not necessarily a QRA; a QRA can conduct audits, while a QRE cannot.
- A QRA that performs an audit must be independent.
- RIs are responsible for ensuring that the QREs and QRAs that they appoint are qualified.
- QREs and QRAs are specialists within their respective fields; they are qualified for their roles.

We will continue to pay particular attention to concerns regarding QREs and QRAs in its reviews and will address these concerns as needed with RIs and their professional advisors.

<sup>14</sup> Section 1.1 of NI 51-101

<sup>15</sup> Section 1.1(5) of 51-101CP

<sup>16</sup> Section 1.1(6) of 51-101CP and section 5.4.3 of the COGE Handbook

<sup>17</sup> Section 2(b) of CSA SN 51-327

## 2.3 DEVELOPMENT TIMING FOR UNDEVELOPED RESERVES

**Concern: Inadequate disclosure regarding item 5.1 of Form 51-101F1, which requires discussion of the plans, including timing, for development of proved undeveloped reserves and probable undeveloped reserves.**

Inadequate disclosure about the timing of development of undeveloped reserves is a recurring concern. It was discussed in the 2017, 2018 and 2019 Oil & Gas Review Reports and the 2021 Energy Matters Report (**2021 Report**). Much of the prior information is repeated here, supplemented with new information, in an effort to educate readers and reduce the chances of future disclosure concerns arising.

Item 5.1 of Form 51-101F1 requires an RI to disclose certain information intended to inform readers about any undeveloped reserves that have been disclosed under item 2.1 of Form 51-101F1. They are to disclose the volumes of both proved undeveloped reserves and probable undeveloped reserves that were first attributed in each of the three most recent financial years, Instruction (1) clarifies that “first attributed” refers to the initial allocation of a particular quantity of undeveloped reserves by an RI. Only previously unassigned undeveloped quantities are to be included in the first attributed volumes for the applicable financial year.

Additionally, RIs are to discuss the basis on which the undeveloped reserves have been attributed, its plans for their development (including timing), and its reasons for deferring development beyond two years. Instruction (2) states that the discussion must enable a reasonable investor to assess the efforts made by the RI to convert the undeveloped reserves to developed reserves. It is expected to be meaningful and specific to an RI’s circumstances, with proved undeveloped reserves and probable undeveloped reserves addressed separately, and clear details provided concerning the timing of each key element of the development plans. We expect the disclosure to justify the development timing.

We interpret “deferring” to mean the scheduling of development of undeveloped reserves beyond two years at the time they were first attributed, and not a decision to subsequently defer the development of previously attributed undeveloped reserves.

Figure 2 presents information concerning compliance with items 5.1.1(b) and 5.1.2(b). The information is drawn from disclosure by RIs for which the ASC is the principal regulator and is attributed to oil and gas activities primarily conducted in 2024. The RIs were grouped using production disclosed per item 6.9 of Form 51-101F1, as follows:

- “Seniors”: RIs with >100,000 barrels of oil equivalent (**BOE**) per day (based on a conversion ratio of six thousand cubic feet of gas for one barrel of oil) of production;
- “Intermediates”: RIs with 10,000 to 100,000 BOE per day of production; and
- “Juniors”: RIs with <10,000 BOE per day of production.

As indicated in Figure 2, 25 per cent of disclosure from the seniors, 11 per cent from the intermediates and 27 per cent from the juniors, does not meet the requirements concerning development timing due to deficiencies. The majority of these deficiencies involve inadequate discussion or no discussion of an RI’s development plans, including timing, for both proved undeveloped reserves and probable undeveloped reserves. For example, of the seventeen RIs that had unsatisfactory disclosure per Figure 2, seven of these provided no discussion and all of these were juniors.



**Figure 2: Compliance with items 5.1.1(b) and 5.1.2(b), for RIs principally regulated by the ASC**

	UNSATISFACTORY DISCLOSURE	
	Number	Per cent
Seniors	3	25%
Intermediates	3	11%
Juniors	11	27%

Figure 3, presents information from the 2021 Report for comparison. As shown, disclosure has improved since 2021 for all three groups, with the intermediates improving the most, from 35 per cent unsatisfactory disclosure, to 11 per cent.

**Figure 3: Compliance with items 5.1.1(b) and 5.1.2(b), for RIs principally regulated by the ASC, for 2021**

	UNSATISFACTORY DISCLOSURE	
	Number	Per cent
Seniors	3	30%
Intermediates	7	35%
Juniors	15	30%

#### Example 1: DISCLOSURE THAT *DID NOT* MEET OUR EXPECTATIONS

The company plans to develop its undeveloped reserves over the next three to five years. Timing may change based upon factors such as commodity pricing, availability of capital, access to processing facilities and transportation, regulatory approval and new reservoir data.

##### *Staff's concerns with this disclosure include:*

- *It does not differentiate information for proved undeveloped reserves and probable undeveloped reserves, as required by item 5.1.*
- *It is not meaningful and specific to the circumstances of the RI, such that it would enable a reasonable investor to assess the efforts made by the RI to convert undeveloped reserves to developed reserves, as noted in instruction (2) of item 5.1.*
- *No reasons are provided to explain why development of the proved undeveloped reserves and probable undeveloped reserves are being deferred beyond two years. This disclosure is required by item 5.1.*
- *The factors referenced as potentially impacting development timing are factors that would often directly influence project commerciality. A project must be commercial for reserves to be assigned and to remain assigned. This suggests that reserves may have been inappropriately assigned, as the factors cited may impact commerciality.*

**Example 2: DISCLOSURE THAT DID MEET OUR EXPECTATIONS**

The company plans to develop all of its proved undeveloped reserves over the next two years. These reserves are attributed to the company's ABC and DEF properties. The majority of its probable undeveloped reserves are attributed to its ABC, DEF and GHI properties and are scheduled to be developed over the next five years. The remaining probable undeveloped reserves are attributed to the JKL property and are scheduled to be developed within seven years. Approximately 50 per cent of the company's probable undeveloped reserves are expected to be developed within the next two years. The remainder have been deferred beyond two years due to the availability of processing capacity within the company-owned 123 facility and higher-priority opportunities.

CSA SN 51-324 discusses development timing. It states that the determination of commerciality must consider:

[E]vidence to support a reasonable timetable for development. A reasonable time frame for the initiation of development depends on the specific circumstances and varies according to the scope of the project. Although five years is recommended as a maximum time frame for classification of a project as commercial, a longer time frame could be applied where, for example, development of economic projects are deferred at the option of the producer for, among other things, market-related reasons or to meet contractual or strategic objectives. [*COGE Handbook*] [Emphasis added]

While the development timetable can extend beyond five years, it must still be reasonable and be supported by evidence. If a project is not commercial, reserves cannot be attributed. Reserves attribution must consider the challenges facing the oil and gas industry and the requirement that reserves must have a chance of commerciality that is effectively 100 per cent.

Section 1.4.7.2.1.8 of the COGE Handbook discusses development timing for undeveloped reserves:

For Undeveloped Reserves, development should normally proceed within five years unless there is appropriate justification with adequate explanation. The evaluator should review Undeveloped Reserves estimates if development has not proceeded as the operator had previously planned. Reserves should be converted to Contingent Resources if development is delayed beyond five years of the intended timeline unless there is compelling justification and clear explanations by the company.

For large projects, where significant capital is required for field development or infrastructure construction, significant capital expenditures should commence within three years for assignment of Proved Undeveloped Reserves. For the assignment of Probable Undeveloped Reserves, significant capital spending should commence within five years. If significant capital expenditures do not occur within these times, the associated oil and gas quantities should be classified as Contingent Resources.

This section also provides examples of situations in which it may be appropriate to exceed this development timing. Regarding ongoing resource play development, it states:

For Resource plays where drilling programs have been underway for a few years and are expected to continue for some time due to a large inventory of locations that qualify for assignment as Reserves, it is reasonable to have Proved Undeveloped Reserves assigned for five years of development drilling and Probable Undeveloped Reserves extending out for ten years of development drilling.

For gas processing facilities, it states:

When construction is underway of a large gas processing facility in which the Reserve owner has committed capacity and is forecasted to be completed within two years to develop a large Resource, it is reasonable to schedule drilling wells for up to five years from the start-up of the facilities in the Proved Undeveloped Reserves category. In the Proved plus Probable Undeveloped Reserves category drilling is limited to ten years from the effective date of the report.

It also states:

There may be reasonable exceptions to these guidelines, including longer times, but only if there is compelling justification and clear disclosure by the company.

We expect development timing for undeveloped reserves to not exceed five years unless there is compelling justification with adequate explanation within the evaluation and the RI's disclosure. RIs should consider incorporating the information included in the evaluation when preparing their disclosure under item 5.1.1(b) and 5.1.2(b). This information may also be helpful for preparation of disclosure under item 5.2 of Form 51-101F1, which concerns identification and discussion of significant factors or uncertainties that affect certain components of the reserves data disclosed in Form 51-101F1.

During technical reviews, we may request additional information if development timing is not adequately explained in an evaluation. An evaluation that does not have such an explanation may be considered to have not been prepared in accordance with the COGE Handbook, in which case, disclosure from the evaluation would not be permitted under NI 51-101.

Figure 4 presents information concerning development timing for undeveloped reserves, based on disclosure per items 5.1.1(b) and 5.1.2(b). The selection and grouping criteria are consistent with that used for Figure 2 and Figure 3. As indicated, the average development timing for proved undeveloped reserves is six years for the seniors, five for the intermediates and four for the juniors, while that for probable undeveloped reserves is nine, seven and five years, respectively. The average timing does not include the 17 RIs, referred to above, that have provided inadequate timing disclosure for both proved undeveloped reserves and probable undeveloped reserves.

**Figure 4: Development timing for proved undeveloped and probable undeveloped reserves by RIs principally regulated by the ASC**

	AVERAGE TIMING (YEARS)	
	Proved	Probable
Seniors	6	9
Intermediates	5	7
Juniors	4	5

For comparison, Figure 5 includes information from the 2021 Report. Average development timing has increased by two years for the seniors and one year for the juniors since 2021 for proved undeveloped reserves, while it has remained the same for the seniors and intermediates with regards to probable undeveloped reserves and increasing by one year for the juniors. The average timing does not include the 20 RIs that provided inadequate timing disclosure for both proved undeveloped reserves and probable undeveloped reserves.



**Figure 5: Development timing for proved undeveloped and probable undeveloped reserves by RIs principally regulated by the ASC, for 2021**

	AVERAGE TIMING (YEARS)	
	Proved	Probable
Seniors	4	9
Intermediates	5	7
Juniors	3	4

Section 2(b) of CSA SN 51-327 discusses general standards and responsibilities with regards to QREs and QRAs. It notes that QREs and QRAs should ensure that an evaluation scenario used in an evaluation is reasonable with respect to timing and cost.

#### KEY POINTS

- Per item 5.1 of Form 51-101F1, the discussion of an RI's development plans for its proved undeveloped reserves and probable undeveloped reserves must:
  - Be meaningful and specific to the RI's circumstances.
  - Refer separately to its proved undeveloped reserves and probable undeveloped reserves.
- To be classified as reserves the chance of commerciality needs to be effectively 100 per cent; i.e. there should be effectively no risk.
  - A project must be commercial for reserves to be attributed.
  - Attribution must assess commerciality; the challenges facing the oil and gas industry must be considered.
- Development timing for undeveloped reserves must be reasonable and be supported by evidence.

In addition to the technical requirements of NI 51-101, RIs are subject to the overarching provisions of securities legislation including the prohibition against making false or misleading statements. Further, RIs may face civil liability to investors in the event their disclosure includes misrepresentations.

We will continue to pay particular attention to deficiencies and other concerns involving development timing in its reviews and will continue to address these concerns with RIs and their professional service providers.

## 2.4 INFORMATION DISCLOSED IN FINANCIAL STATEMENTS AND ACCOMPANYING NOTES THAT IS INTENDED TO SATISFY CERTAIN FORM 51-101F1 REQUIREMENTS

**Concern: Information presented in an RI's financial statements and accompanying notes that does not satisfy Form 51-101F1 items as intended.**

Certain Form 51-101F1 items permit an RI to present the required information in their financial statements and accompanying notes for the most recent financial year ended. However, if the information is located in the financial statements it must still fully satisfy the Form 51-101F1 item, just as it would if the information were instead presented in the Form 51-101F1. For all but one of these items, the RI is instructed to direct the reader of the 51-101F1 to the presentation of the information in the financial statements. Staff frequently encounter situations where the information in the financial statements and accompanying notes does not satisfy the item or the directions regarding where to find the information are insufficient or absent.

The items in Form 51-101F1 that can be satisfied by providing the required information in the financial statements and accompanying notes are as follows:

- Item 5.2: Identify and discuss significant economic factors or significant uncertainties that affect particular components of the reserves data.
- Item 6.2.1: Identify and discuss significant economic factors or significant uncertainties that have affected or are reasonably expected to affect the anticipated development or production activities on properties with no attributed reserves.
- Item 6.3.1: If an RI is bound by an agreement directly or through an aggregator, under which it may be precluded from fully realizing, or may be protected from the full effect of, future market prices for oil or gas, generally describe the agreement. Include dates or time periods and summaries or ranges of volumes and contracted or reasonably estimated values.
- Item 6.6: Disclose by country for the most recent financial year ended, the RI's property acquisition costs for proved properties and unproved properties (separately), its exploration costs and its development costs.

Items 5.2, 6.2.1 and 6.6 have an accompanying instruction that specifies that the item may be satisfied by an RI directing readers to the presentation of the required information in the financial statements and accompanying notes for the most recent financial year ended. While item 6.3.1 does not have such an instruction, staff encourage disclosure to be provided that directs the reader to the information.

Generic comments like the following are insufficient to properly direct readers:

- "This information can be found in the financial statements;" or
- "Please see the financial statements for this information."

Staff expect RIs to provide specific directions regarding where exactly the information is presented, such as referral to a specific area of the financial statements or a specific note number.

If readers are directed to the financial statements and accompanying notes, the reference must be to the most recent financial year ended. The requirement is not satisfied by referring readers to financial statements and notes for another financial period.

The information presented in the financial statements and accompanying notes must fully satisfy the requirements specified for each Form 51-101F1 item. Generic or otherwise "boilerplate" information is not acceptable whether the disclosure is within the Form 51-101F1 or in the financial statements. Likewise, information that is not clearly presented will result in an item being considered as not satisfied. If required information is combined or "rolled up" with other information and it cannot be readily separated, the requirements may not be satisfied. For instance, item, 6.6 requires separate disclosure of property acquisition costs, exploration costs and development costs. It is not appropriate to combine this into one figure in the financial statements, without an accompanying explanation regarding how to differentiate the required information.

The following are examples of disclosure that staff encounter that results in RIs being considered to have not satisfied the specified item:

### Example 3: DISCLOSURE THAT *DID NOT* MEET OUR EXPECTATIONS

#### Per item 5.2 of Form 51-101F1:

The Company's properties have the same significant risks and uncertainties that any other similar company's properties would have. These are disclosed in the financial statements and MD&A as filed on SEDAR+. Please refer to these documents for a discussion of these matters.

#### Staff's comments on this disclosure:

- *This refers to significant risks and uncertainties related to the company's properties, while the requirement is to identify and discuss significant economic factors or significant uncertainties that affect particular components of the reserves data.*
- *The reader is directed to "the financial statements and management's discussion and analysis as filed on SEDAR+."*
  - *The directions are insufficient. Staff expect specific directions regarding where exactly the information can be found.*
  - *It is not clear if the reader is being directed to the company's financial statements for the most recent financial year ended.*
- *The information in the financial statements and MD&A is a listing of generic and otherwise boilerplate risks. There is no discussion and the information does not provide any clarity with respect to significant risks and significant uncertainties particularly concerning the company's reserves data.*

### Example 4: DISCLOSURE THAT *DID NOT* MEET OUR EXPECTATIONS

#### Per item 6.6 of Form 51-101F1:

For further information regarding the Company's acquisition, development and exploration costs please refer to the Company's financial statements for the year ended December 31, 2024.

The Company's financial statements show the following:

	2024	2023
Balance, January 1	35,988,224	26,721,844
Additions	12,200,995	9,674,284
Revision of asset retirement estimate	(34,623)	(407,944)
Transfer of E&E assets to D&P assets (Note 9)	(38,652,461)	–
Impairment loss	(9,502,135)	–
Balance, December 31	–	35,988,224

#### Staff's comments on this disclosure:

- *The disclosure states that information concerning the Company's acquisition, development and exploration costs is found in the referenced financial statements, there are no specific directions regarding exactly where the information is presented.*
- *The information in the financial statements consists of a single value in the "Additions" line item that appears to represent a summation of the Company's acquisition, development and exploration costs, and perhaps other, unrelated costs, with no accompanying notes that describe how the individual costs can be separated.*

## 2.5 RESERVES RECONCILIATIONS

### Concern: Common errors and deficiencies with the annual reserves reconciliation required by item 4.1 of Form 51-101F1.

Staff have identified numerous errors and deficiencies over the years that have contributed to incorrect disclosure concerning reserves reconciliations. These include:

- Opening balances failing to match closing balances from the previous financial year.
- Negative volumes occurring where they should not.
- Erroneous and potentially misleading uses of reserve change categories, particularly “technical revisions.”
- Using reserve change categories that are not specified by NI 51-101 and are therefore not permitted to be used.
- The use of incorrect dates for acquisitions and dispositions causing errors in reserve changes.
- Incorrect production volumes.
- Absence of required explanations regarding disclosure in each reserve change category.
- Errors resulting from incorrect mathematical summation.
- Missing or inconsistent units of measure.

Incorrect reserves reconciliation disclosure is a recurring concern, with errors and deficiencies identified in the disclosure of RIs of all sizes. Some deficiencies are easy to identify, while others only come to light through detailed analyses of disclosure and scrutiny of associated reserves evaluations. In some cases, this incorrect disclosure may be misleading, such as the incorrect use of reserve change categories, particularly “technical revisions,” discussed below.

This section is included in each edition of the Energy Matters Report (and previously, in each edition of the Oil & Gas Review Report) as a helpful reference for those involved in the preparation and disclosure of reserves reconciliations. This includes those in the employ of RIs and their professional service providers. Both NI 51-101 and the COGE Handbook provide information concerning reserves reconciliations. It is imperative that those involved in their preparation and disclosure understand this information to help avoid errors and deficiencies.

Item 4.1 of Form 51-101F1 requires that an annual reconciliation of changes in estimates of gross proved reserves (in total), gross probable reserves (in total), and gross proved plus probable reserves (in total) be disclosed. This disclosure is required by country, product type specified in item 4.1.2(b) and reserve change category specified in item 4.1.2(c), and instruction (4) of item 4.1. In addition, item 4.1.2(c) requires an explanation concerning disclosure that occurs in each reserve change category.

Product types are specified in item 4.1.2(b) as:

- (i) *bitumen;*
- (ii) *coal bed methane;*
- (iii) *conventional natural gas;*
- (iv) *gas hydrates;*
- (v) *heavy crude oil;*
- (vi) *light crude oil and medium crude oil combined;*
- (vii) *natural gas liquids;*
- (viii) *shale gas;*
- (ix) *synthetic crude oil;*
- (x) *synthetic gas;*
- (xi) *tight oil.*

Oil, condensate, liquids, gas, natural gas, solution gas, associated gas, non-associated gas, sulphur and helium should not be used as they are not specified as “product types” in item 4.1.2(b). If these are used in a reserves reconciliation, it is likely that they have also been incorrectly used in reserves disclosed under item 2.1 of Form 51-101F1, which also requires disclosure by product type.

Reserve change categories specified in item 4.1.2(c) are:

- (i) extensions and improved recovery;
- (ii) technical revisions;
- (iii) discoveries;
- (iv) acquisitions;
- (v) dispositions;
- (vi) economic factors;
- (vii) *production*.

Instruction (4) of item 4.1 requires that reserves changes attributed to infill drilling either be included in reserve change category “extensions and improved recovery” or in a separate reserve change category labelled “infill drilling.” The COGE Handbook describes infill drilling as drilling that occurs within a known accumulation. Only categories specified in item 4.1.2(c) or instruction (4) are permitted to be used.

The reconciliation compares reserves data at the “effective date” of the most recent financial year (the financial year for which the disclosure is being prepared), with the corresponding estimates at the last day of the preceding financial year, which is its closing balance. The closing balance serves as the current year’s “opening balance.” The “closing balance” for the current year is the sum of the changes during the current year added to its opening balance.

Effective date is defined in section 1.1 of NI 51-101 as:

[T]he date as at which, or for the period ended on which, the information is provided;

Additional information concerning terminology and preparation of reserves reconciliations is contained in section 2.7(6) of 51-101CP and section 4.6.2 of the COGE Handbook. However, please note that for the purposes of complying with Alberta securities laws, in the event of a conflict between the COGE Handbook and NI 51-101, the Instrument takes precedence.

Staff note the following common disclosure errors and deficiencies with respect to the reserves reconciliation required by item 4.1 of Form 51-101F1, along with corrective information and examples.

- **Reserve change categories extensions and improved recovery, infill drilling and discoveries** — This category must not be used to record negative volumes. Once a volume has been assigned, subsequent changes should be identified as “technical revisions” or “economic factors” and accounted for in the respective reserve change categories, except as noted in section 4.6.2.4 of the COGE Handbook.



- **Reserve change category technical revisions** — Do not record a negative volume that exceeds 100 per cent of the opening balance. Also, do not attribute reserves changes as technical revisions that are not technical revisions. Instead, attribute these to the appropriate reserve change category.

Technical revisions are expected to show changes in pre-existing reserves estimates in respect of carried-forward properties over the period of the reconciliation and are the result of new technical information. They are not the result of capital expenditures.<sup>18</sup>

It is technically impossible to remove a volume that is in excess of the associated opening balance through a technical revision. Therefore, a negative technical revision that exceeds 100 per cent of the opening balance is incorrect.

Accounting for changes in reserves estimates that result from capital expenditures as technical revisions may result in misleading disclosure. This can be the case even if an RI acknowledges in its disclosure that technical revisions have been incorrectly recorded. Staff will continue efforts to identify misattributed technical revisions.

- **Reserve change category acquisitions** — We see RIs using incorrect dates to account for reserves additions that occur through acquisitions. The correct date to reconcile changes in reserves acquired during the most recent financial year is the effective date of the most recent financial year, which is December 31 for most RIs.

RIs are required to use reserves estimates at the effective date – not the acquisition date – plus any production that has occurred since the acquisition date. This production must also be included in reserve change category “production.” If there have been changes in the reserves estimates between the acquisition date and the effective date (other than due to production), the RI should explain this in a footnote to the reconciliation table.<sup>19</sup>

- Acquisition date** — The term “acquisition date” is not defined nor clarified in NI 51-101 and its related forms, 51-101CP or staff notices. Staff consider it to mean the date at which an RI has attained a direct or indirect ownership, working or royalty interest in particular reserves. Ownership is discussed in section 1.4.4.2 of the COGE Handbook.
- Activities after the acquisition date** — Reserves estimates attributed to activities that have occurred on an acquired property after the acquisition date of the property, yet prior to the effective date of the most recent financial year, must not be included in the reserve change category “acquisitions.” They should be accounted for in the appropriate reserve change category that represents the activity that has occurred.

These activities typically involve the drilling or recompletion of wells and related pursuits. The results of such activities are to be reflected in reserve change categories “extensions and improved recovery,” “discoveries” or “infill drilling,” as appropriate. Since they occurred after the acquisition date, they should not be included in the reserve change category “acquisitions.”

RIs should explain why disclosure has been made in each applicable category. Staff suggest that these explanations occur in conjunction with the explanations required by item 4.1.2(c) of Form 51-101F1, which is discussed below under “Explanations.”

<sup>18</sup> Section 2.7(6)(c) of 51-101CP

<sup>19</sup> Section 2.7(6)(c) of 51-101CP

In summary, the estimates to be used in the reserve change category “acquisitions” are the sum of:

- The estimates of the reserves data by product type attributed to the acquisition at the effective date of the most recent financial year (the financial year for which the disclosure is being prepared); and
- The production by product type that has occurred from the acquisition, accrued from the date ownership was obtained, to the effective date of the most recent financial year.

Although reserves estimates may be evaluated at any point during a particular financial year, reserves are only reconciled for the purposes of item 4.1 as at the last day of the most recent financial year.

Reconciliation steps regarding acquisitions are:

1. **Evaluate** all of the RI’s reserves at the effective date of the RI’s most recent financial year. Include all properties, wells, etc., owned at the beginning of the most recent financial year and those acquired during the most recent financial year.
  2. **Determine** the RI’s share of the gross production volume, by product type, derived from the acquisition. Only include production that has occurred from the acquisition date to the effective date of the most recent financial year.
  3. **Add** the results from step 2 to the reserves determined for the acquired properties, wells, etc., that were identified and evaluated in step 1. This exercise is mechanical and is not influenced or affected by estimates from any evaluation of the acquisition (commissioned by the RI or any other party) that may have occurred at or around the date that ownership was obtained.
  4. **Enter** the results from step 3 into the reconciliation table adjacent to the reserve change category “acquisitions,” per the appropriate product type and reserves category, be it gross proved reserves (in total), gross probable reserves (in total) or gross proved plus probable reserves (in total).
  5. **Enter** the results from step 2 into the reconciliation table adjacent to the reserve change category “production,” per the appropriate product type and reserves category.
  6. **Assign** to the appropriate reserve change category, reserves estimates originating from activities occurring on the acquired property, wells, etc., subsequent to the acquisition date and prior to the effective date of the most recent financial year (these activities typically involve the drilling or recompletion of wells and related pursuits). It is incorrect to account for these reserves estimates under reserve change category “acquisitions.”
- **Reserve change category dispositions** — We also see RIs using incorrect dates to account for reserves reductions as a result of dispositions. As discussed in section 4.6.2 of the COGE Handbook, reserves that are disposed of are to be recorded at the “disposition date,” which is the date at which an RI’s ownership has ceased. Production that has occurred subsequent to the last day of the preceding financial year to the disposition date is accounted for under reserve change category “production,” per the appropriate product type and reserves category.
  - **Reserve change category production** — Volumes should match those disclosed under item 6.9.1(a) of Form 51-101F1 for the same country and product type, unless production is included from entities that do not have reserves assigned. If they do not match, an explanation must be provided. These explanations can be provided in conjunction with the explanations required by item 4.1.2(c) of Form 51-101F1 (discussed below under “Explanations”).
  - **Opening balance** — Volumes for the current year should match the closing balance from the previous financial year for the same country, product type and reserves category. These should match.
  - **Closing balance** — Volumes should match those disclosed for the same country, product type and reserves category under item 2.1.1 of Form 51-101F1.

- **Units of measure** — Some RIs don't disclose the units of measure in the reconciliation or use inconsistent units of measure without explanation. Although no particular unit of measure is specified to be used in Form 51-101F1, switching between units of measure is confusing and may be misleading. Consistency of units is addressed in general instruction (7) of Form 51-101F1, which advises against switching between Imperial units and Système International (SI) units without a compelling reason. If an RI does change units of measure, they should disclose why.
- **Reserve change category usage** — RIs must only use the reserve change categories specified in item 4.1.2(c) or instruction (4) of item 4.1. Although section 4.6.2.2 of the COGE Handbook provides recommended "change categories" (equivalent to "reserve change categories"), not all change categories have an equivalent reserve change category. Accordingly, RIs must not use "Working Interest Changes," "Recategorizations" and "Category Transfers" as reserve change categories for disclosure required by NI 51-101.
- **Volume summation** — Staff regularly see disclosure that does not correctly sum. The closing balance for each product type for each reserves category must equal the sum of the volumes disclosed in each associated reserve change category. Additionally, the gross proved plus probable reserves (in total) for each product type must equal the sum of the gross proved reserves (in total) and the gross probable reserves (in total).

Incorrect summation, both vertically and horizontally in the reserves reconciliation may result from mathematical error or incorrect preparation of the reconciliation. The latter will often be associated with technical revisions and the re-categorization of reserves.

Also, RIs that optionally disclose BOEs in their reconciliation must ensure that the conversion is done appropriately and that the constituent volumes sum correctly.

- **Explanations** — RIs must provide sufficient explanations for each individual reserve change category for a reader to understand the change. Item 4.1.2(c) of Form 51-101F1 requires separate identification and explanation of disclosure that occurs in each reserve change category.

Without explanations, changes may occur that cannot be easily understood. For example, a large technical revision, an acquisition, or a re-categorization of reserves from probable reserves to proved reserves may have occurred. In the absence of an explanation for the latter, for example, the re-categorization could go unnoticed if the proved plus probable reserves (in total) is unchanged.

**Example 5: DISCLOSURE THAT *DID NOT* MEET OUR EXPECTATIONS**

	OIL		
	Total proved (Mbbl)	Total probable (Mbbl)	Total proved + probable (Mbbl)
<b>FACTORS</b>			
Opening balance	0	100	100
Discoveries	0	0	0
Extensions	0	0	0
Infill drilling	0	0	0
New ads	0	50	50
Improved recovery	0	0	0
Technical revisions	75	0	25
Acquisitions	0	0	0
Dispositions	0	0	0
Economic factors	0	0	0
Production	(10)	(5)	(15)
Closing balance	65	145	210

**Explanation:** The Company assigned probable oil reserves of 100 Mstb to a location as an extension on its ABC Property in 2023. In the first quarter of 2024, the probable location was drilled, tested and put on production, and 75 Mstb of proved oil reserves were subsequently assigned. The probable reserves assignment remains unchanged. In 2024, the Company assigned an additional 50 Mstb of probable oil reserves to a new extension location based on offset drilling. The production in the reconciliation is attributed to the well drilled in 2024.

**Staff's comments on this disclosure:**

- *This reserves reconciliation incorrectly portrays how a re-categorization of reserves from probable to proved is to be prepared and disclosed.*
- *The reserves reconciliation does not correctly sum both vertically and horizontally:*
  - *For the reserve change category "Technical revisions," total proved + probable is not equal to the sum of total proved and total probable; and*
  - *The closing balance for the total proved + probable does not correctly sum.*
- *"Oil" is not a product type.*
- *"New adds" is not a reserve change category.*
- *No production should be reconciled under total probable as it is already accounted for under total proved.*

**Example 6: DISCLOSURE THAT *DID* MEET OUR EXPECTATIONS**

	HEAVY OIL		
	Total proved (Mbbbl)	Total probable (Mbbbl)	Total proved + probable (Mbbbl)
<b>FACTORS</b>			
Opening balance	0	125	125
Discoveries	0	0	0
Extensions	75	(75)	0
Infill drilling	0	0	0
Improved recovery	0	0	0
Technical revisions	0	0	0
Acquisitions	0	0	0
Dispositions	0	0	0
Economic factors	0	0	0
Production	(10)	0	(10)
Closing balance	65	50	115

**Explanation:** The Company assigned probable heavy oil reserves of 125 Mstb to a location on its ABC Property in 2023. In the first quarter of 2024, the location was drilled, tested and put on production, and 75 Mstb of proved heavy oil reserves were subsequently assigned. The probable reserves assignment remains unchanged. The production in the reconciliation is attributed to this new well.

**Staff's comments on this disclosure:**

- This reserves reconciliation correctly portrays how a re-categorization of reserves from probable to proved is to be prepared and disclosed.
- It would be inappropriate for the RI to reconcile the proved reserves as a positive technical revision and the probable reserves as a negative technical revision.
- Instead, the proved reserves is correctly entered as an addition in the reserve change category that the reserves for the probable location were initially attributed, which in this example is reserve change category "Extensions."
- The probable reserves component has been correctly entered as a negative change in the original reserve change category that the reserves for the probable location were initially attributed, which in this example is reserve change category "Extensions."
- All subsequent changes to the reserves associated with this drilled location will be attributed to reserves change category "Technical Revisions."
- The reserves reconciliation correctly sums both vertically and horizontally.
- An explanation accompanies the reserves reconciliation that explains the disclosure in the individual reserve change categories.
- Heavy oil is a product type.
- The correct reserve change categories are used.
- The units of measure are consistent.



Instruction (5) of item 4.1 of Form 51-101F1 discusses a scenario in which an RI becomes engaged in oil and gas activities after the last day of their preceding financial year. In this situation, a reserves reconciliation is not required, because the opening balance in its reconciliation would be zero, as the RI would not have had reserves at the last day of the preceding financial year and therefore a reconciliation could not be done.

If an RI had reserves at the effective date of the preceding financial year, but an evaluation of these reserves is unavailable, reserves estimates will not be available for the opening balance and a reconciliation cannot practicably be undertaken. In such a situation, a zero opening balance is not appropriate. Instead, the RI must disclose the reason for the absence of the reconciliation.

Additional information concerning preparation of the reserves reconciliation is provided in 51-101CP. For example, section 2.7(6) (a) discusses a scenario in which an RI has reserves at the effective date of its most recent financial year, but had no reserves at the start of that year (at which time the RI was presumably engaged in oil and gas activities). If the added reserves are material to the RI, a reconciliation must be provided. The opening balance will be zero, reflecting the lack of reserves at the start of the financial year. Section 5.10(4) of 51-101CP discusses reserves reconciliations with respect to long-form prospectuses.

## 2.6 INSIGHTS FROM NI 51-101 DISCLOSURE

NI 51-101 disclosure can provide valuable insights into various oil and gas topics both in respect of individual RIs and collectively for groups of RIs engaged in oil and gas activities. This includes such things as reserves and resources other than reserves, significant economic factors or uncertainties that affect reserves data, costs, important properties and facilities, land expiries, forward contracts, exploration and development activities and production estimates. Our insights into oil and gas reserves, resources other than reserves and production for AB RIs engaged in oil and gas activities are explored in this section.

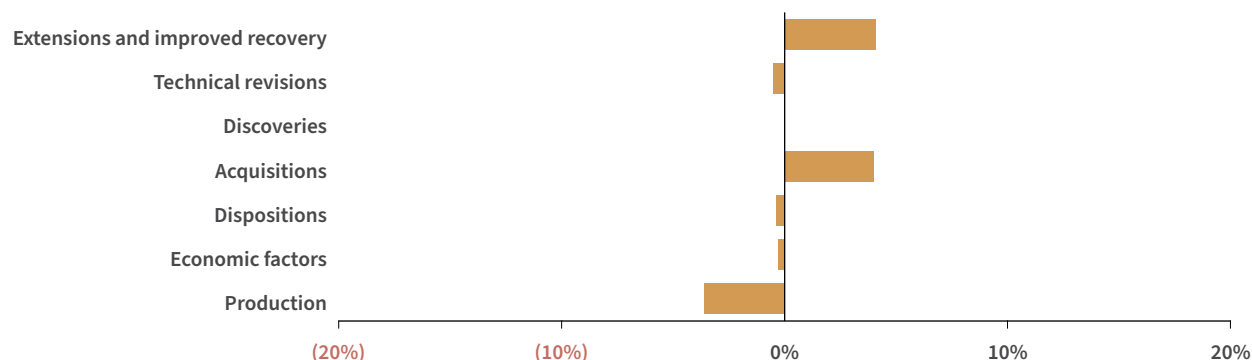
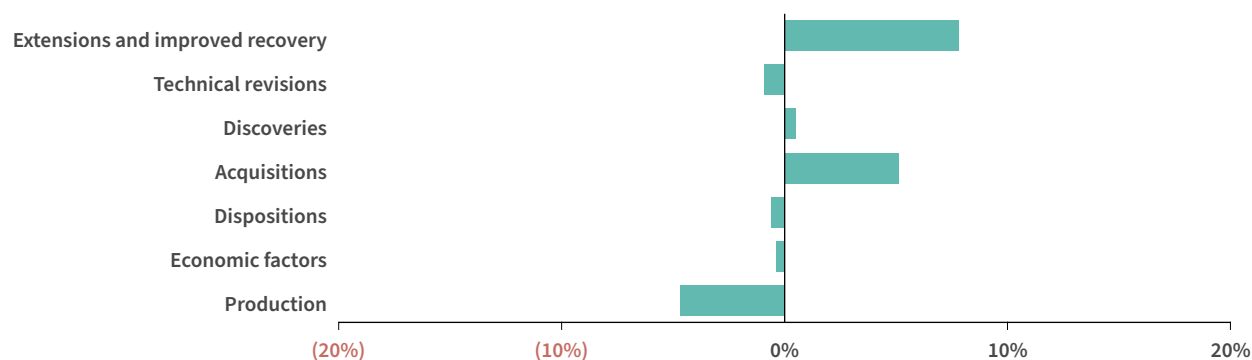
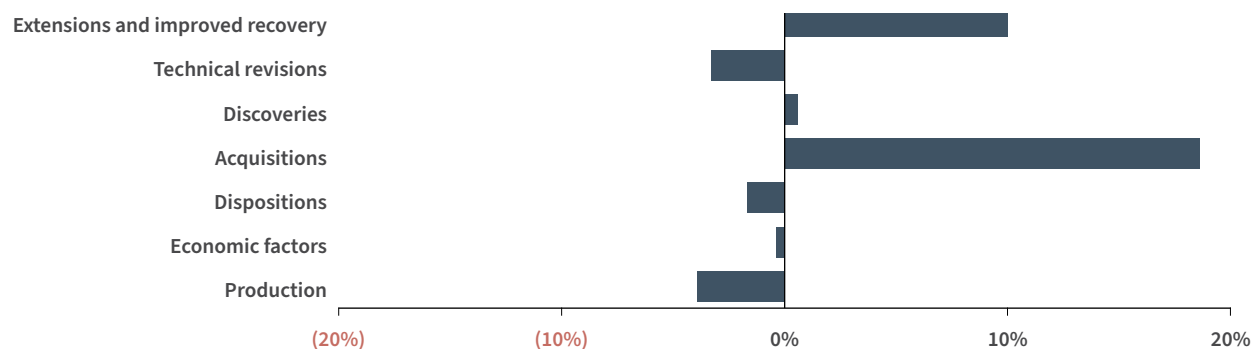
Analysis of an RI's reserves estimates and their variability over time, can be particularly informative with respect to the RI's specific activities and the quality of its reserves estimates. Instrumental to this analysis is the annual reserves reconciliation required by item 4.1 of Form 51-101F1.

For example, an RI's pursuit of new reservoirs or efforts to expand or increase recoveries from existing reservoirs, can be assessed in part through its disclosure in the reserve change categories "discoveries" and "extensions and improved recovery," respectively. The quality of reserves estimates on the other hand, can be judged using disclosure in the "technical revisions" reserve change category. This information can help determine whether reserves estimates have been meeting their associated certainty levels and hence have been assigned as required in accordance with the COGE Handbook. This process of "reserves validation" is described in section 4.6.1 of the COGE Handbook.

Activities and reserves quality can also be assessed for groups of issuers that report under NI 51-101. Figure 6 presents a series of aggregated reserves reconciliations for AB RIs that demonstrate changes in gross proved plus probable reserves (in total) by reserve change category. These reconciliations reflect oil and gas activities that were disclosed up to the end of September 2025, but were mostly conducted in 2024 (reflecting variability in financial year-end dates). An RI's contribution to its group reconciliation is based solely on the reserves volumes it has disclosed in each specified reserve change category. While generalized, a review of the changes that have occurred to volumes between the opening and closing balances for each group of RIs can help assess the overall quality of reserves data.

The following steps were taken to generate the reconciliations in Figure 6:

1. Quarterly average gross daily production volumes were obtained for each AB RI engaged in oil and gas activities at the end of 2024 (excluding those subject to a cease trade order). They were obtained from item 6.9 of Form 51-101F1, which requires their disclosure by country and product type for the most recent financial year. The volumes were summed for each RI and an annual average gross daily production volume was determined for each.
2. The RIs were ranked by their annual average gross daily production volume.
3. The RIs were then categorized into groups referred to as “production groups” based on annual average gross daily production volumes as follows:
  - a. “Seniors”: RIs with >100,000 BOE per day of production (based on a conversion ratio of six thousand cubic feet of gas for one barrel of oil);
  - b. “Intermediates”: RIs with 10,000 to 100,000 BOE per day of production; and
  - c. “Juniors”: RIs with <10,000 BOE per day of production.
4. The RIs ranked highest by their annual average gross daily production volume were selected from each production group, with 10 senior, 20 intermediate and 37 junior RIs selected. Fifty juniors have historically been selected, but only 37 met the criteria for this analysis.
5. Within each group of selected RIs, volumes disclosed by each RI in each applicable reserve change category specified in item 4.1.2(c) of Form 51-101F1 for gross proved plus probable reserves (in total) were summed. No weighting or adjustment was applied.
6. The per cent change between the opening balance of 2024 (the closing balance of 2023) and the closing balance of 2024 was calculated. Figure 6 illustrates these results by production group. Positive and negative changes fall to the right and left of the opening balance (denoted as “0” per cent), respectively.

**Figure 6: 2023 reconciliations of summed gross proved plus probable reserves (in total) for AB RIs, by production group****Figure 6a: Seniors****Figure 6b: Intermediates****Figure 6c: Juniors**

As illustrated in Figure 6, changes in extensions and improved recovery, which result from capital expenditures for step-out drilling in previously discovered reservoirs, and changes associated with the installation of improved recovery schemes, are four per cent for the seniors, eight per cent for the intermediates and 10 per cent for the juniors. All seniors recorded extensions and improved recovery. All but three of the intermediates recorded extensions and improved recovery, with three accounting for 53 per cent of

the total for the production group. Sixteen of the juniors recorded extensions and improved recovery, with five accounting for 84 per cent of the group's total.

Regarding technical revisions, positive and negative changes are generally attributed to better or poorer reservoir performance, respectively, than initially forecast. For a given entity, proved reserves should be adjusted positively over time, while proved plus probable reserves should remain relatively constant. Technical revisions in Figure 6 concern proved plus probable reserves (in total). These are zero per cent for the seniors, negative one per cent for the intermediates and negative three per cent for the juniors. Six of the seniors recorded negative technical revisions. Eleven intermediates recorded negative technical revisions, with three accounting for 83 per cent of the group's total, while 16 juniors did, with two accounting for 51 per cent of the production group's total. Discussion of these revisions, their relationship to those presented in previous editions and staff's perspectives on both, can be found below.

Discoveries have been recorded by one of the seniors (an extremely small amount), five of the intermediates and five of the juniors.

Changes in acquisitions are four per cent for the seniors, five per cent for the intermediates and 19 per cent for the juniors. Six seniors, 12 intermediates and 18 juniors recorded acquisitions, with one of the seniors accounting for 71 per cent of the group's total, three of the intermediates accounting for 75 per cent, and two of the juniors accounting for 57 per cent of the production group's total.

Changes in dispositions are zero per cent for the seniors, negative one per cent for the intermediates and negative two per cent for the juniors. Seven seniors, nine intermediates and five juniors recorded dispositions.

All three production groups had adjustments for economic factors of zero per cent.

Figures 7 through 9 illustrate changes in the reserve change categories extensions and improved recovery, discoveries and technical revisions, respectively, for gross proved plus probable reserves (in total), for each production group in Figure 6, for 2015 to 2024. While generalized, the purpose is to illustrate the multi-year changes in each reserve change category for each production group. This can assist in the identification of disclosure trends and issues concerning proved plus probable reserves (in total).

**Figure 7: Summed extensions and improved recovery for gross proved plus probable reserves (in total) for AB RIs, by production group**

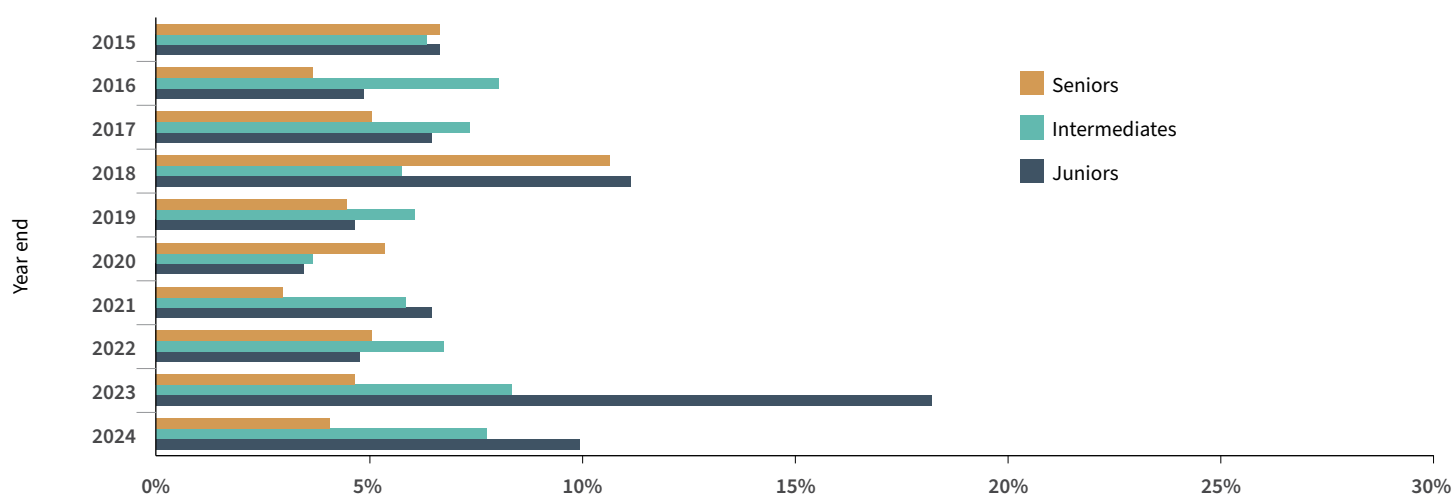


Figure 8 illustrates the average percentage change in discoveries for each production group, for 2015 to 2024. The percentage change for the juniors increased sharply in 2020, attributed to three RIs focused on activities outside of Canada, and then decreased to more typical historical levels. The percentage change for the intermediates has remained relatively consistent since 2015, as it has for the seniors since 2019.

**Figure 8: Summed discoveries for gross proved plus probable reserves (in total) for AB RIs, by production group**

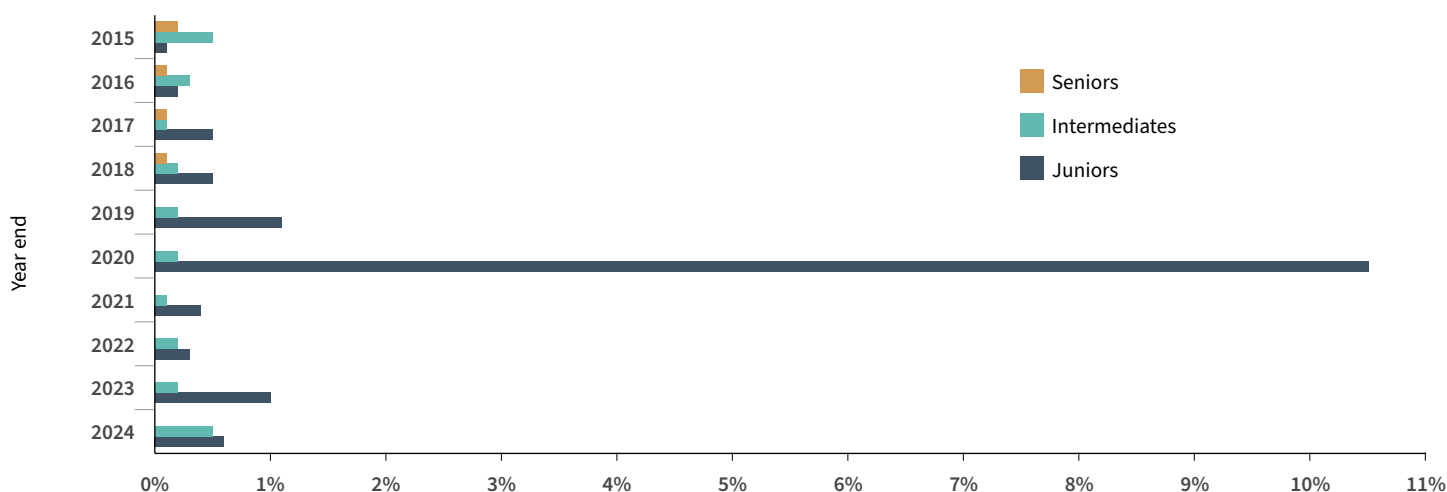


Figure 9 illustrates the average percentage change in technical revisions for each production group, for 2015 to 2024. Although the reserves quality varies for individual RIs within each group, the changes in gross proved plus probable reserves (in total) remained relatively constant until about 2020 for the juniors and intermediates, appearing to approximate the associated certainty levels described in the COGE Handbook. The juniors have recorded negative technical revisions for five consecutive years, while the intermediates have for the last four, although the magnitude has been decreasing for the latter since 2022. The seniors have been negative for all years, although the magnitude has decreased for four consecutive years.

In summary, the certainty level for proved plus probable reserves (in total) is not being met, although the situation has been improving for the seniors and intermediates in recent years. This suggests that some reserves may not have been assigned to the appropriate reserves category or perhaps reserves should not have been assigned.

**Figure 9: Summed technical revisions for gross proved plus probable reserves (in total) for AB RIs, by production group**

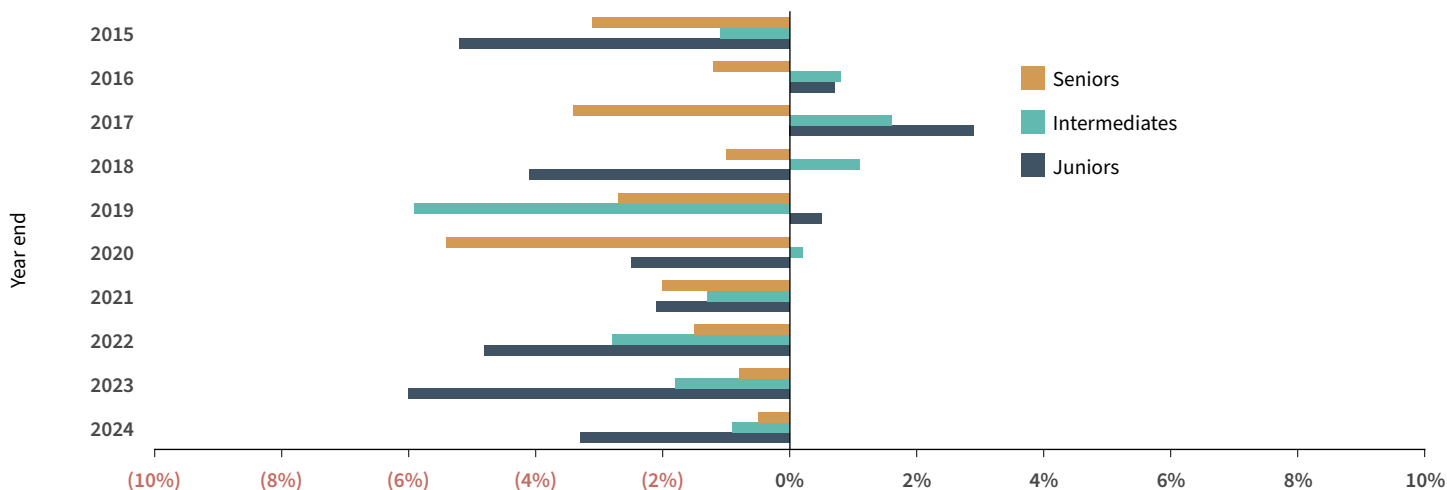




Figure 10 further illustrates the long-term trends in technical revisions of gross proved plus probable reserves (in total). It shows the percentage of RIs with positive technical revisions, negative revisions and no change in technical revisions, for all AB RIs from Figure 6 (and its equivalent from previous editions of the Energy Matters Report and the former Oil & Gas Review Report), for 2015 to 2024. As shown, the percentage of RIs with positive technical revisions declined from 2016 until 2023, increasing in 2024. The percentage of those with negative technical revisions increased from 2016 through 2022 and have decreased since.

**Figure 10: Percentage breakdown of technical revisions for gross proved plus probable reserves (in total) for AB RIs**

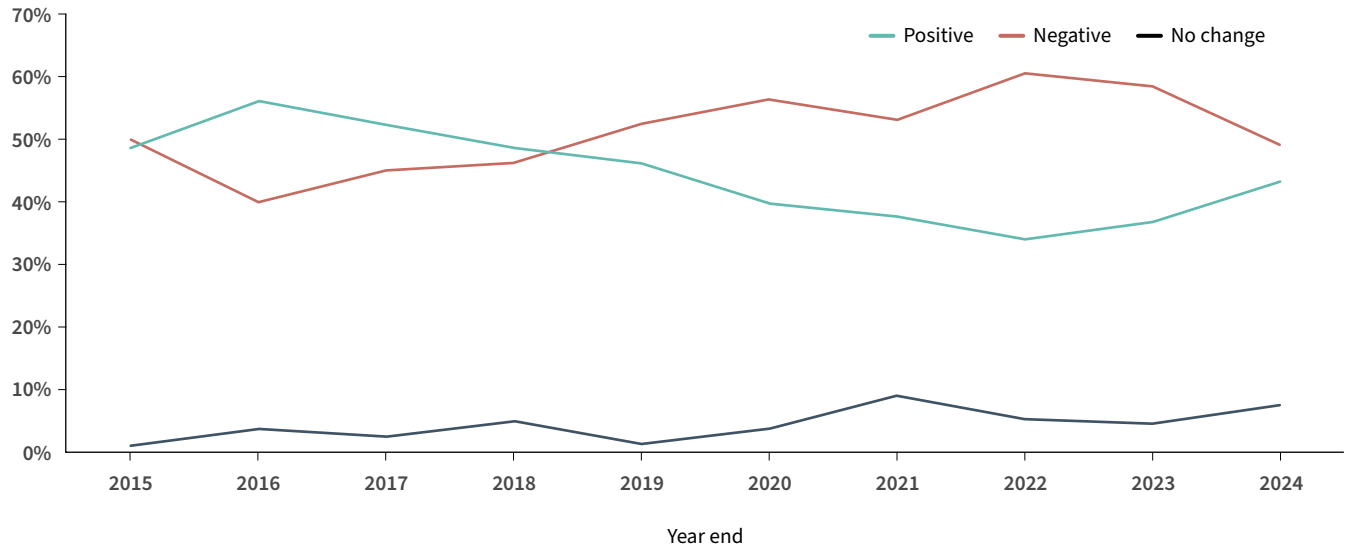
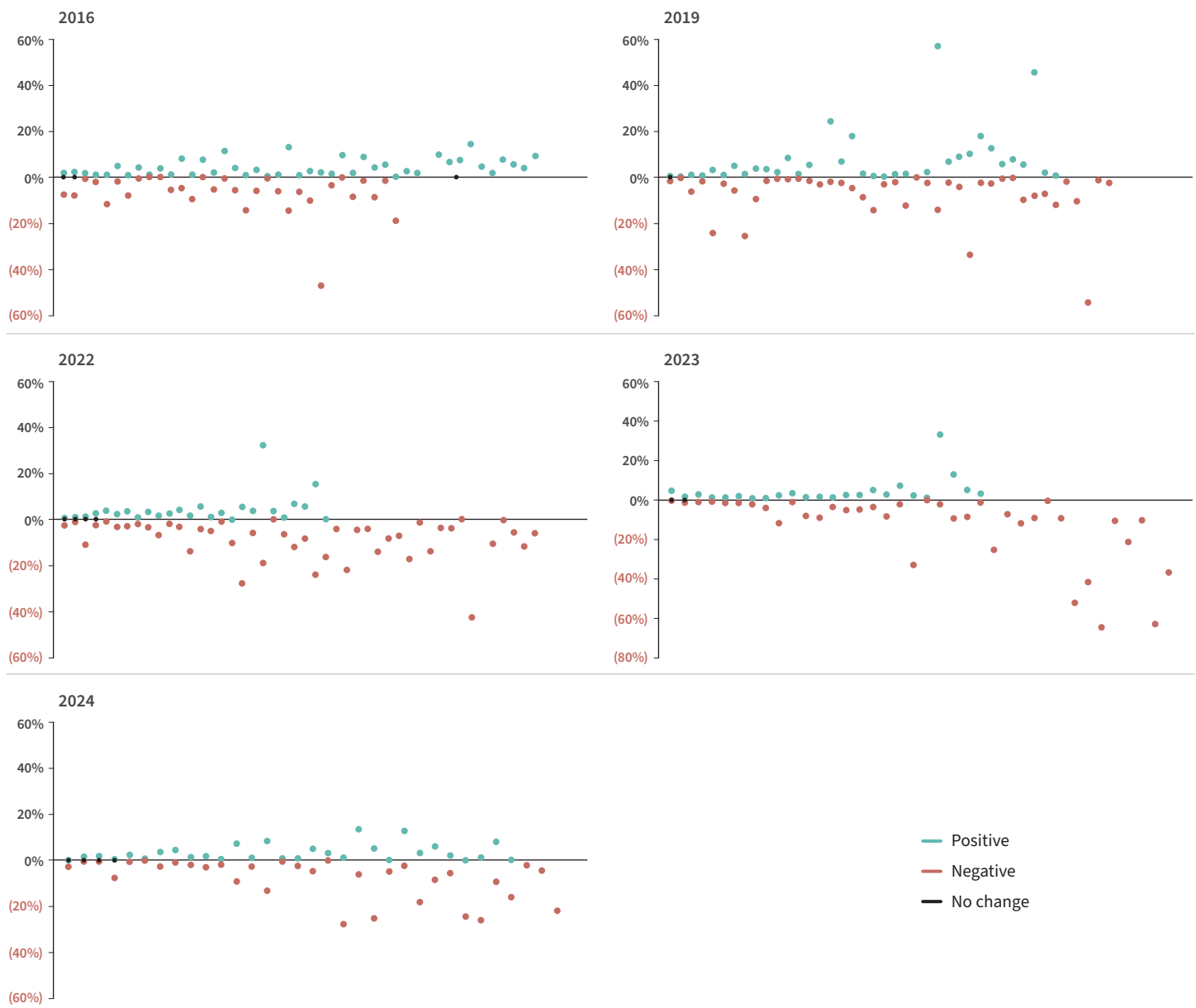


Figure 11 shows the distribution of technical revisions of gross proved plus probable reserves (in total) for AB RI at discrete intervals. Each AB RI represented in Figure 6 (and its equivalent from previous editions of the Energy Matters Report and the former Oil & Gas Review Report) is included in Figure 11. As indicated, there were more positive technical revisions than negative revisions in 2016. In 2019, there were roughly the same number of positive and negative revisions, with a relatively even distribution above and below the zero per cent change line, although the average magnitude of change increased. In 2022 and 2023, there were far more negative revisions than positive ones and the negative revisions were more negative on average. In 2024, there are about the same number of positive and negative revisions and the average magnitude of each negative revision has decreased, suggesting that outcomes have been improving.

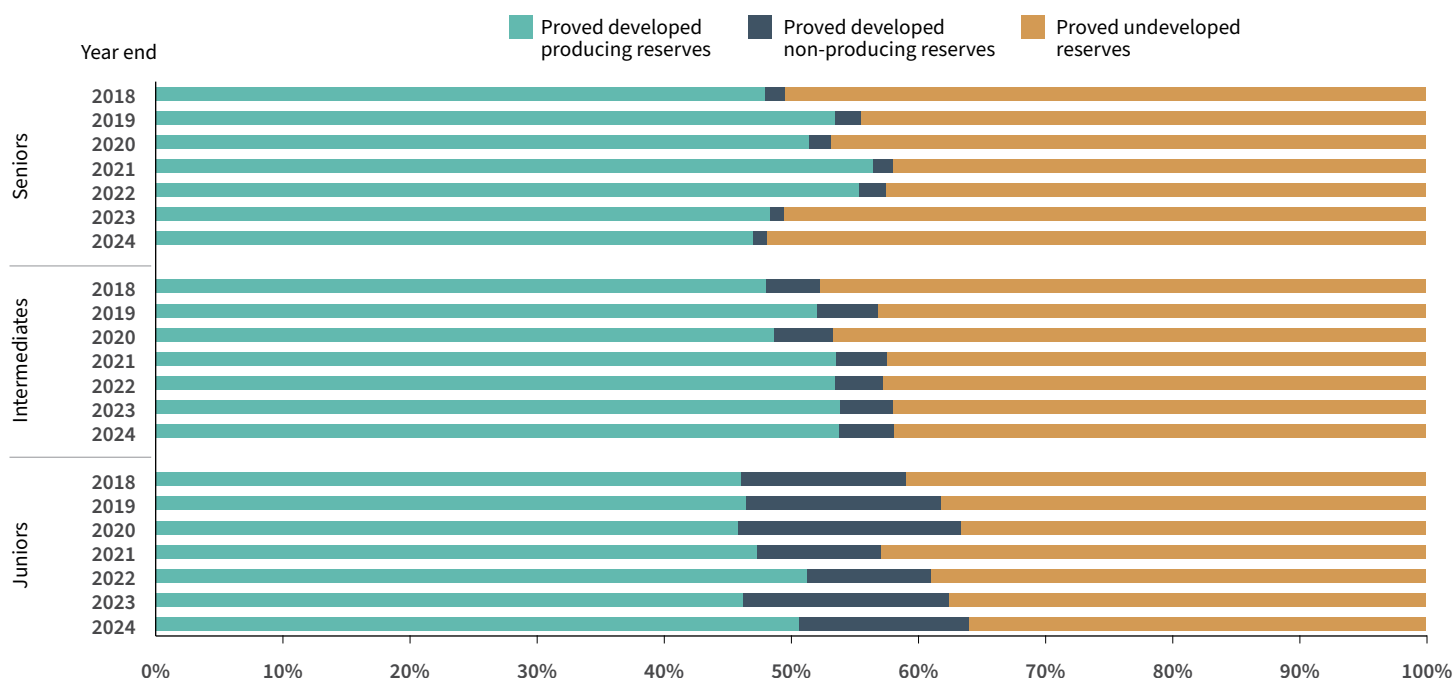
**Figure 11: Technical revisions for gross proved plus probable reserves (in total) for AB RIs**



We will continue to pay particular attention to negative technical revisions in our reviews of disclosure and will continue to address any concerns that arise with RIs.

Figure 12 shows the average percentage allocation of gross proved developed producing reserves, proved developed non-producing reserves and proved undeveloped reserves, which comprise gross proved reserves (in total) attributed to AB RIs, by production group, for 2018 to 2024. It was constructed using disclosure per item 2.1 of each constituent RI's Form 51-101F1, which requires disclosure by each of these reserves categories. It includes data for 87 RIs that had gross proved reserves (in total) attributed in 2024. All RIs within each production group were included, as they are through the remainder of this section. Each RI's contribution is based solely on the volume it disclosed in each of these reserves categories, with no weighting or adjustment applied.

**Figure 12: Average percentage allocation of gross proved reserves (in total) for AB RIs, by production group**



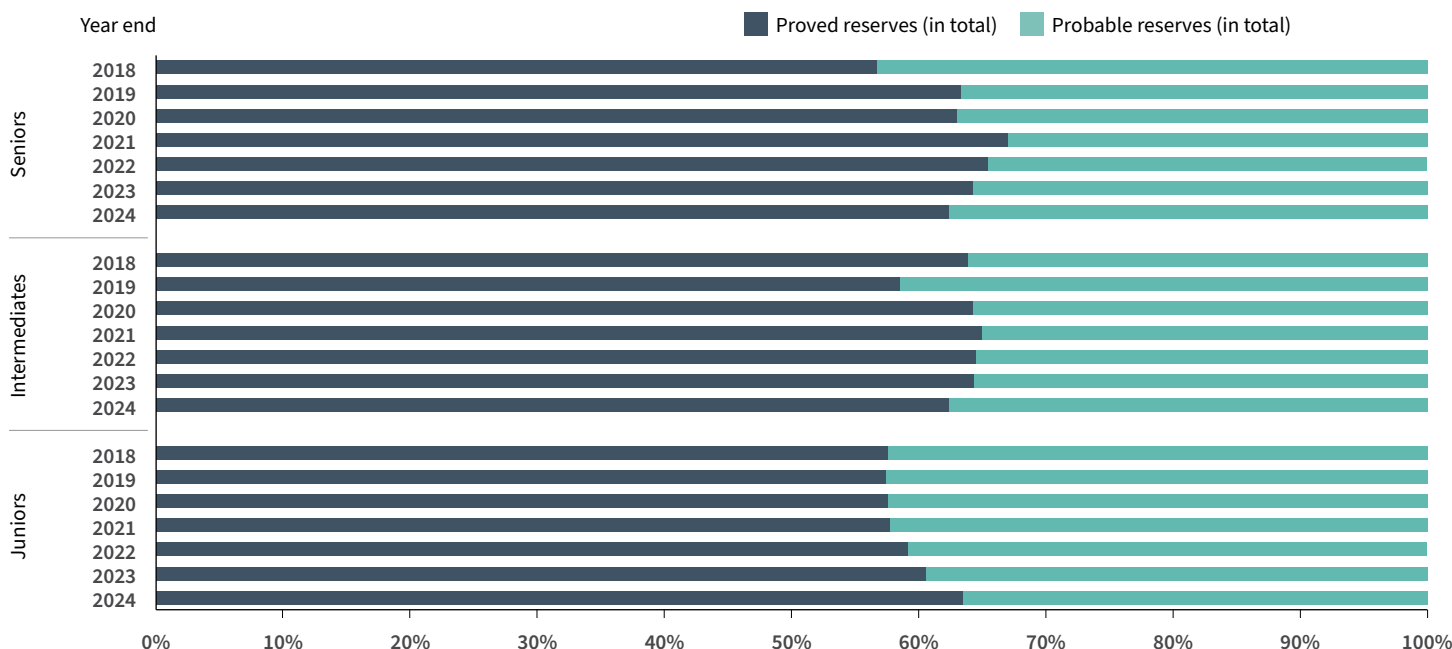
As illustrated, the average percentage of gross proved developed producing reserves is typically highest for the seniors and intermediates and lowest for the juniors, for each year. The juniors tend to have the lowest average percentage of gross proved undeveloped reserves, but the highest percentage of gross proved developed non-producing reserves, followed by the intermediates.

Proved developed non-producing reserves are reserves that have either not previously been on production or have previously been on production, but are shut in and the date of production resumption is unknown. Junior RIs generally have a larger percentage of non-producing reserves because they tend to be more sensitive to low commodity prices than larger issuers and are generally less able access the capital and services needed to place wells on production.

However, other than in circumstances discussed in section 1.4.7.2.1.8 of the COGE Handbook, reserves should not typically be classified as developed non-producing for an extended period of time, so elevated percentages of proved developed non-producing reserves could be indicative of incorrectly classified reserves. We will continue to monitor proved developed non-producing reserves in our reviews of disclosure and as needed, will follow-up to address concerns with RIs.

Figure 13 shows the average percentage allocation of gross proved plus probable reserves (in total) to its constituent gross proved reserves (in total) and gross probable reserves (in total), attributed to AB RIs, by production group, for 2018 to 2024. It was constructed using disclosure per item 2.1 of each constituent RI's Form 51-101F1, which requires disclosure by each of these reserves categories. It includes data for 87 RIs that had gross proved plus probable reserves (in total) attributed in 2024. Each RI's contribution is based solely on the volume it disclosed in each of these reserves categories, with no weighting or adjustment applied.

**Figure 13: Average percentage allocation of gross proved plus probable reserves (in total) for AB RIs, by production group**

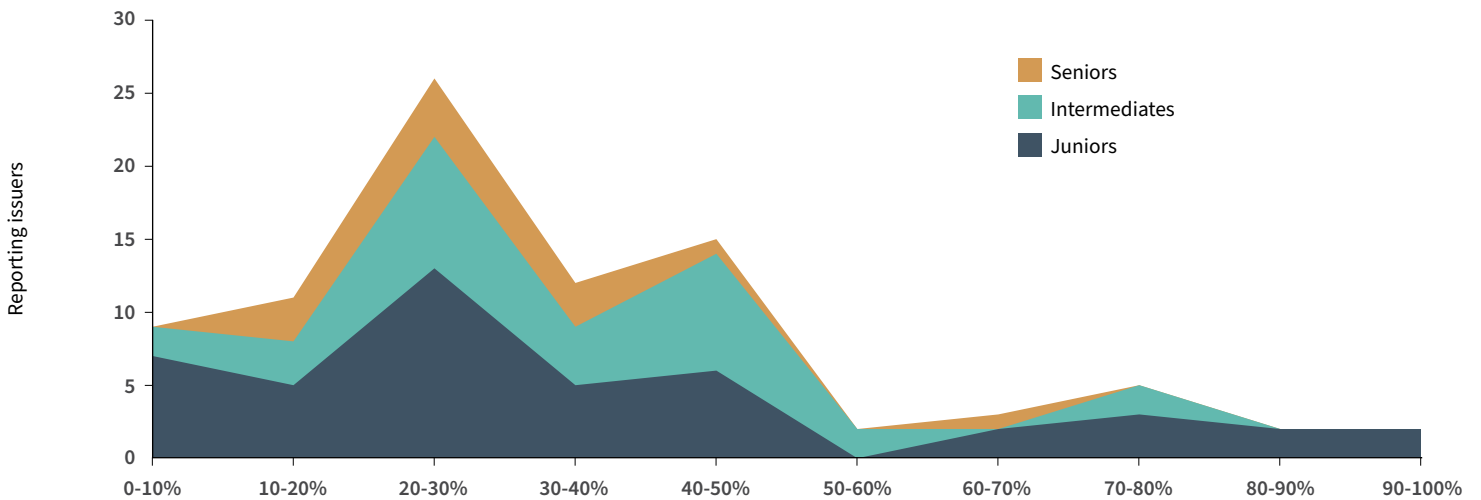


As illustrated, the average gross proved reserves (in total) for the juniors is consistently around 60 per cent. The seniors and intermediates typically have similar allocations of just over 60 per cent. The juniors have the smallest percentage allocation of gross probable reserves (in total).

Figures 14 and 15 show ratios of specified categories of reserves for AB RIs, by production group, for 2024. The information was obtained from disclosure per item 2.1 of each constituent RI's Form 51-101F1. Each figure includes data for 87 RIs that had gross proved plus probable reserves (in total) attributed. Each RI's contribution is based solely on the volume it has disclosed in each specified reserves category, with no weighting or adjustment applied.

Per Figure 14, most RIs have about 30 to 40 per cent of their gross proved plus probable reserves (in total) attributed to gross proved developed producing reserves. The data indicates that it is actually 34 per cent.

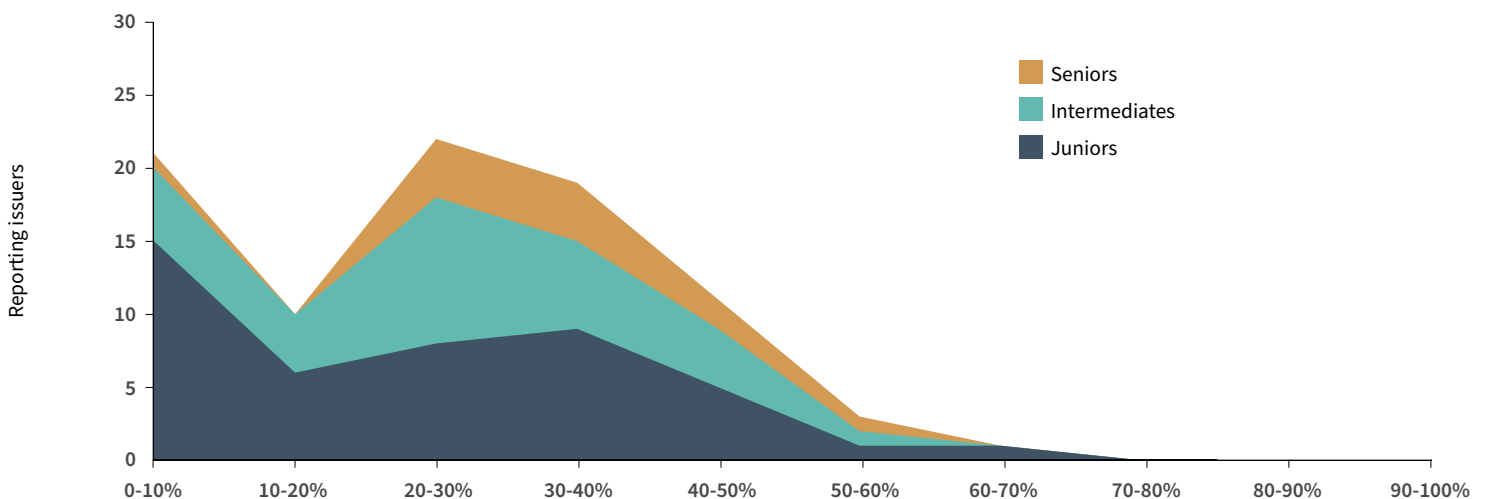
**Figure 14: Percentage of gross proved developed producing reserves to gross proved plus probable reserves (in total) for AB RIs, by production group**



Higher percentages of gross proved developed producing reserves relative to gross proved plus probable reserves (in total) (and gross proved reserves (in total)), is indicative of higher relative percentages of reserves that have a high degree of certainty of recovery and do not require significant additional capital investment for this recovery (production) to occur.

Figure 14 shows that most RIs have about 20 to 30 per cent of their gross proved plus probable reserves (in total) attributed to proved undeveloped reserves. The data indicates that the figure is actually 24 per cent.

**Figure 15: Percentage of gross proved undeveloped reserves to gross proved plus probable reserves (in total) for AB RIs, by production group**



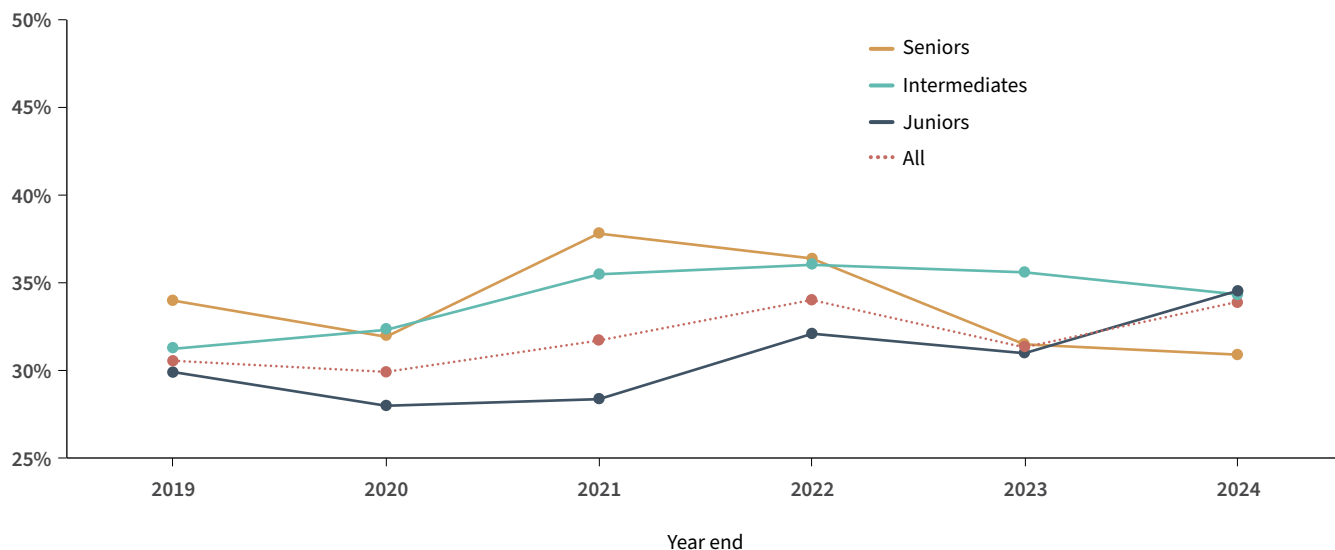
Higher percentages of gross proved undeveloped reserves relative to gross proved plus probable reserves (in total) (and gross proved reserves (in total)), is indicative of higher relative percentages of reserves that require capital investment for production to occur.



Figures 16 and 17 show average ratios of specified categories of reserves for AB RIs, by production group, for 2019 to 2024 as disclosed per item 2.1 of Form 51-101F1. Each figure includes data for 87 RIs that had gross proved plus probable reserves (in total) attributed in 2024 and is based solely on the volume disclosed in each specified reserves category, with no weighting or adjustment applied.

As shown in Figure 16, the juniors have had the lowest average percentage of gross proved developed producing reserves to gross proved plus probable reserves (in total), with the seniors having the highest, for five out of the six years.

**Figure 16: Average percentage of gross proved developed producing reserves to gross proved plus probable reserves (in total) for AB RIs, by production group**



As shown in Figure 17, the juniors have had the lowest average percentage of gross proved undeveloped reserves to gross proved plus probable reserves (in total), with the seniors having the highest.

**Figure 17: Average percentage of gross proved undeveloped reserves to gross proved plus probable reserves (in total) for AB RIs, by production group**

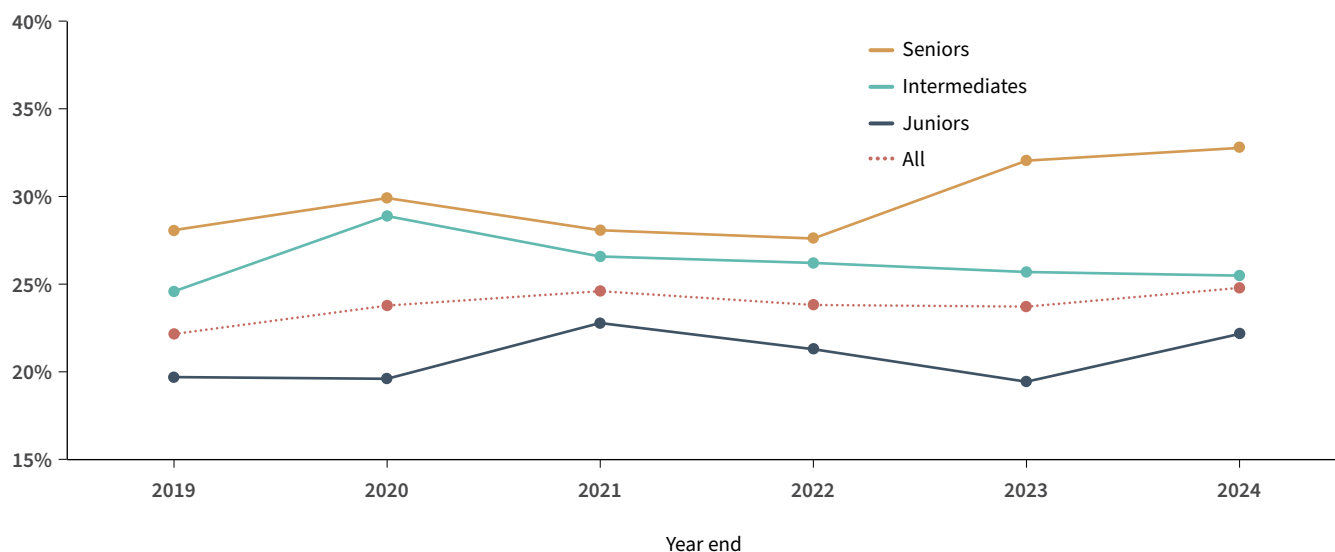
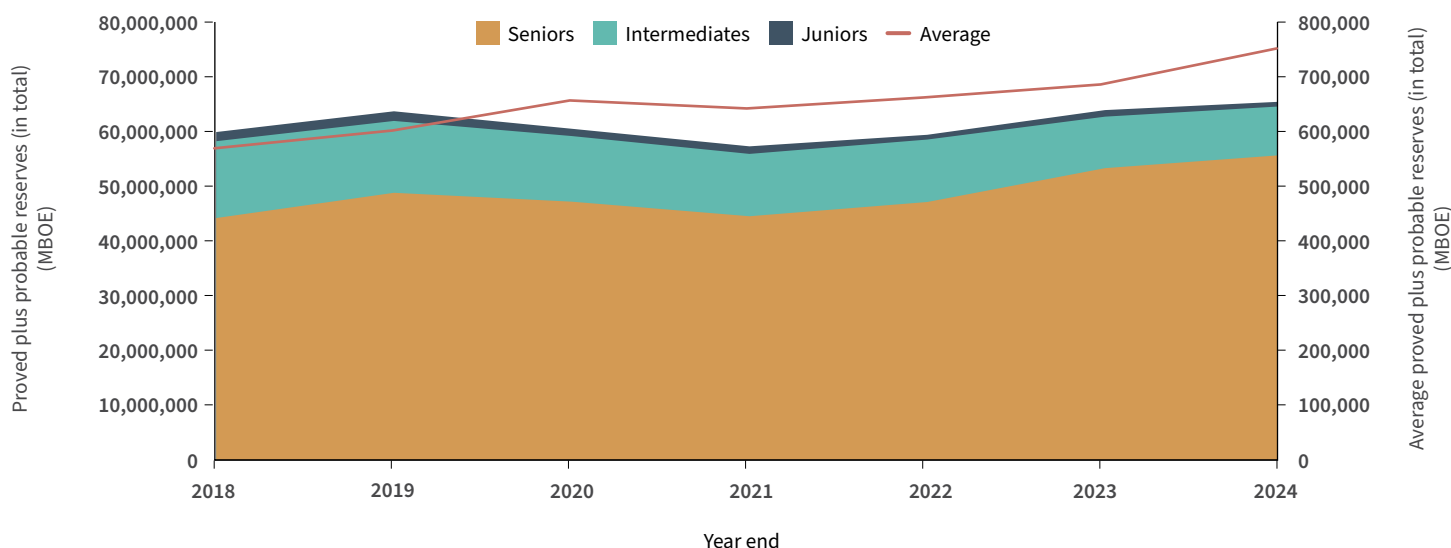


Figure 18 illustrates the summation of gross proved plus probable reserves (in total) for AB RIs, by production group, for 2018 to 2024, and the average proved plus probable reserves (in total) per RI. It was constructed using disclosure per item 2.1 of each constituent RI's Form 51-101F1, which requires disclosure per this reserves category. This data was then summed for the RIs in each production group, while an average per RI was determined. It includes data for 87 RIs that had gross proved plus probable reserves (in total) attributed in 2024. Each RI's contribution is based solely on the volume it has disclosed in this reserves category, with no weighting or adjustment applied.

**Figure 18: Summed gross proved plus probable reserves (in total) for AB RIs, by production group and average reserves per RI**



As shown, gross proved plus probable reserves (in total) for AB RIs in 2024 was slightly above what it was in 2018. The contribution from the juniors has decreased annually since 2019. The average proved plus probable reserves (in total) per RI has increased from 576,000 to 753,000 MBOE over the period, a 31 per cent increase, including a nine per cent increase in 2024 over 2023. This has occurred in spite of a decrease in the number of AB RIs engaged in oil and gas activities over the period, as discussed in section 6 of the Report.

Figure 19 illustrates the number of occurrences of disclosure of contingent resources data, prospective resources data or both, in the Form 51-101F1 for AB RIs, for 2014 to 2024. Disclosure occurrences of contingent resources data increased in 2024 over 2023, as it did in 2023 versus 2022, while occurrences for prospective resources data remained the same in 2024.

**Figure 19: Disclosure occurrences of contingent resources data, prospective resources data or both, by AB RIs**

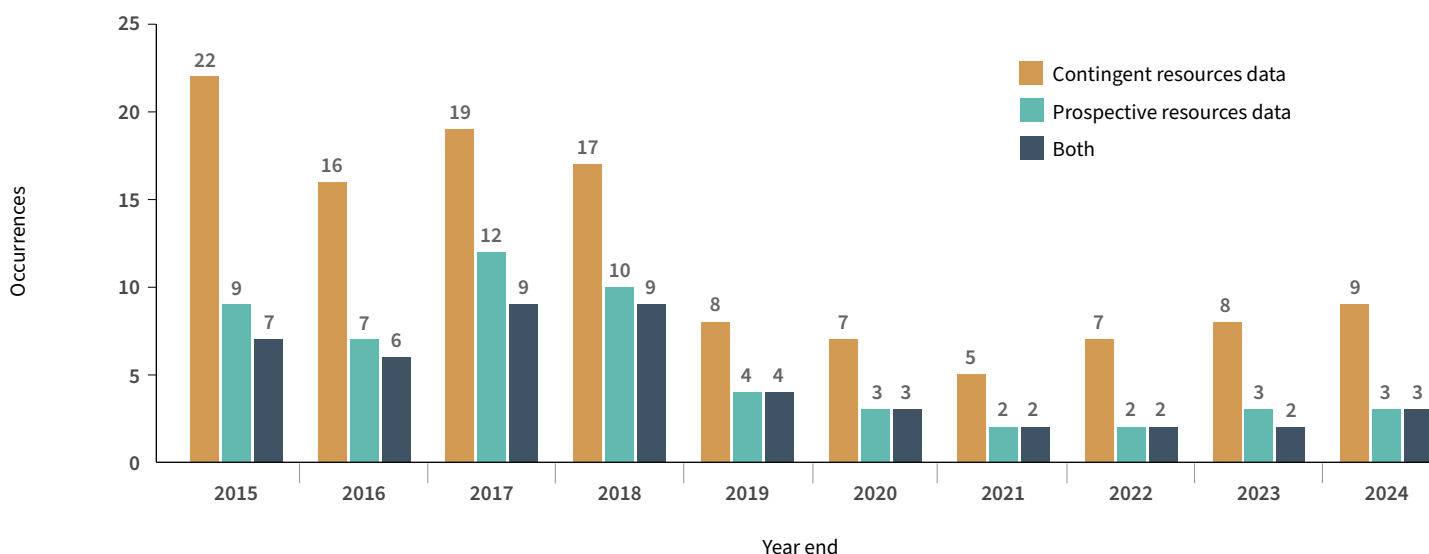


Figure 20 illustrates the information shown in Figure 19 by production group.

**Figure 20: Disclosure occurrences of contingent resources data, prospective resources data or both, by AB RIs, by production group**

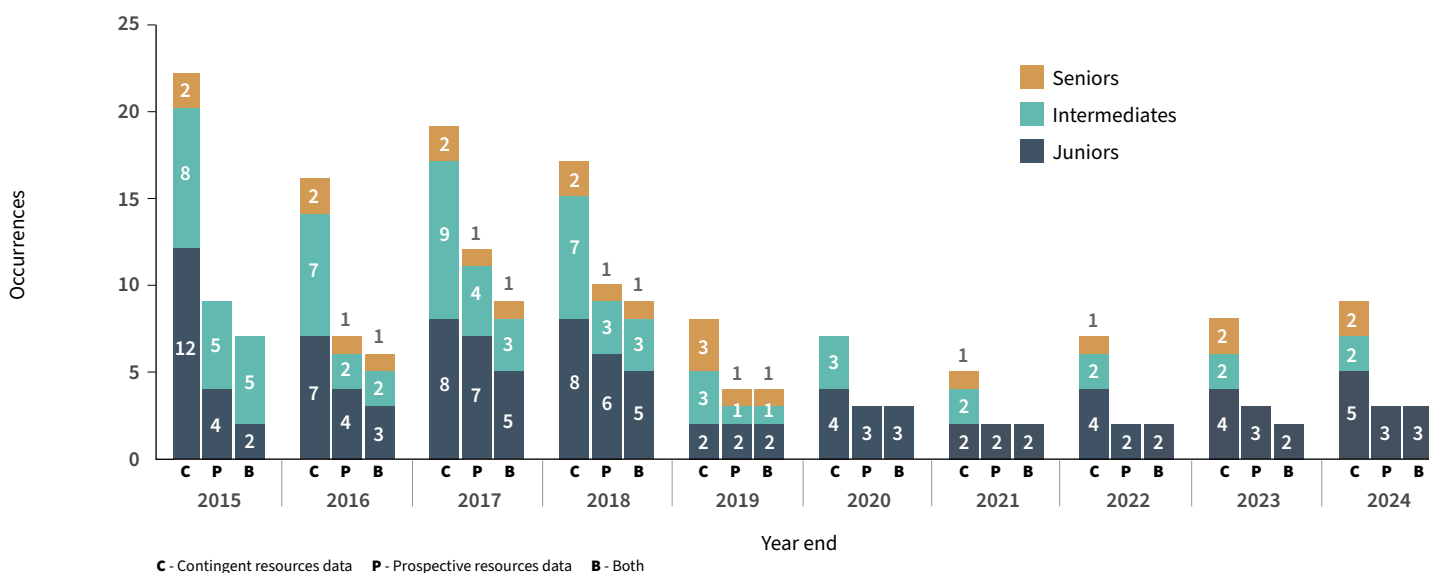


Figure 21 shows the percentage of AB RIs engaged in oil and gas activities that disclosed contingent resources data, prospective resources data or both, in Form 51-101F1, for 2014 to 2024, by production group.

**Figure 21: Percentage of AB RIs engaged in oil and gas activities, that disclosed contingent resources data, prospective resources data or both, by production group**

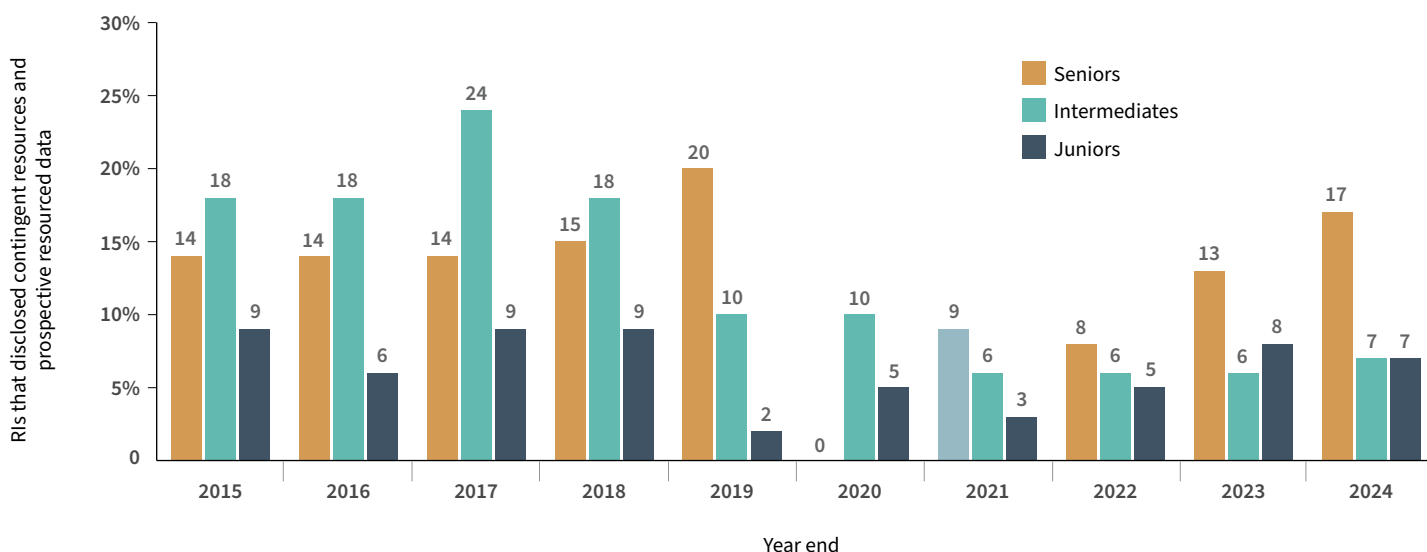


Figure 22 indicates the locations where AB RIs engaged in oil and gas activities for which the ASC was the principal regulator, for 2018 to 2024, have one or more of reserves data, contingent resources data or prospective resources data attributed. This information was obtained from each RI's Form 51-101F1, specifically item 2.1 for reserves data and generally Part 7 for contingent resources data and prospective resources data.

**Figure 22: Locations where AB RIs have reserves data, contingent resources data or prospective resources data attributed**

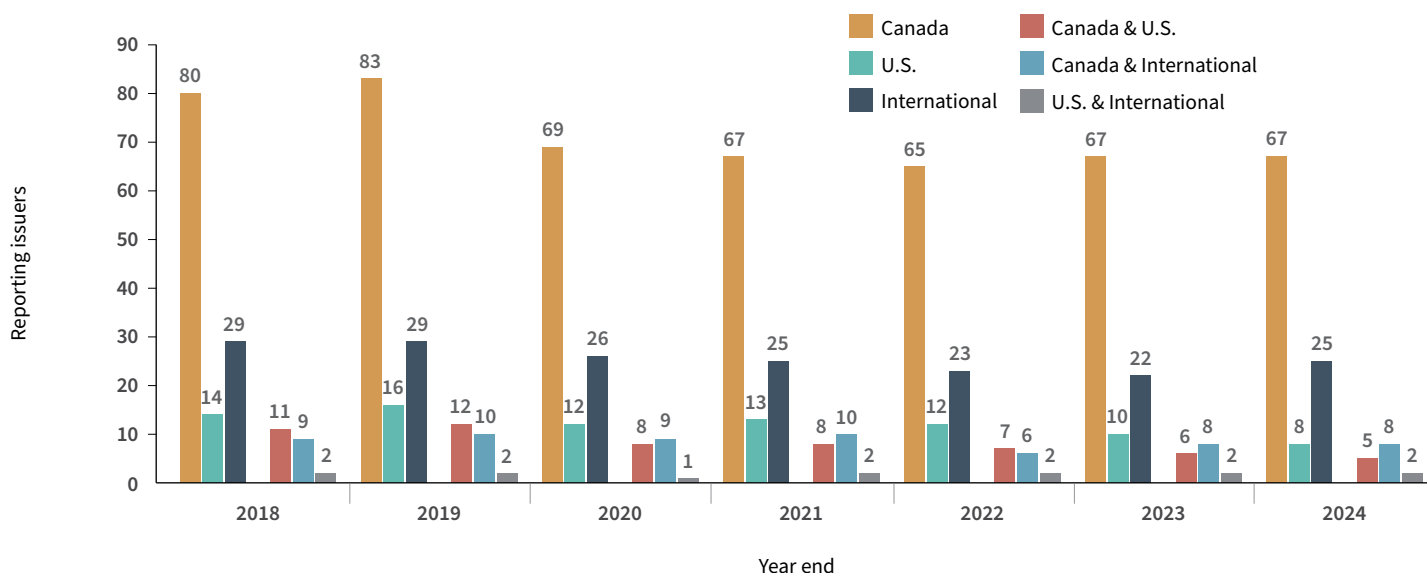


Figure 23 shows the specific countries the reserves data, contingent resources data or prospective resources data from Figure 22 are attributed for 2024 and the number of RIs that have one or more of these in each country. Again, this information was obtained from each RI's Form 51-101F1, specifically item 2.1 for reserves data and generally Part 7 for contingent resources data and prospective resources data.

**Figure 23: Countries where AB RIs have reserves data, contingent resources data or prospective resources data attributed**



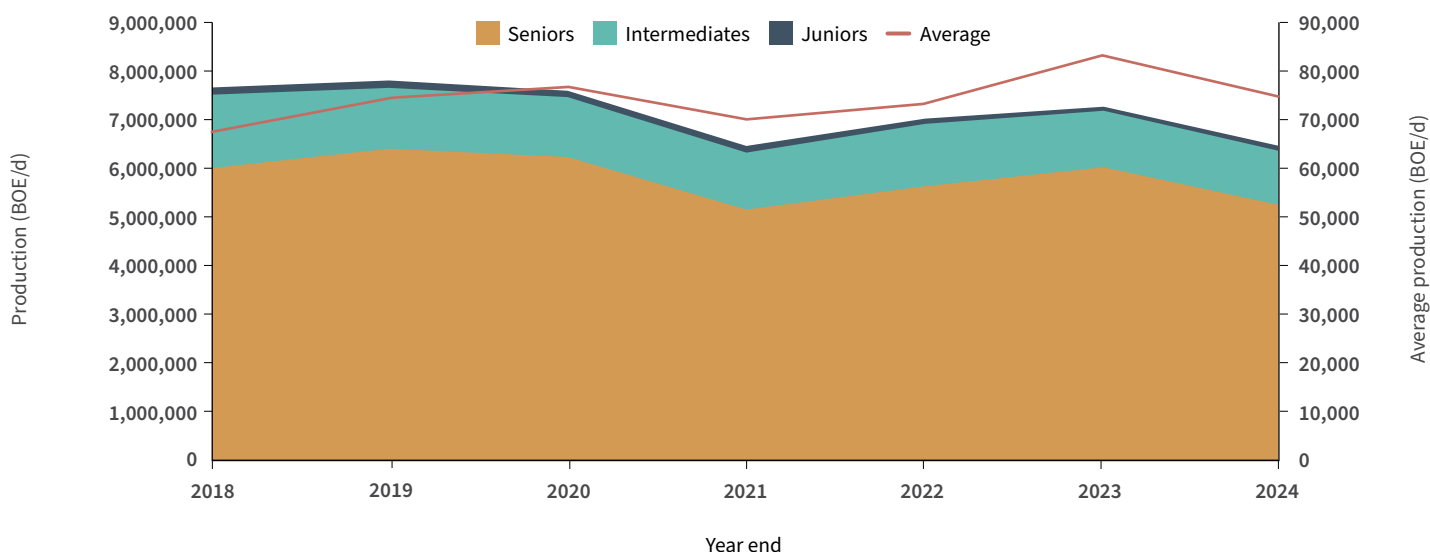
Figure 24 indicates the number of net exploration wells attributed to AB RIs, by production group, reflecting activities mostly conducted in 2024. This information was obtained from item 6.7 of each RI's Form 51-101F1. As shown, there are 64 net wells attributed to 19 different RIs. This comprises 52 net oil wells and 12 net gas wells, with the majority attributed to seniors RIs. Forty-nine of these wells are attributed to Canada, while the remaining 15 are attributed to China, Croatia, Columbia, Ecuador and Thailand.

**Figure 24: Number of net exploration wells attributed to AB RIs, by production group**

	JUNIORS		INTERMEDIATES		SENIORS		TOTAL	
	RIs	Net wells	RIs	Net wells	RIs	Net wells	RIs	Net wells
Oil	4	8.0	6	9.0	4	35.0	14	52.0
Gas	1	1.0	3	9.8	1	1.0	5	11.8
<b>Total</b>	<b>5</b>	<b>9.0</b>	<b>9</b>	<b>18.8</b>	<b>5</b>	<b>36.0</b>	<b>19</b>	<b>63.8</b>

Figure 25 illustrates the summation of production for AB RIs, for 2018 to 2024, by production group and the average production per RI. It was constructed using disclosure per item 6.9 of each constituent RI's Form 51-101F1, which requires the disclosure of quarterly average gross daily production volumes by country and product type for the most recent financial year. It includes data for 85 RIs that had production disclosed under item 6.9, down from 112 in 2018. Each RI's contribution is based solely on the production volume it has disclosed, with no weighting or adjustment applied.

**Figure 25: Summed production for AB RIs, by production group and average production per RI**



As shown, there has been a decrease in production over the period for AB RIs. The contribution from the juniors has also shrunk since 2019, while it has remained relatively consistent for the seniors and intermediates. The average production per RI increased from 68,000 BOE/d to almost 83,000 BOE/d from 2019 to 2023, but decreased to just under 76,000 BOE/d in 2024, an eight per cent year-over-year decrease. There has been a decrease in the number of AB RIs engaged in oil and gas activities over the period, which has disproportionately affected the juniors, although there have also been a number of juniors that have become intermediates and intermediates that have become seniors. More information concerning changes in the number of RIs is discussed in section 6 of the Report.



### 3. Alberta mining matters

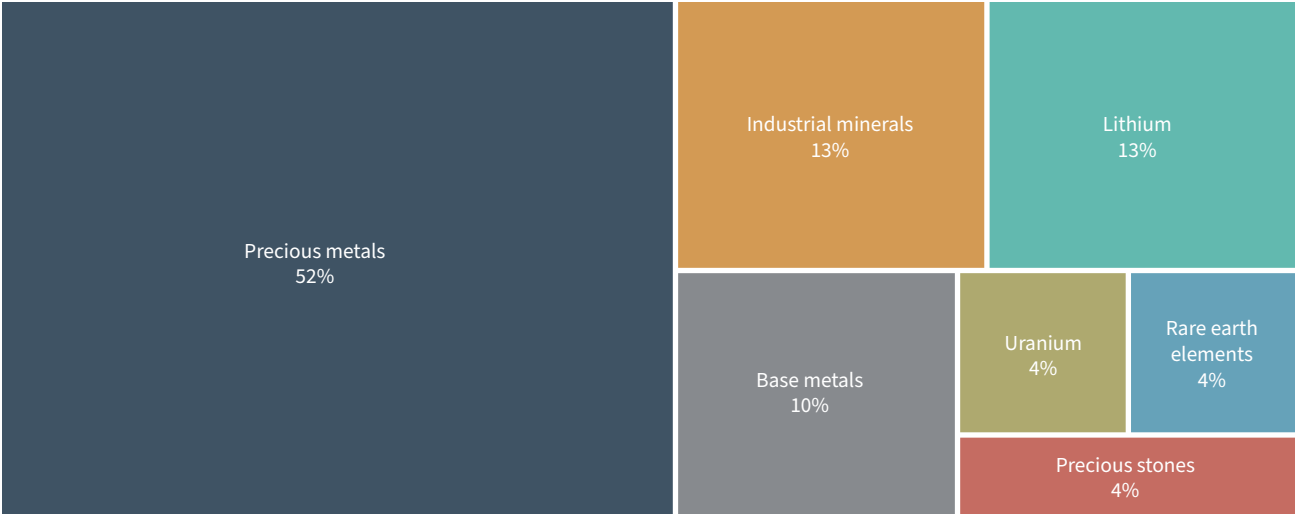
Mining and quarrying accounted for 1.2 per cent of Canada’s gross domestic product (**GDP**) in 2024, compared to 3.3 per cent for oil and gas extraction.<sup>20</sup> Approximately 60 different mineral commodities are mined in Canada, including gold, potash, coal and copper. Excluding mined bitumen, Alberta’s contribution is mostly limited to thermal and metallurgical coal, aggregates, and silica sand (used for hydraulic fracturing in oil and gas operations), amounting to 1.8 per cent of the mining and quarrying component of Canada’s 2024 GDP.

In an effort to strengthen and diversify its economy, the Government of Alberta published its mineral strategy and action plan in 2021,<sup>21</sup> focusing primarily on lithium from brines, potash, uranium, helium, vanadium, rare earths and titanium. Lithium is designated a critical mineral by the Government of Canada due to its use in energy storage.

Canada currently has approximately 1,800 mining RIs, who disclose under National Instrument 43-101 *Standards of Disclosure for Mineral Projects*. At the end of September 2025, 48 (approximately three per cent) of these were principally regulated by the ASC, representing about 11 per cent of the 457 RIs it principally regulates. Of these 48, seven were producing at this time, nine were advancing a project and 32 were prospecting and exploring. Of the seven producing, four were mainly producing precious metals (gold and silver) and three were producing industrial minerals (sand, graphite and kaolinite). Of the nine advancing a project, five were focused on lithium from brines, one was focused on precious metals and three were focused on base metals. With respect to RIs involved in prospecting and exploration, 25 were pursuing precious metals and one was pursuing lithium.

Figure 26 identifies the primary commodity being pursued by the 48 AB mining RIs. Precious metals is the most prominent, at 52 per cent, followed by industrial minerals, lithium and base metals.

Figure 26: Primary commodity focus for AB mining RIs

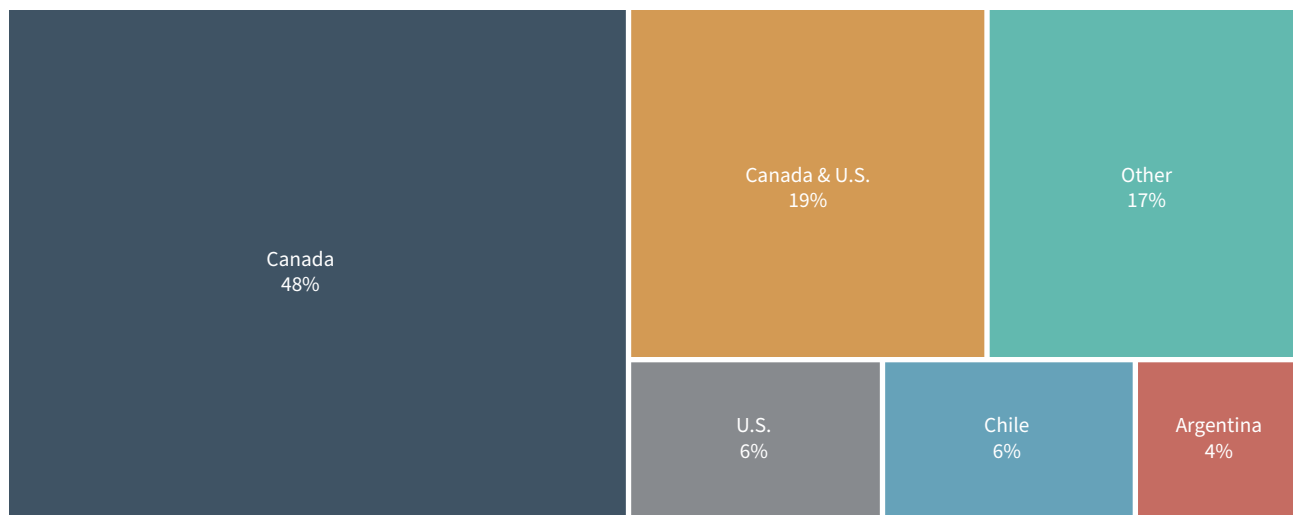


<sup>20</sup> Statistics Canada. Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000)

<sup>21</sup> <https://www.alberta.ca/minerals-strategy-and-action-plan>

Figure 27 illustrates the geographic focus of AB mining RIs. As shown, Canada is the most common at 48 per cent, followed by a combination of Canada and the U.S. at 19 per cent.

**Figure 27: Geographic focus for AB RIs that report under NI 43-101**



The market capitalization of RIs for which the ASC was the principal regulator at the end of September 2025 was approximately \$1.1 trillion, with the component attributed to mining RIs amounting to about \$1.8 billion. The average market cap for AB mining RIs was about \$37 million.

Please refer to section 6 of the Report for additional information concerning mining and the Alberta capital market.

### 3.1 NI 43-101 UPDATE

Canada's mining disclosure regime is an internationally recognized standard for mineral project disclosure. In April 2022, the CSA published Consultation Paper 43-401 *Consultation on National Instrument 43-101 Standards of Disclosure for Mineral Projects (Consultation Paper)*. It was intended to inform potential amendments to NI 43-101 and Companion Policy 43-101CP to National Instrument 43-101 *Standards of Disclosure for Mineral Projects (43-101CP)* and solicited comments.

Eighty-five comment letters were received from market participants, including RIs, individuals, consulting and law firms, regulatory organizations and advocacy groups, including those representing Indigenous Peoples. On June 12, 2025, the CSA published proposed amendments to NI 43-101 and Form 43-101F1 *Technical Report*, and proposed changes to 43-101CP.

The amendments and changes reflect feedback received from the Consultation Paper, and also reflect CSA staff regulatory reviews, changes in market practice, and evolving policy considerations. The comment period closed on October 10, 2025 and the CSA is currently reviewing submissions.

## 4. CSA climate-related project update

On April 23, 2025, the CSA announced a pause in its development of a mandatory climate-related disclosure rule.<sup>22</sup> This was done to support Canadian capital markets and RIs as they adapt to global economic and geopolitical developments. At the same time, the CSA announced that it was focusing on initiatives to make Canadian capital markets more competitive, efficient and resilient. This decision reflects the ASC's commitment to supporting Alberta capital markets during a time of significant global economic change and uncertainty.

While the development of a new climate-related disclosure rule is paused, RIs are still required to disclose material climate-related risks under existing securities legislation. The following previously-published staff notices may assist RIs in identifying material climate-related risks and ensuring compliant climate-related disclosures:

- CSA Staff Notice 51-333 *Environmental Reporting Guidance* (published October 2010)
- CSA Staff Notice 51-354 *Report on Climate change-related Disclosure Project* (published April 2018)
- CSA Staff Notice 51-358 *Reporting of Climate Change-related Risks* (published August 2019)
- CSA Staff Notice 51-364 *Continuous Disclosure Review Program Activities for the fiscal years ended March 31, 2022 and March 31, 2021* (published November 2022)
- CSA Staff Notice 51-365 *Continuous Disclosure Review Program Activities for the fiscal years ended March 31, 2024 and March 31, 2023* (published November 2024)

In December 2024, the Canadian Sustainability Standards Board (**CSSB**) issued its inaugural sustainability standards. These are generally aligned with those issued by the International Sustainability Standards Board in 2023. The CSSB standards provide a useful voluntary disclosure framework for sustainability and climate-related disclosure. RIs are encouraged to refer to these when preparing their disclosure.

The ASC is continuing to monitor domestic and international regulatory developments and market conditions. While the paused climate-related project may be revisited in the future, any changes will be communicated to RIs with sufficient notice. In the interim, the ASC remains committed to addressing materially misleading or inaccurate disclosure.

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<sup>22</sup> [CSA updates market on approach to climate-related and diversity-related disclosure projects](#)

## 5. Environmental-related sustainability disclosure

There continues to be interest in environmental-related sustainability disclosure amongst some capital market stakeholders. Accordingly, certain RIs continue to voluntarily provide disclosure that addresses such things as GHG emissions and targets. However, there has been a significant reduction in the number of RIs that have provided this disclosure over the last two years, while some have even removed previously published disclosure. Many RIs have cited the amendments to the *Competition Act* (Canada) implemented through Bill C-59 (**C-59**) as the reason for their decision to decline to provide such disclosure or to remove previous disclosure.

The November 2025 federal budget announced the Government of Canada's intention to further amend the *Competition Act* (Canada) to address some recent changes. These include removal of the requirement for companies to substantiate claims regarding environmental benefits using internationally recognized methodologies and the right of third parties to bring greenwashing complaints directly to the Competition Tribunal, which hears and disposes of applications made under certain part of the *Competition Act* (Canada).

Environmental-related sustainability disclosure is typically provided in comprehensive stand-alone reports, usually labelled as “sustainability reports” that are posted on RI websites. Disclosure is sometimes also found on websites and in required filings. When preparing such disclosure, RIs are reminded of the broader Canadian securities disclosure framework and its various requirements, guidance and prohibitions.

Since 2021, the Energy Group has conducted limited reviews of certain information concerning sustainability disclosure from select groups of AB RIs. We refer to these reviews as “environmental sustainability monitoring reviews” and they involve the assessment of basic information, such as:

- Whether or not environmental-related sustainability disclosure has been provided concerning:
  - GHG emissions
  - other air emissions
  - energy usage
  - water usage
  - abandonment and reclamation activities (for AB RIs engaged in oil and gas activities)
- Timing and frequency of such disclosure.
- How the disclosure was prepared (reporting frameworks and standards).
- Whether a sustainability report has been disclosed.
- Whether or not other specific information has been disclosed.

These reviews are conducted to better understand how AB RIs are voluntarily responding to investor interest in environmental-related sustainability matters. The reviews do not assess compliance with any reporting framework and standard and they do not assess whether or not any social or governance information has been disclosed.

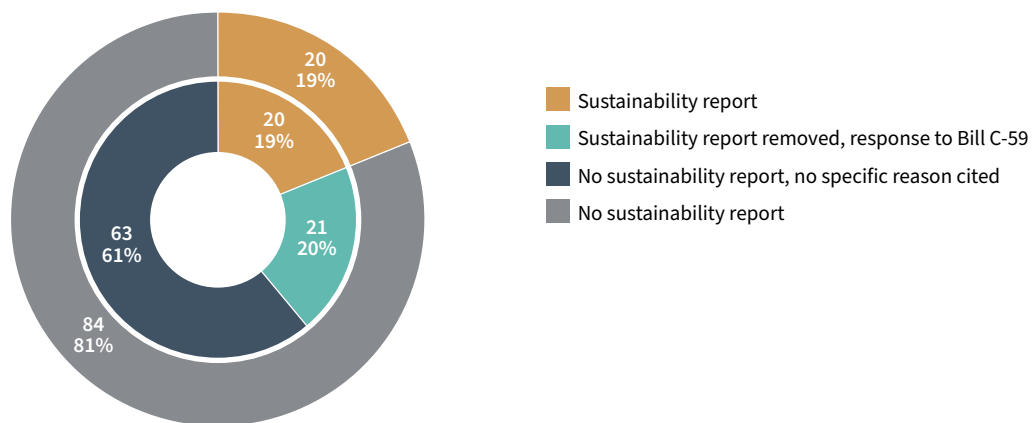
The 2021 Report included information attributed to RIs engaged in oil and gas activities for which the ASC was the principal regulator. The 2022 Energy Matters Report (**2022 Report**) included updated information for these RIs, but was expanded to include information for RIs involved in oil and gas midstream (including pipelines) and oil and gas services, for which the ASC was the principal regulator. The 2023 Energy Matters Report (**2023 Report**) included updated information for these energy sub-industries and was further expanded to include information for RIs involved in utilities and AB mining RIs.

The 2024 Report did not address environmental-related sustainability disclosure, as it was intended to be included in a separate report that was ultimately not published due to challenges in providing year-to-year comparative data—a result of many sustainability reports not being published. This edition provides a review of such disclosure in respect of all AB RIs (excluding those subject to a cease trade order), categorized into various group based on the RI's primary focus.

The timing of sustainability disclosure in general is often irregular and does not typically conform to an RI's financial year end. The information in this section reflects the situation regarding environmental-related sustainability disclosure from current RIs made during 2025 and available as at the end of September 2025. In previous reports, an RI need only have made the disclosure during a particular period for the disclosure occurrence to have been noted. The change was made in this report due to the difficulty of tracking instances where RIs provided and then subsequently removed disclosure.

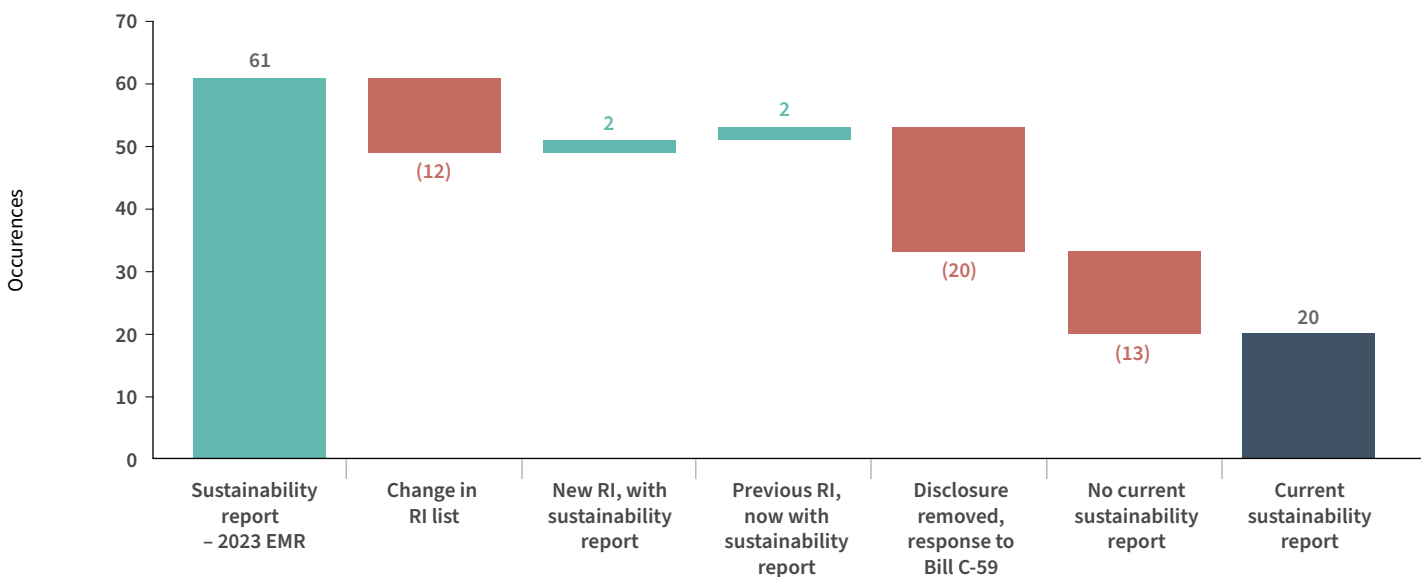
As shown in Figure 28, 19 per cent of current AB RIs engaged in oil and gas activities (20 out of 104 RIs) had a sustainability report at the end of September 2025. Eighty-four RIs (81 per cent) did not have a report. Of those, 63 did not provide a reason why they did not have a report and 21 cited concerns with C-59.

**Figure 28: Environmental-related sustainability report disclosure occurrences by AB RIs engaged in oil and gas activities**



For comparison, between October 1, 2022 and September 30, 2023, 62 per cent of AB RIs engaged in oil and gas activities provided this disclosure.<sup>23</sup> Figure 29 reconciles these changes.

**Figure 29: Changes in environmental-related sustainability report disclosure occurrences over time by AB RIs engaged in oil and gas activities**



<sup>23</sup> 2023 Report

As illustrated in Figure 30, six out of nine (67 per cent) of current AB RIs involved in oil and gas midstream had a sustainability report at the end of September 2025. Of the three RIs that did not, two did not provide a reason and one cited concerns with C-59.

**Figure 30: Environmental-related sustainability report disclosure occurrences by AB RIs involved in oil and gas midstream**

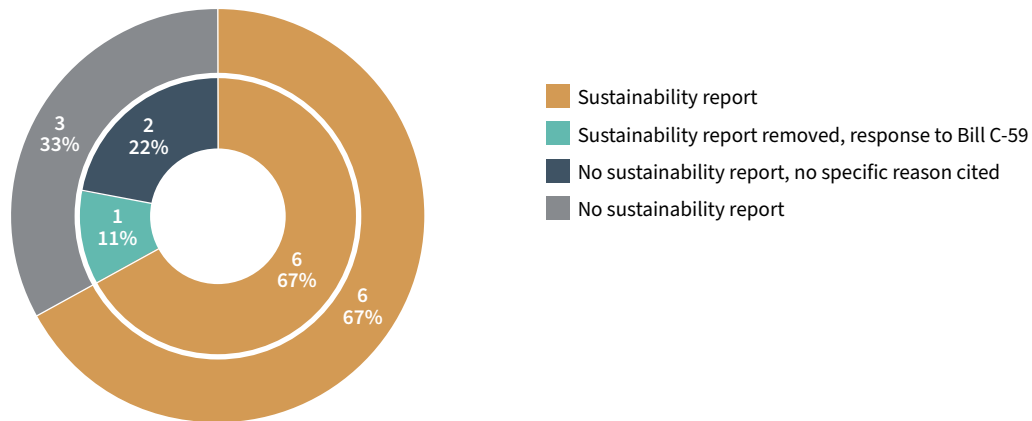
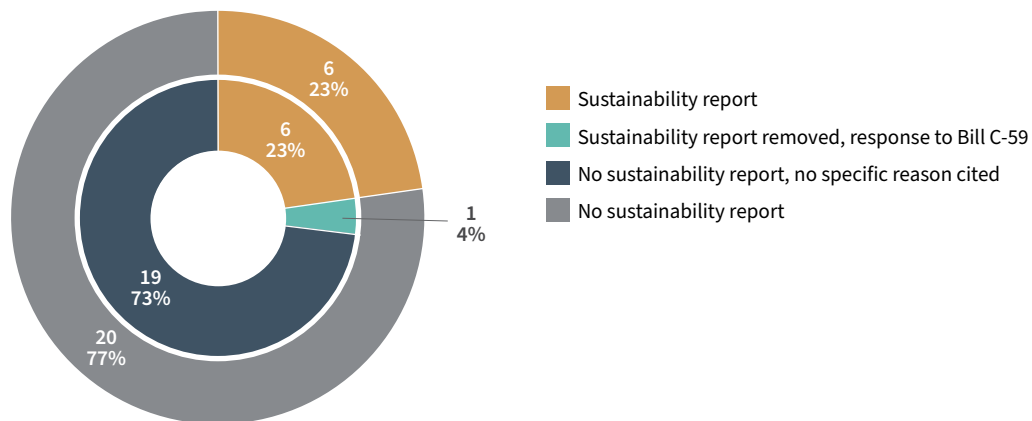


Figure 31 illustrates environmental-related sustainability report disclosure occurrences by current AB RIs involved in oil and gas services. Six out of 26 RIs (23 per cent) had a sustainability report at the end of September 2025. Of the 20 RIs that did not have a report, 19 did not provide a reason for not providing one and one cited concerns with C-59.

**Figure 31: Environmental-related sustainability report disclosure occurrences by AB RIs involved in oil and gas services**





Per Figure 32, 10 of 12 current RIs (83 per cent) involved in utilities had a sustainability report at the end of September 2025. Neither of the two RIs that did not have a report provided a reason for not providing one.

**Figure 32: Environmental-related sustainability report disclosure occurrences by AB RIs involved in utilities**

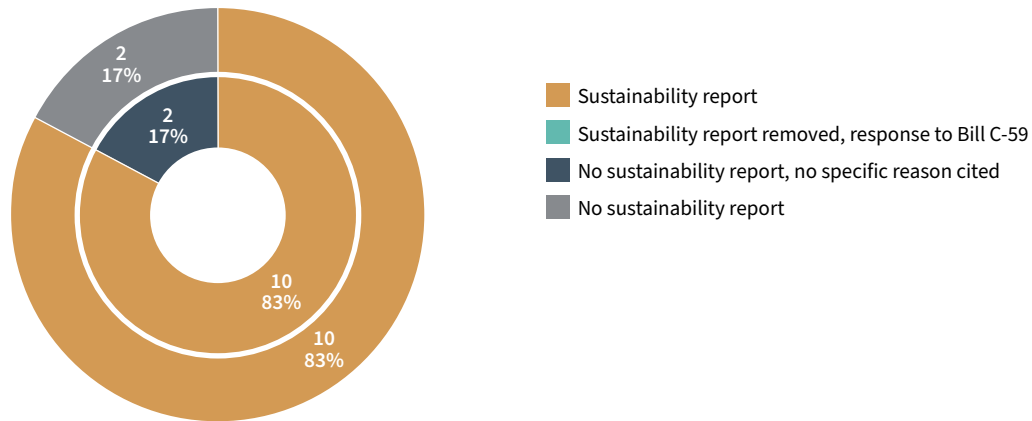
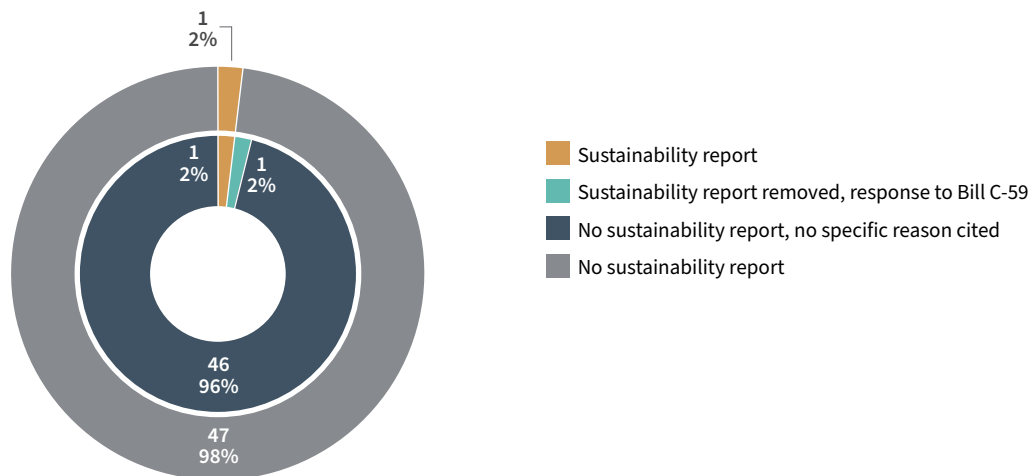


Figure 33 indicates that only one of the 48 current AB mining RIs had a sustainability report at the end of September 2025. Only one of the 47 RIs that did not have a report provided a reason for not providing one and it cited concerns with C-59. The 48 mining RIs includes eight involved with energy minerals, six of which are focused on lithium and two on uranium.

**Figure 33: Environmental-related sustainability report disclosure occurrences by AB RIs that report under NI 43-101**



As shown in Figure 34, eight per cent of current AB RIs categorized as “other” had a sustainability report at the end of September 2025 (15 out of 180 RIs). “Other” consists of all RIs not categorized previously in this section, excluding investment funds that report under National Instrument 81-106 *Investment Fund Continuous Disclosure*. None of the RIs that did not publish a sustainability report provided a reason for not doing so.

**Figure 34: Environmental-related sustainability report disclosure occurrences by other AB RIs**

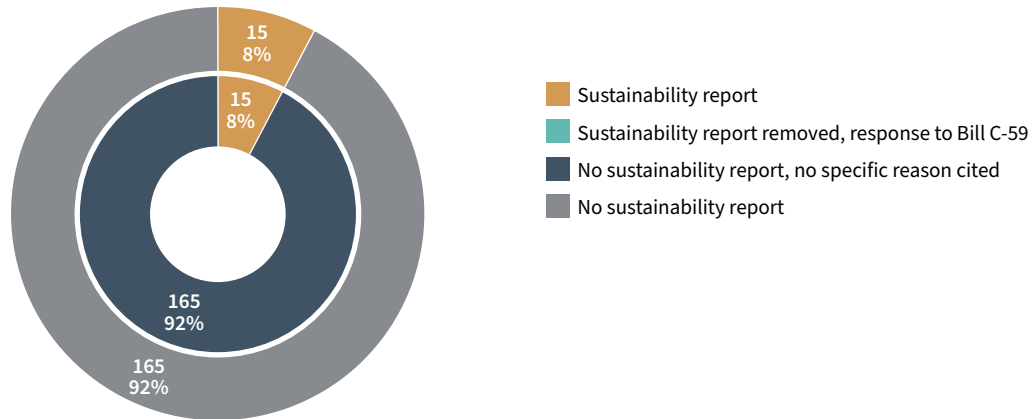


Figure 35 presents a summary of the environmental-related sustainability report disclosure occurrences illustrated in Figure 28 through Figure 34.

**Figure 35: Summary regarding environmental-related sustainability report disclosure occurrences by AB RIs**

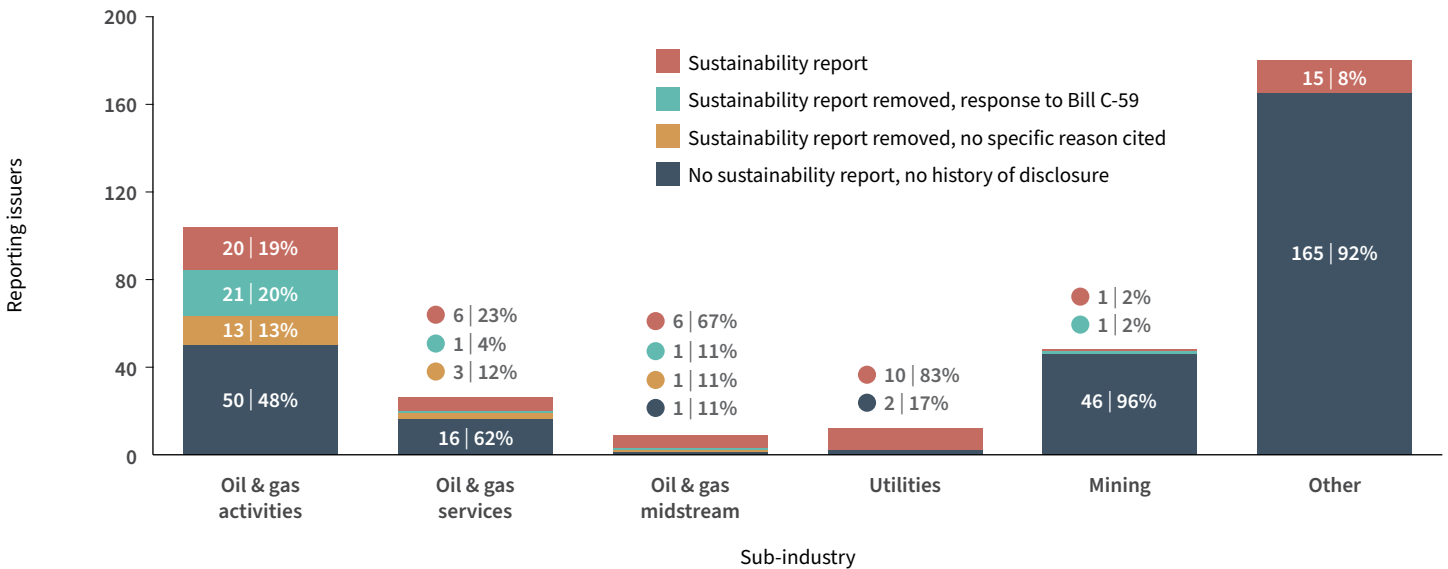
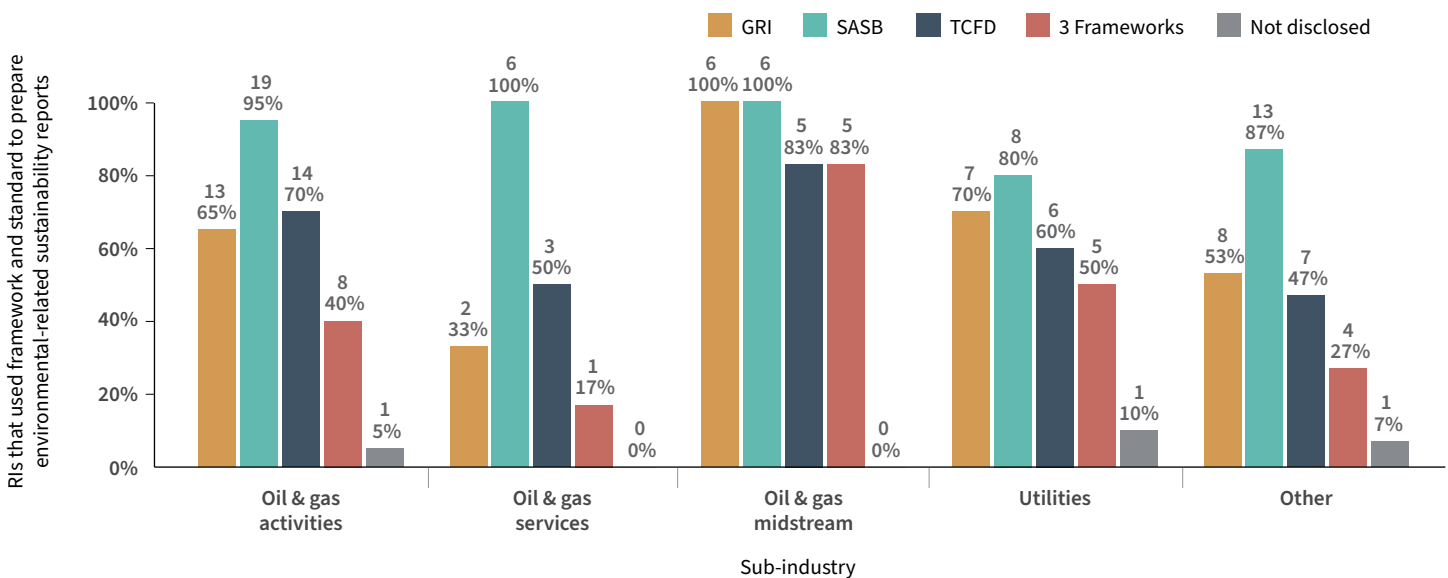


Figure 36 shows if one or more of the reporting frameworks and standards identified below was used to prepare the environmental-related sustainability disclosure found in the reports for the constituent RIs in each category of RIs. These are currently the most commonly used reporting frameworks and standards. No assessment was conducted regarding whether the reporting framework or standard was used appropriately or in its entirety. The reporting frameworks and standards are:

- Task Force on Climate-related Financial Disclosure's (**TCFD**) Recommendations of the Task Force on Climate-related Financial Disclosures
- Global Reporting Initiative's (**GRI**) GRI Standards
- Sustainability Accounting Standards Board's (**SASB**) SASB Standards

*Note: The Canadian Sustainability Standards Board (CSSB) initial standards, largely based on those of the International Sustainability Standards Board (ISSB), became effective in April 2025. As other frameworks are being incorporated into the ISSB, we anticipate also monitoring for reference to ISSB and CSSB in future reviews.*

**Figure 36: Reporting frameworks and standards used by AB RIs to prepare environmental-related sustainability reports**



Nineteen out of the 20 current AB RIs engaged in oil and gas activities that had a sustainability report at the end of September 2025 used SASB. Eight of these RIs used all three of the frameworks and standards.

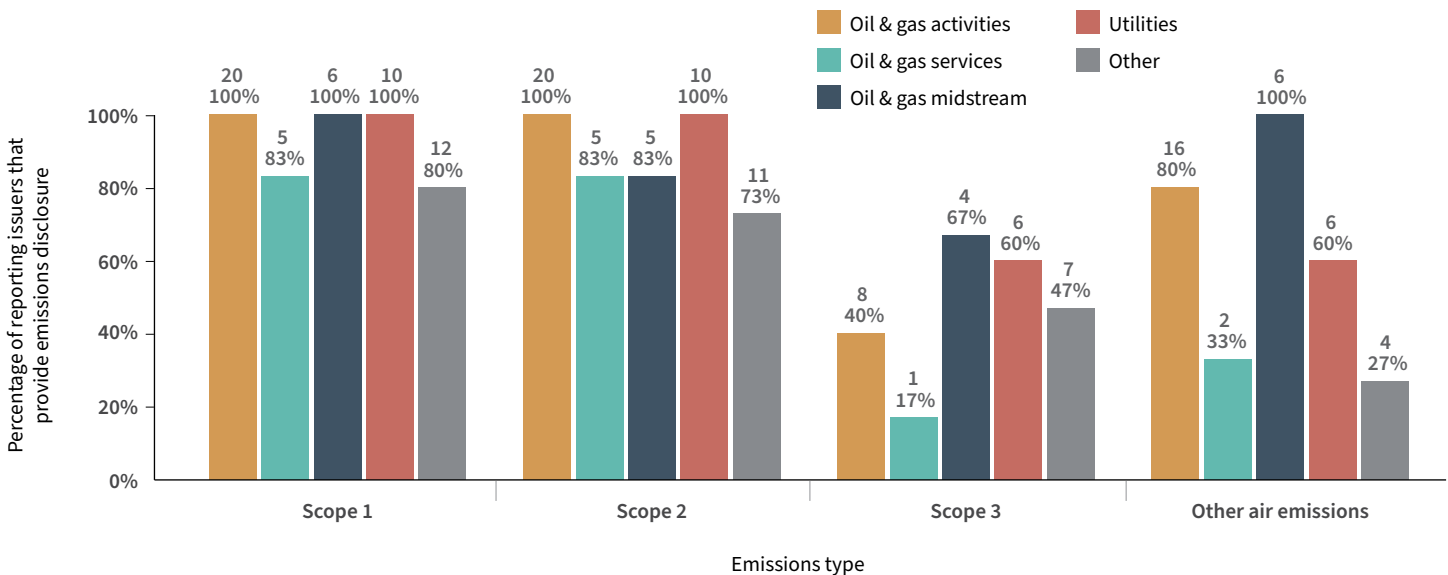
Of the six current AB RIs involved in oil and gas midstream that had a sustainability report at the end of September 2025, all used SASB, while five used all three frameworks and standards. Of the six involved in oil and gas services with a report, all used SASB and one used all three. Eight of the 10 involved in utilities that had a report used SASB, while five used all three. For the other RIs, 13 used SASB (87 per cent), while four used all three (27 per cent).

Figure 37 illustrates emissions disclosure occurrences for each specified group of RIs. “Scope 1,” “Scope 2” and “Scope 3” refer to carbon dioxide equivalent emissions, which include carbon dioxide, methane and nitrous oxide. The terms are defined within each reporting framework and standard, but broadly mean:

- Scope 1: All direct emissions owned or otherwise controlled by the RI.
- Scope 2: All indirect emissions attributed to energy acquired by the RI (electricity, heat or steam).
- Scope 3: All other indirect emissions attributed to the value chain of the RI.

Please note that there is wide variation in adherence to the various methodologies for preparing Scope 3 emissions disclosure. Some RIs note that they only include material quantities of emissions and some indicate that they exclude certain data due to concerns with its completeness or reliability. “Other air emissions” in Figure 37 includes nitrogen oxides, sulphur dioxide, volatile organic compounds and particulate matter.

**Figure 37: Emissions disclosure occurrences by AB RIs with an environmental-related sustainability report**



As shown in Figure 37, all of the RIs engaged in oil and gas activities, and those involved in oil and gas midstream and utilities, disclosed Scope 1 emissions. As well, Scope 1 emissions disclosure remains high for RIs involved in oil and gas services and other RIs.

All RIs engaged in oil and gas activities and those involved in utilities, disclosed Scope 2 emissions. However, Scope 3 emissions were less widely disclosed. RIs engaged in oil and gas activities have the most disclosure occurrences at eight or 40 per cent of constituent RIs, while the four RIs involved in oil and gas midstream providing this disclosure represent 67 per cent.

## 6. Energy and the Alberta capital market

This section explores the relationship between energy and the Alberta capital market with respect to RIs for which the ASC is the principal regulator. It also makes some comparisons to other jurisdictions, both within and outside of Canada. Key aspects of the overall Alberta capital market are discussed, along with their changes over time. This includes the number of RIs for which the ASC is the principal regulator, the industry attribution of these RIs and their respective market capitalizations. While some comparative information is provided for other industries, the emphasis is on the energy industry. There is specific focus on both the established and emerging sub-industries and their capital raising activities via prospectus offerings and prospectus-exempt financings. Due to its importance, information concerning clean energy-related project funding provided by the Government of Canada is also included.

### REPORTING ISSUER STATISTICS

Figure 38 illustrates the number of RIs for which the ASC was the principal regulator (excluding those subject to a cease trade order), by industry, at September 30, 2025. The largest distinct industry segment is energy, with 179 RIs or 39 per cent of Alberta RIs.

Figure 38: Number of AB RIs, by industry

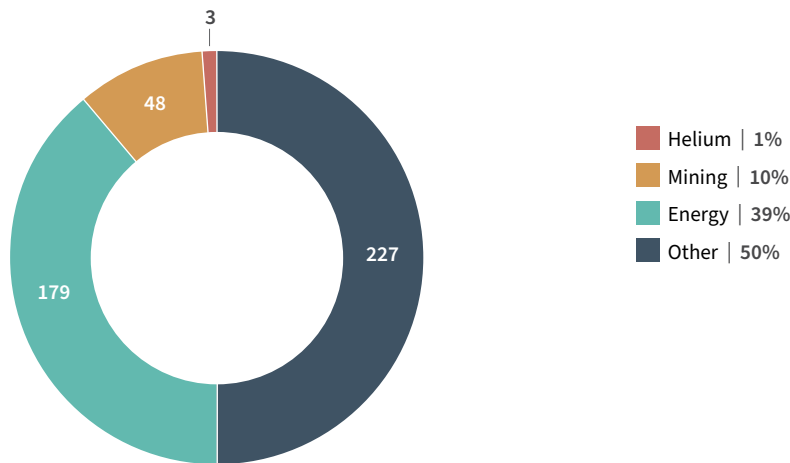
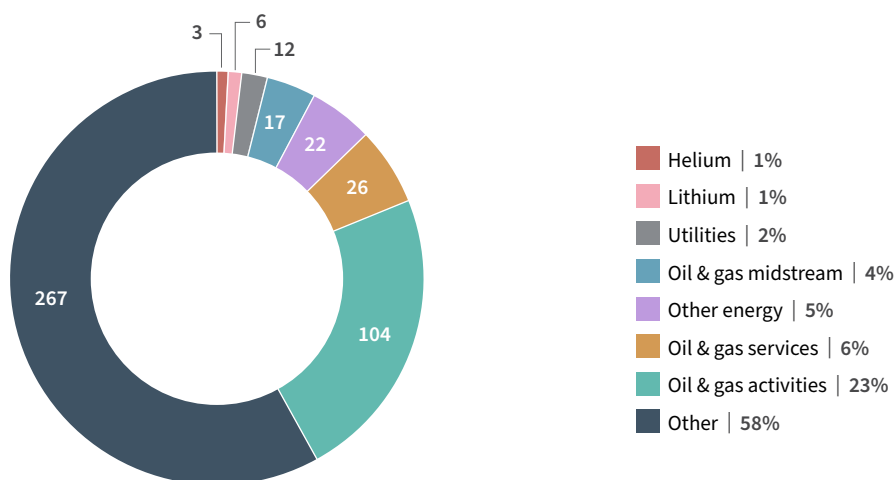


Figure 39 shows the RIs from Figure 25 categorized as “Energy-related” or “Other.” As indicated, 190 RIs or 42 per cent of Alberta RIs are attributed to the former. Energy-related includes RIs focused on lithium (six RIs), uranium (two RIs) and helium (three RIs).

**Figure 39: Number of energy-related AB RIs compared to AB RIs**

In Figure 40, the category “Energy-related” from Figure 39 is broken into its constituent energy sub-industries, with the number of RIs attributed to each indicated. As shown, 104 RIs or 23 per cent of energy-related RIs are attributed to “Oil & gas activities.”

**Figure 40: Number of energy-related AB RIs, by sub-industry, compared to AB RIs**

Regarding the individual sub-industries in Figure 40 “Oil & gas activities” represents RIs engaged in oil and gas activities per NI 51-101; “Oil & gas midstream” includes RIs involved with oil and gas pipelines; “Oil & gas services” includes RIs involved in such things as oil and gas drilling, well services and equipment; “Utilities” includes RIs that are involved in electrical generation via traditional and renewable means, transmission or distribution; “Lithium” includes RIs that report under NI 43-101 and are involved in the production and sale of lithium, including six involved with its recovery from brines, while “Other” includes RIs involved in other energy-related sub-industries, including energy services (seven RIs), clean technology (six RIs), renewable hydrocarbons (five RIs), hydrogen (two RIs) and uranium (two RIs).

Many RIs categorized within “Oil & gas activities” and “Oil & gas midstream” are increasingly pursuing projects beyond their traditional oil and gas focus. For example, many RIs in the former are pursuing non-traditional projects that involve CCS and CCUS, as well as their related technologies, in addition to renewable hydrocarbons, electricity co-generation, wind energy, and various clean technologies. Some RIs in “Oil & gas midstream” are pursuing projects related to renewable hydrocarbons, and are developing renewable electrical generation projects that are typically the domain of RIs in “Utilities.”



Figure 41 presents a snapshot of the number of energy-related AB RIs by their respective sub-industry, for 2021 to the end of September 2025. Note that throughout this section, information for any given year is as of December 31, except for the current year, which is as of September 30 and discussed as “year to date” (YTD).

**Figure 41: Number of energy-related AB RIs, by sub-industry**

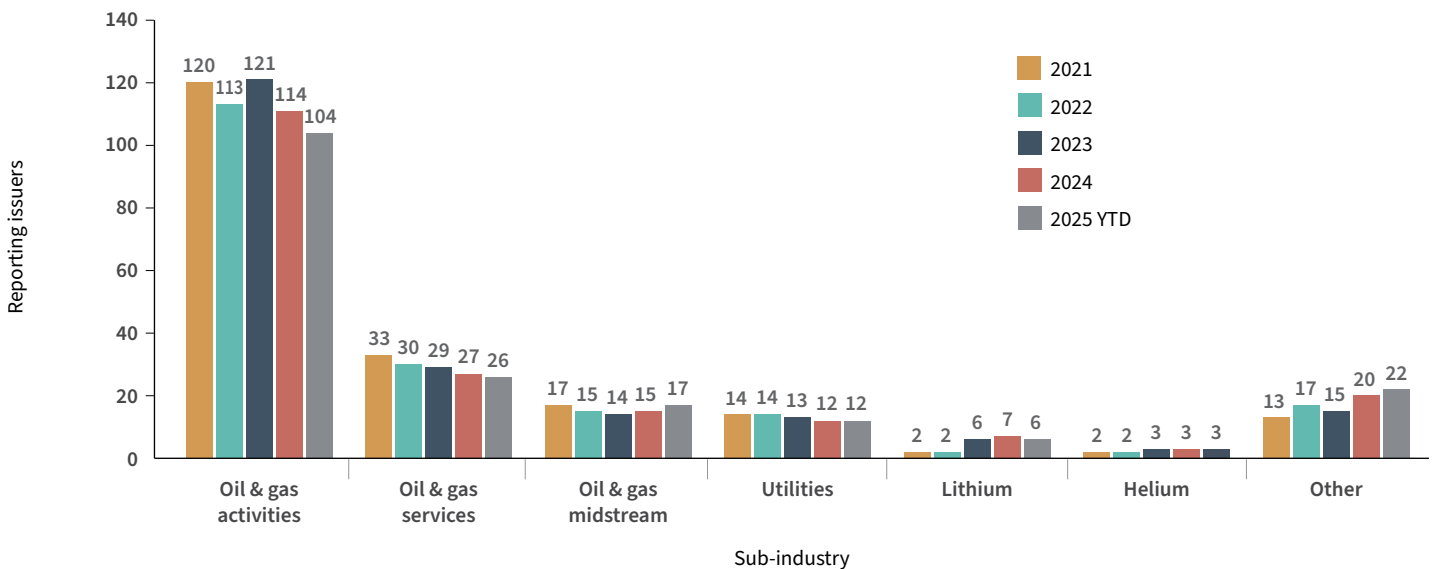
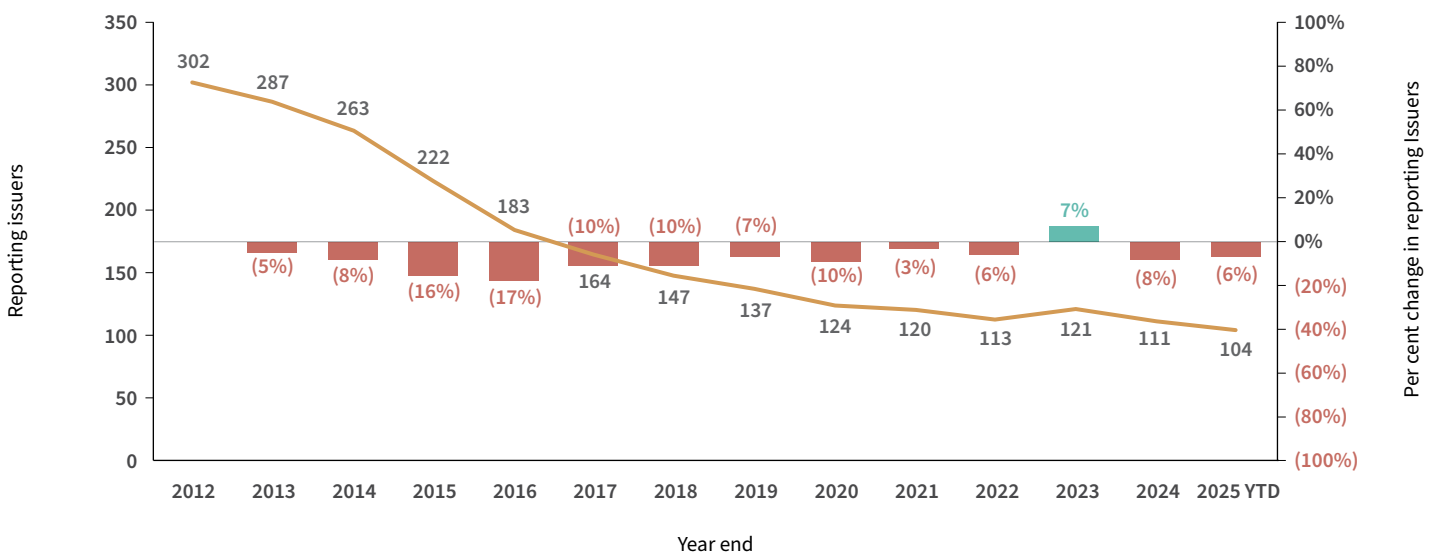


Figure 41 shows an overall decline in the number of RIs attributed to “Oil & gas activities,” “Oil & gas services,” “Oil & gas Midstream” and “Utilities.” However, there has been a modest increase in the number of RIs attributed to “Lithium,” “Helium” and “Other.”

Figure 42 shows the number of AB RIs engaged in oil and gas activities for 2012 to the end of September 2025. There were 111 RIs engaged in oil and gas activities at the end of 2024, down from 302 at the end of 2012, representing a decrease of 60 per cent. At the end of September 2025, there were 104, representing a 66 per cent decrease since 2012 and a six per cent decrease over 2024.

**Figure 42: Number of AB RIs engaged in oil and gas activities**



As shown in Figure 43, the reduction in RIs engaged in oil and gas activities is principally attributed to a reduction in the number of junior RIs, which dropped from 210 in 2012 to 62 at the end of September 2025, a 70 per cent decrease. Intermediate RIs have also notably declined, from 41 to 29 during that period, a 29 per cent drop. To construct this figure, RIs were grouped into “production groups” as follows, using production disclosed per item 6.9 of Form 51-101F1:

- “Seniors”: RIs with >100,000 BOE per day of production (based on a conversion ratio of six thousand cubic feet of gas for one barrel of oil);
- “Intermediates”: RIs with 10,000 to 100,000 BOE per day of production; and
- “Juniors”: RIs with <10,000 BOE per day of production.

All RIs within each production group were included. Throughout this section, production groups are constructed using the same methodology.

**Figure 43: Number of AB RIs engaged in oil and gas activities, by production group**

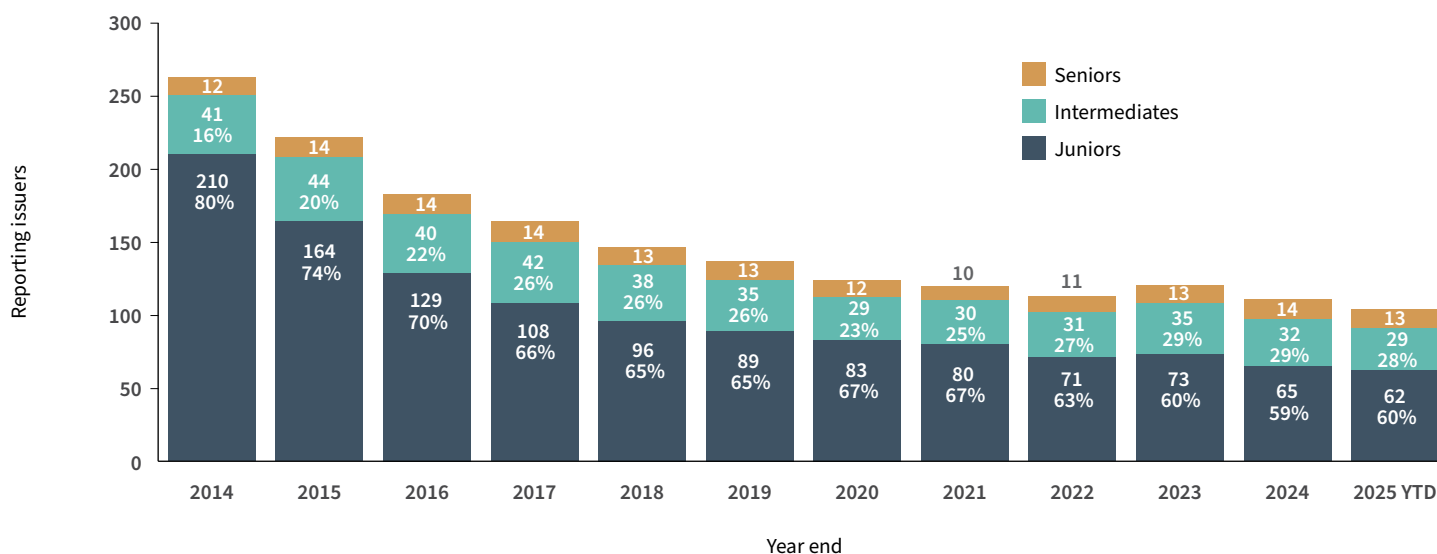


Figure 44 provides the reasons for the changes that occurred in the number of RIs from the beginning of 2025 to the end of September 2025 for each production group. There have been six new RIs (negative seven net) to date in 2025. The negative seven net includes one RI that was privatized, one that was acquired by a company not principally regulated by the ASC, six that were acquired by another RI principally regulated by the ASC, two that changed industries, and three that have had a cease trade order issued.

**Figure 44: Net change in AB RIs engaged in oil and gas activities, by production group**

REPORTING ISSUERS <sup>1</sup>				REASON FOR CHANGE
Seniors	Intermediates	Juniors	TOTAL	
–	–	–	0	Receivership/bankruptcy
–	–	(2)	(2)	Change in industry/acquired by a company in another industry
(1)	–	(1)	(2)	Privatized/acquired by a company not principally regulated by the ASC/ceased to be RI principally regulated by the ASC
(1)	(3)	(2)	(6)	Acquired by an RI principally regulated by the ASC
–	–	(3)	(3)	CTO
1	1	4	6	New RI <sup>3</sup>
<b>TOTAL</b>	<b>(1)</b>	<b>(2)</b>	<b>(4)</b>	<b>(7)</b>

<sup>1</sup> Does not capture changes due to movement between RI groups.

<sup>2</sup> "–" = no occurrences

<sup>3</sup> New RI includes CTO revocations.

Figure 45 shows the number of RIs engaged in oil and gas activities where another Canadian securities regulator is the principal regulator, for 2017 to the end of September 2025. The number of such RIs has decreased 48 per cent over the period. However, the number increased four per cent over the 2024 Report.

**Figure 45: Number of non-AB RIs engaged in oil and gas activities**

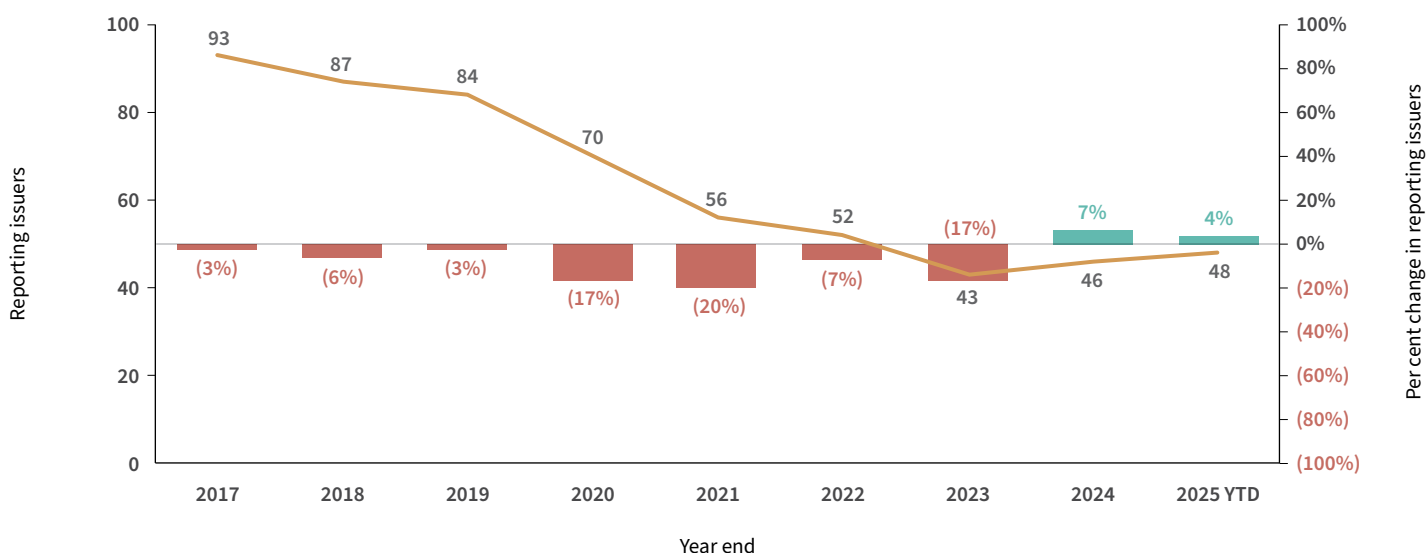


Figure 46 shows the RIs from Figure 45 grouped by production group, using the methodology employed to construct Figure 31. As illustrated, the majority of RIs are junior RIs.

**Figure 46: Number of non-AB RIs engaged in oil and gas activities, by production group**

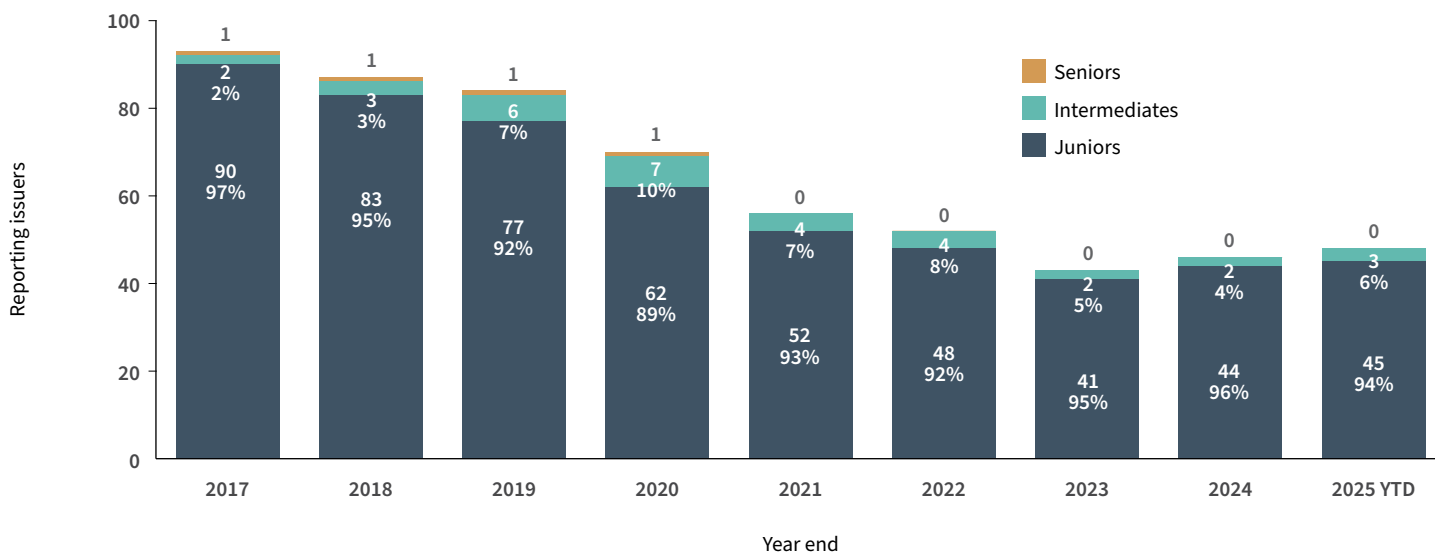


Figure 47 indicates the principal regulator of all Canadian RIs engaged in oil and gas activities for 2017 to the end of September 2025. The BCSC is the principal regulator of the majority of RIs that are not principally regulated by the ASC.

**Figure 47: RIs engaged in oil and gas activities, by principal regulator**

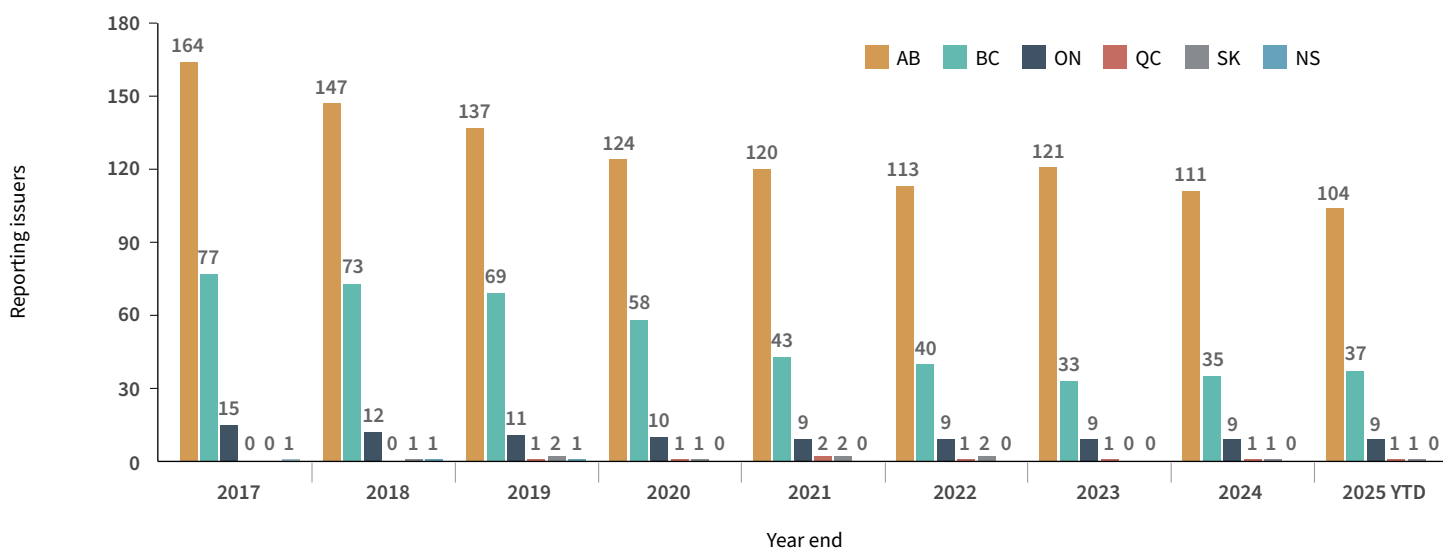


Figure 48 shows the number of energy-related AB RIs, by their respective sub-industry, that have their common shares listed on each of the indicated stock exchanges, at the end of September 2025.

**Figure 48: Number of energy-related AB RIs, by sub-industry, that have common shares listed on each stock exchange**

	ENERGY REPORTING ISSUERS									
	TSX	TSX-V	CSE	NYSE	NASDAQ	TSX & NYSE	TSX & London	TSX & Frankfurt	TSX-V & Frankfurt	Hong Kong
Oil & gas activities	51	40	2	11	2	8	2	1	1	1
Oil & gas services	21	4	–	1	–	2	–	–	–	–
Oil & gas midstream	8	–	–	5	–	4	–	–	–	–
Utilities	7	–	–	–	1	1	–	–	–	–
Lithium	–	6	1	–	–	–	–	1	1	–
Helium	–	2	1	–	–	–	–	–	–	–
Other	5	10	3	–	–	1	–	–	–	–

## REPORTING ISSUER MARKET CAPITALIZATIONS

Figure 49 illustrates the market capitalization of RIs for which the ASC was the principal regulator, by industry, at the end of September 2025. The industry with the largest market capitalization, by far, is energy, at \$765 billion or 72 per cent of the market capitalization of Alberta RIs. Note that throughout this section, market capitalizations are based on closing prices attributed to the most active marketplace for the common shares of each RI. For most of the RIs, this is the Toronto Stock Exchange (**TSX**) or the TSX Venture Exchange (**TSX-V**). Pricing data for this figure and all others in the Report is in Canadian dollars, unless otherwise noted.

**Figure 49: Market capitalization of AB RIs, by industry**

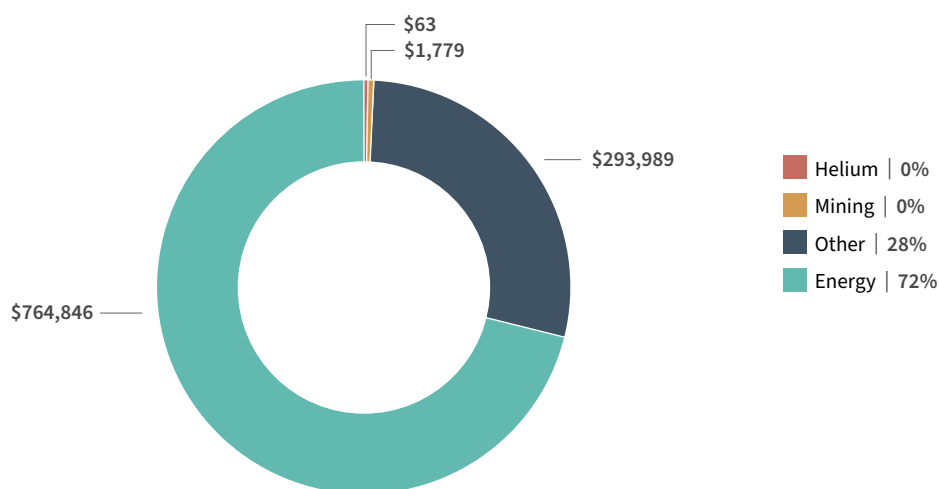
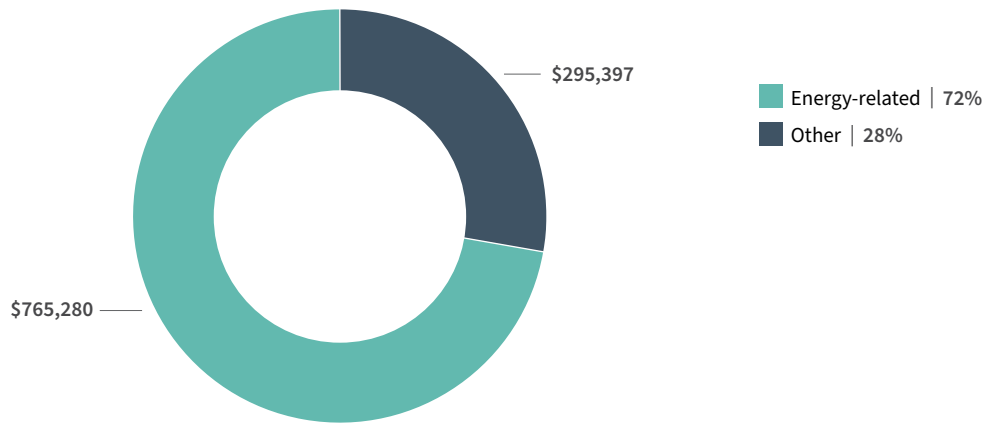


Figure 50 shows the market capitalization of RIs from Figure 49 categorized as “Energy-related” or “Other.” The former accounts for \$765 billion, or 72 per cent of the market capitalization of Alberta RIs.

**Figure 50: Market capitalization of energy-related AB RIs compared to AB RIs**



In Figure 51, the market capitalization of the category “Energy-related” from Figure 49 is attributed to its constituent energy sub-industries. As indicated, \$408 billion, or 39 per cent of the market capitalizations of energy-related RIs is attributed to “Oil & Gas Activities.”

**Figure 51: Market capitalization of energy-related AB RIs, by sub-industry, compared to AB RIs**

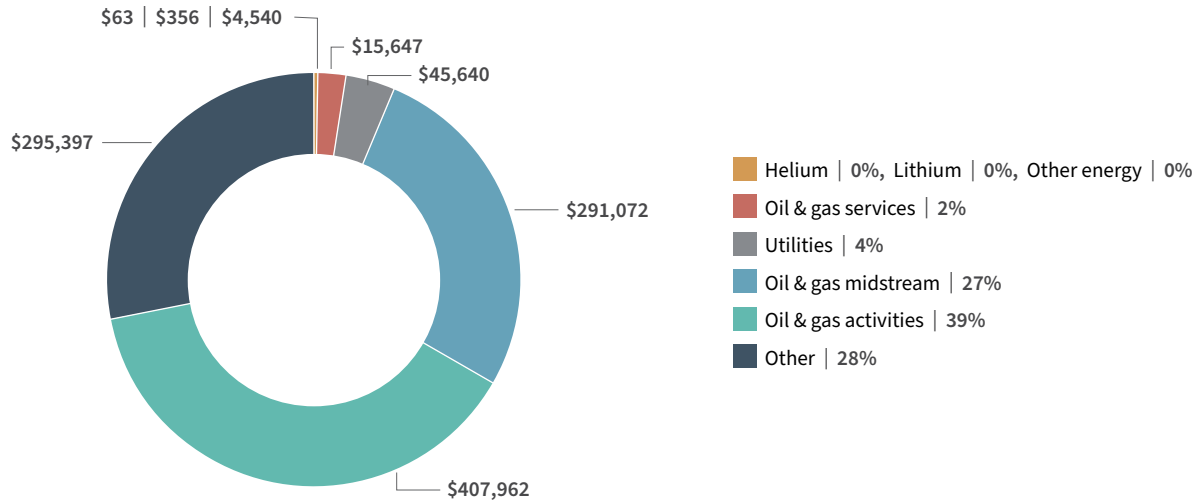


Figure 52 illustrates the market capitalizations of the energy-related sub-industries for 2021 to the end of September 2025.

**Figure 52: Market capitalization of energy-related AB RIs, by sub-industry**

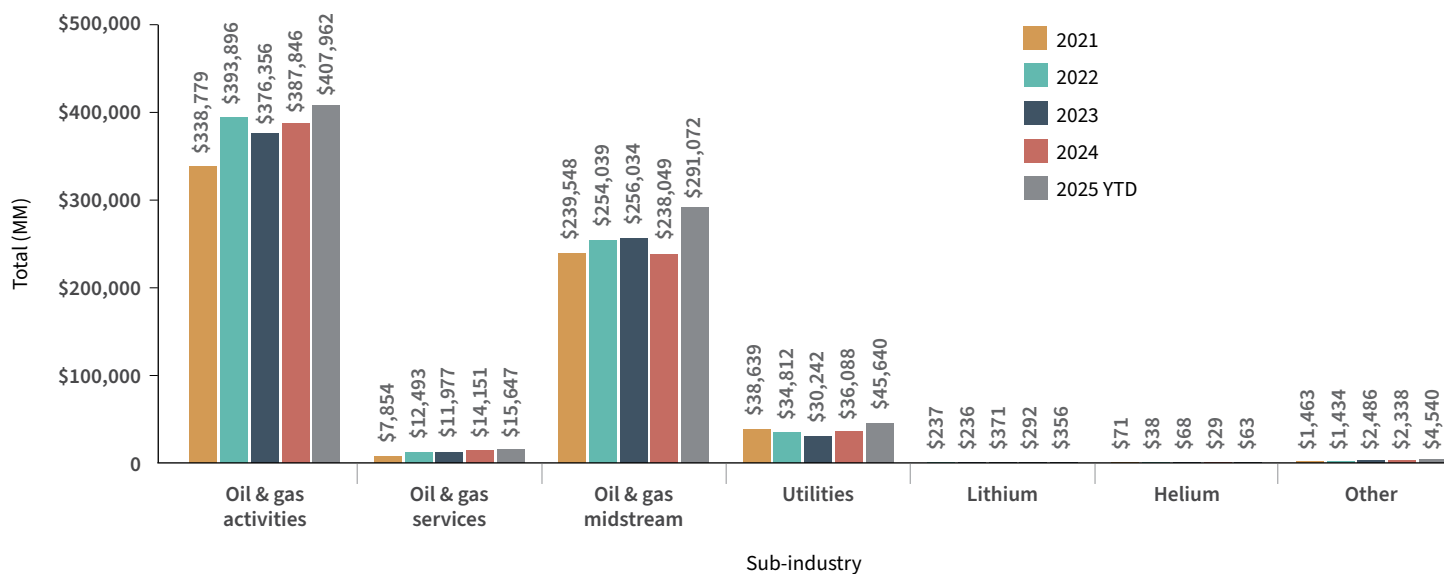


Figure 53 illustrates the average market capitalization of RIs within each of the energy-related sub-industries presented in Figure 52.

**Figure 53: Average market capitalization of energy-related AB RIs, by sub-industry**

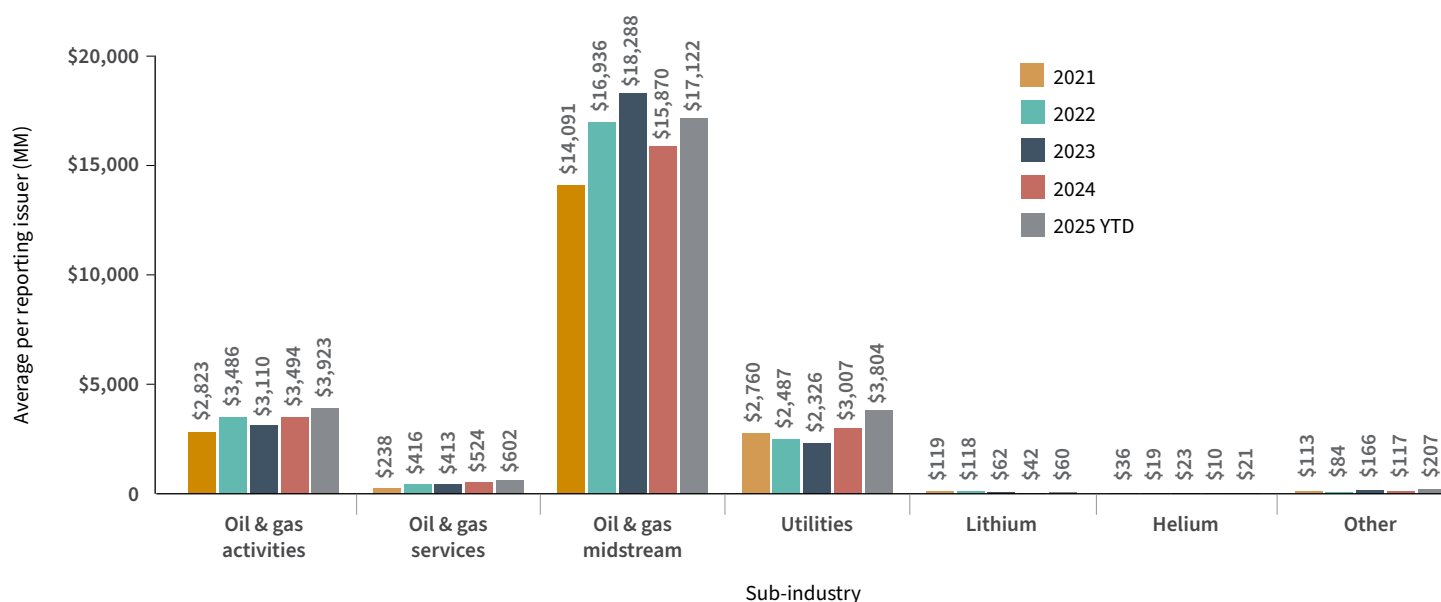
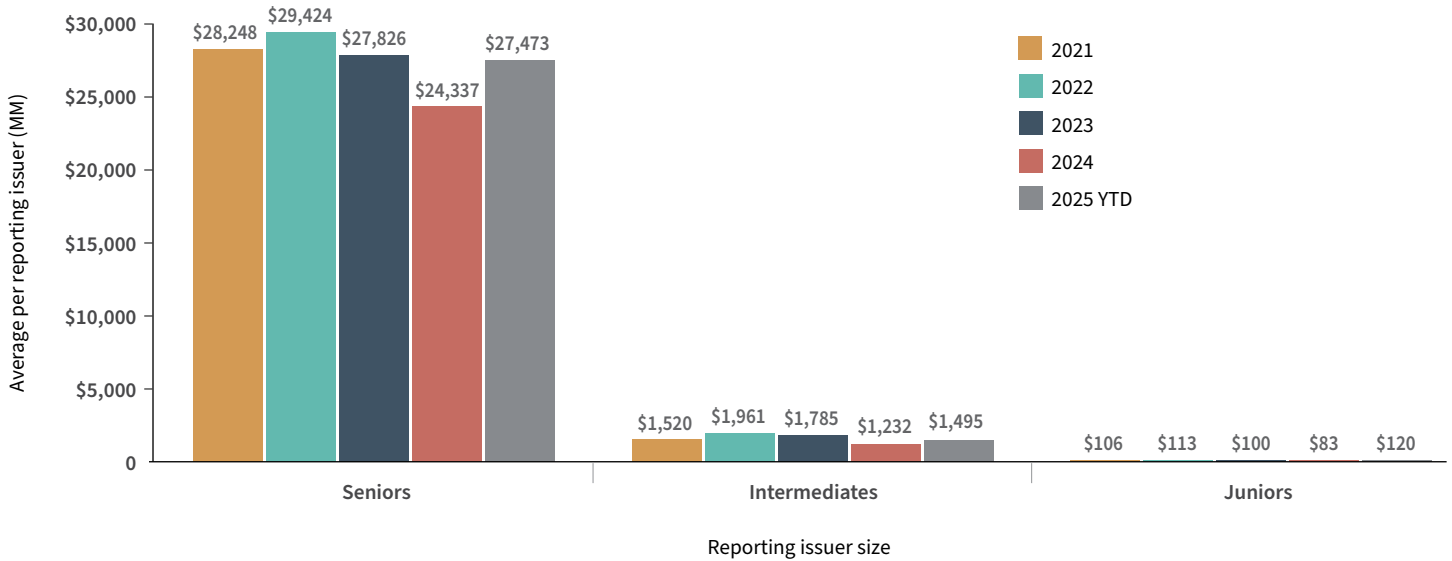




Figure 54 shows the average market capitalization of the RIs engaged in oil and gas activities presented in Figure 53, by production group.

**Figure 54: Average market capitalization of AB RIs engaged in oil and gas activities, by production group**



## FINANCING ACTIVITIES

Figure 55 shows the amount of capital raised through prospectus offerings by RIs engaged in oil and gas activities for which the ASC was the principal regulator, for 2016 to the end of September 2025, along with the number of these offerings. The offerings include various types of equity and debt securities, such as common shares, units, debentures, convertible debentures, rights, subscription receipts, bonds and notes. Figure 55 accounts for prospectuses filed in Alberta, while the amount includes capital raised in Alberta and Canadian jurisdictions outside Alberta, as applicable. The 2025 YTD activity consists of five offerings by five different RIs.

**Figure 55: Capital raised through prospectus offerings and the number of such offerings, by AB RIs engaged in oil and gas activities**

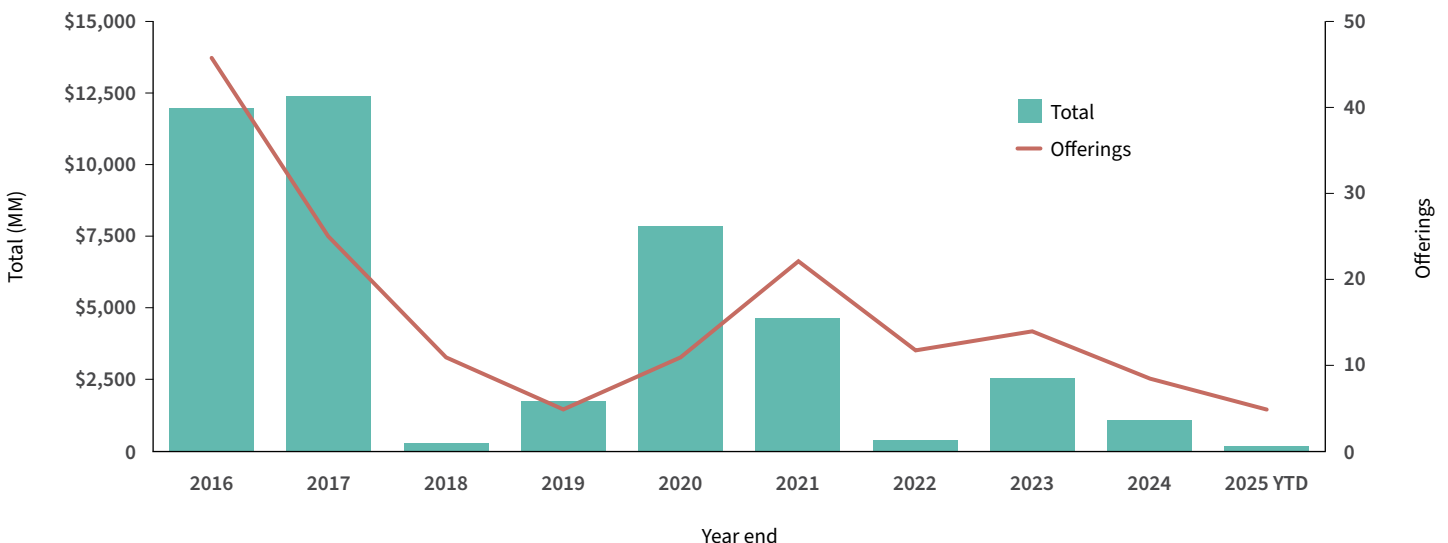


Figure 56 attributes the amounts shown in Figure 55 to production group. Three of the five 2025 YTD offerings is attributed to intermediates and the other two attributed to junior RIs.

**Figure 56: Capital raised through prospectus offerings and the number of such offerings, by AB RIs engaged in oil and gas activities, by production group**

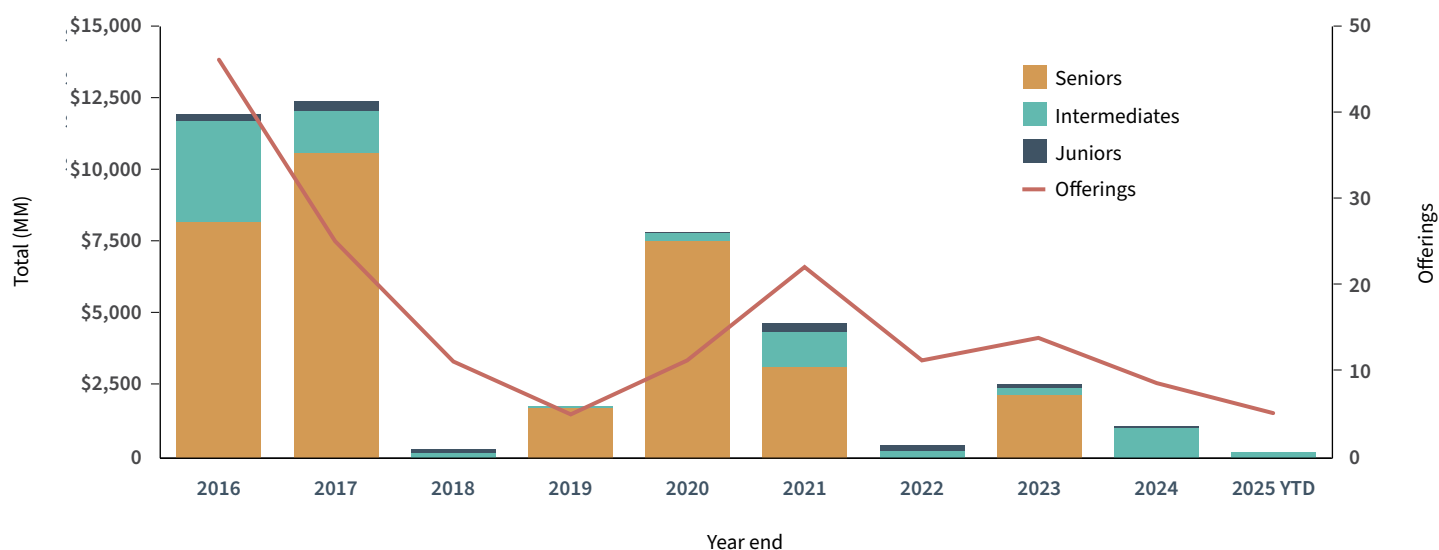


Figure 57 attributes the amounts shown in Figure 56 to securities category, be it equity, debt or both. All of the offerings for the period from October 1, 2024 to the end of September 2025 were for equity.

**Figure 57: Capital raised through prospectus offerings and the number of such offerings, by AB RIs engaged in oil and gas activities, by securities category**

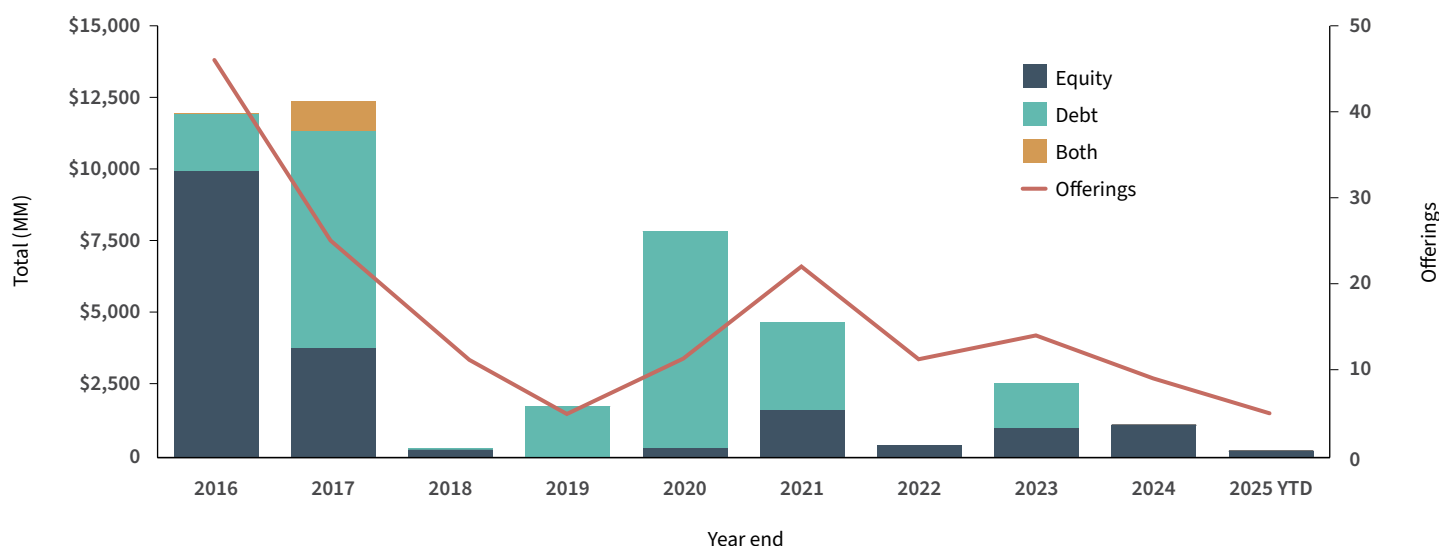
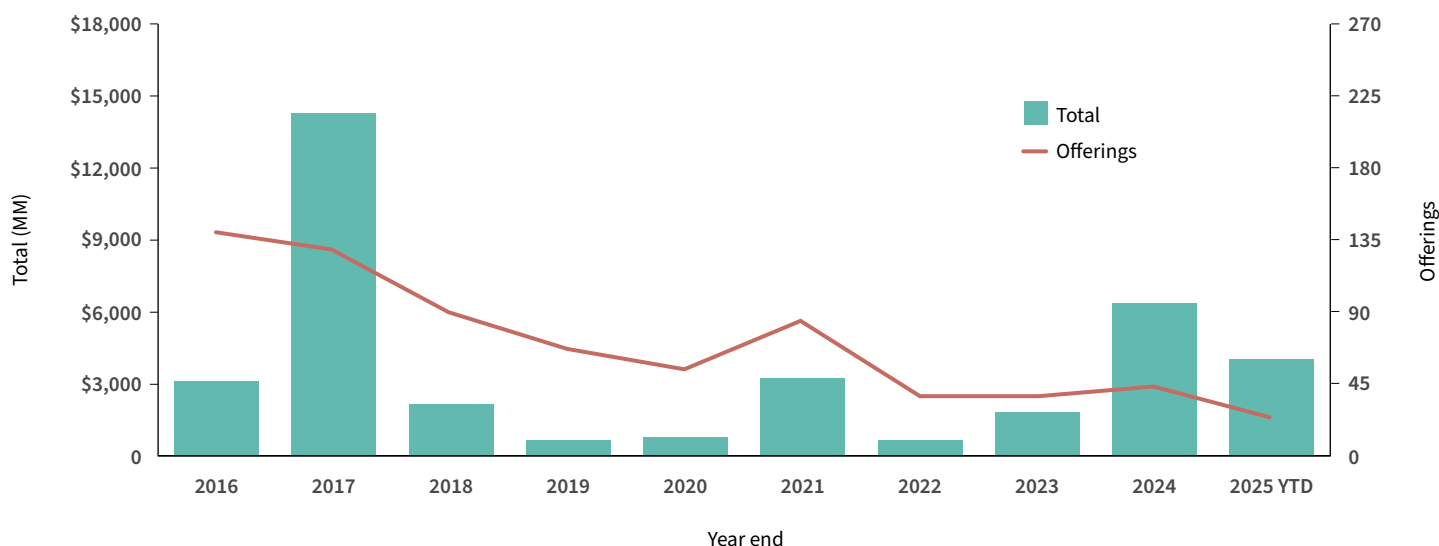


Figure 58 shows the amount of capital raised under exemptions from the prospectus requirement (capital not raised via prospectus) by RIs engaged in oil and gas activities for which the ASC was the principal regulator, for 2016 to the end of September 2025, and the number of these offerings. The offerings include various types of equity and debt securities. The amounts include

capital raised in Alberta and jurisdictions outside Alberta, as applicable and as reported. The 2025 YTD activity consists of 25 offerings by 20 different RIs.

**Figure 58: Capital raised under prospectus exemptions and the number of such offerings, by AB RIs engaged in oil and gas activities**



There are a number of prospectus exemptions available, most of which are set out in National Instrument 45-106 *Prospectus Exemptions*. Both RIs and non-RIs rely on prospectus exemptions to raise capital. Most prospectus exemptions used for capital raising purposes are required to be reported to applicable securities regulators using Form 45-106F1 *Report of Exempt Distribution*.

Figure 59 attributes the amounts raised from Figure 58 to production group. The 2025 YTD activity includes 25 offerings, attributed to five seniors, six intermediates and 14 junior RIs. Most of the capital raised is attributed to the senior RIs.

**Figure 59: Capital raised in the exempt market and the number of such offerings, by AB RIs engaged in oil and gas activities, by production group**

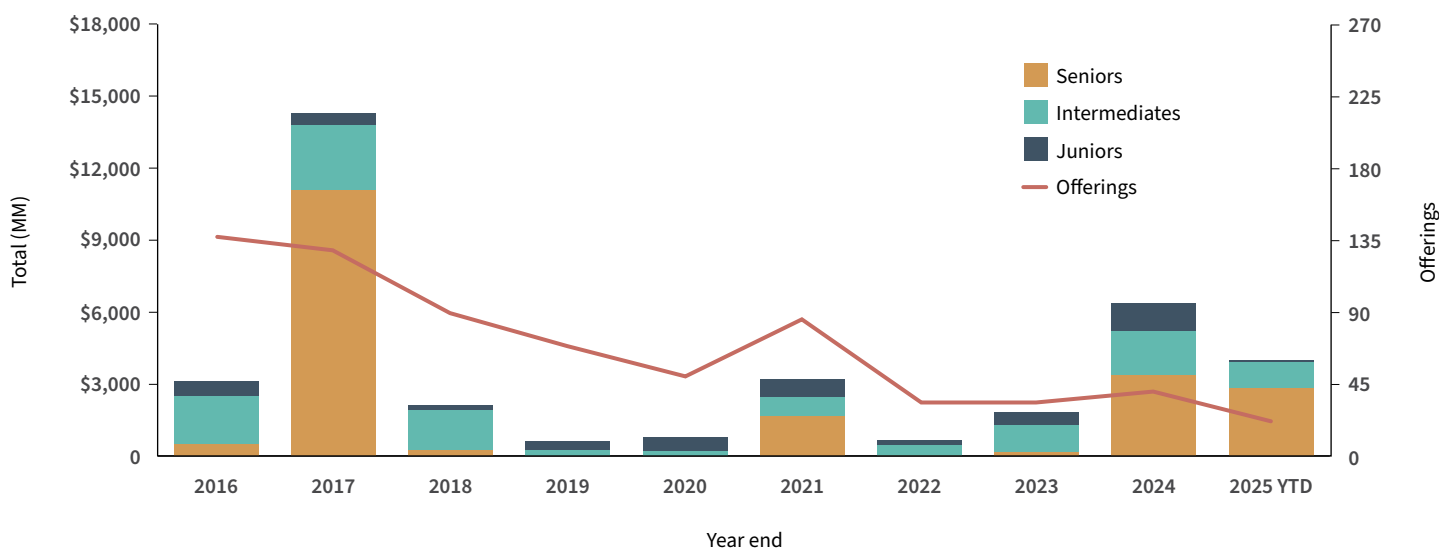


Figure 60 includes information presented in Figure 56 and Figure 59, for comparison. To the end of September 2025, the amount raised and the number of offerings YTD is higher in the exempt market.

**Figure 60: Capital raised through prospectus offerings and under prospectus exemptions, and the number of such offerings from each, by AB RIs engaged in oil and gas activities**

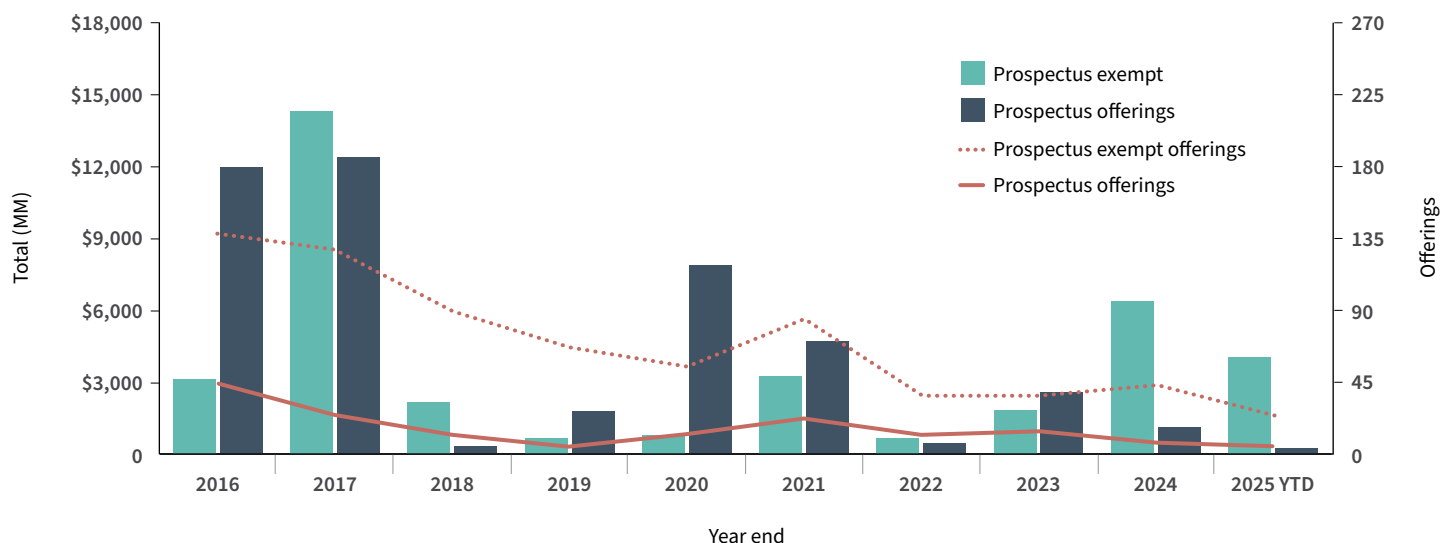


Figure 61 illustrates the amount of capital raised in Alberta by Alberta-based oil and gas issuers that are not RIs, for 2016 to the end of September 2025, and the number of these offerings. It represents capital raised under exemption from the prospectus requirement (capital not raised via prospectus), is based on information reported to the ASC and is incomplete, as some offerings are not required to be reported (e.g. issuers relying on the private issuer prospectus exemption). The amount raised includes capital raised in Alberta and jurisdictions outside Alberta, as applicable and as reported. The 2025 YTD activity consists of 12 offerings by nine different issuers.

**Figure 61: Capital raised under prospectus exemption and the number of such offerings, by oil and gas issuers based in Alberta that are not RIs**

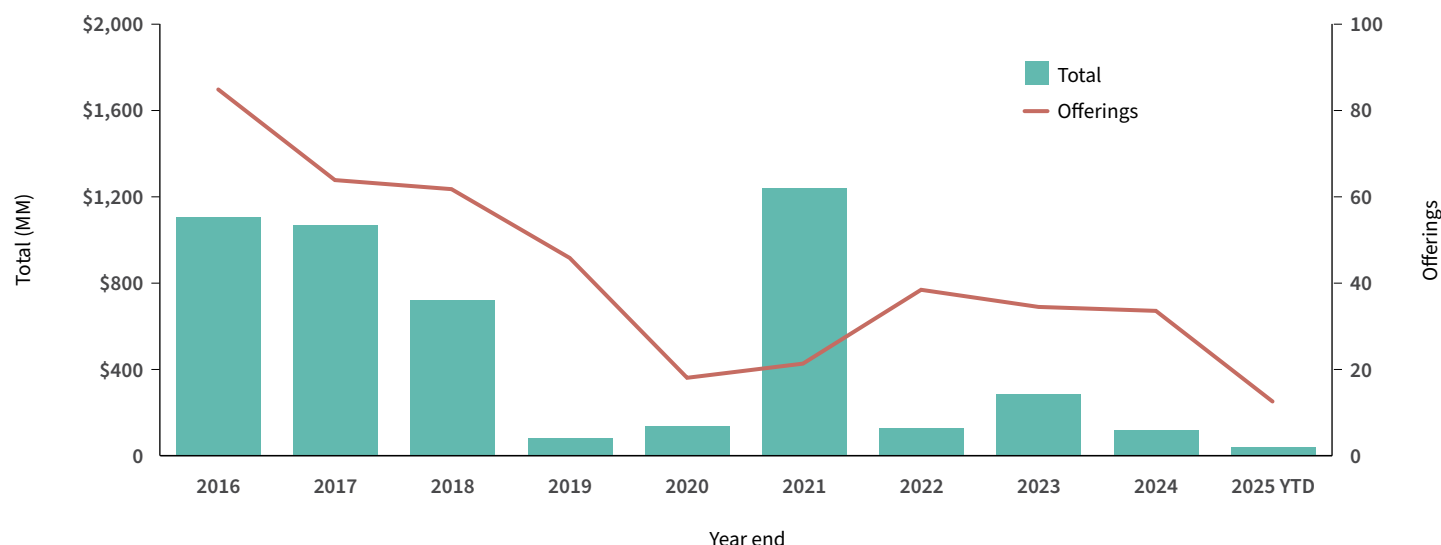


Figure 62 shows the amount of capital raised through prospectus offerings by RIs involved in oil and gas midstream and oil and gas services for which the ASC was the principal regulator, for 2016 to the end of September 2025, and the number of these offerings. The offerings include various types of equity and debt securities, such as common shares, units, debentures, convertible debentures, rights, subscription receipts, bonds and notes. As long as the prospectus was filed in Alberta, the offering is included in Figure 62. The amount raised includes capital raised in Alberta and jurisdictions outside Alberta, as applicable. The 2025 YTD activity consists of 12 offerings by six different RIs involved in oil and gas midstream and one offering by an RI involved in oil and gas services.

**Figure 62: Capital raised through prospectus offerings and the number of such offerings, by AB RIs involved in oil and gas midstream and oil and gas services**

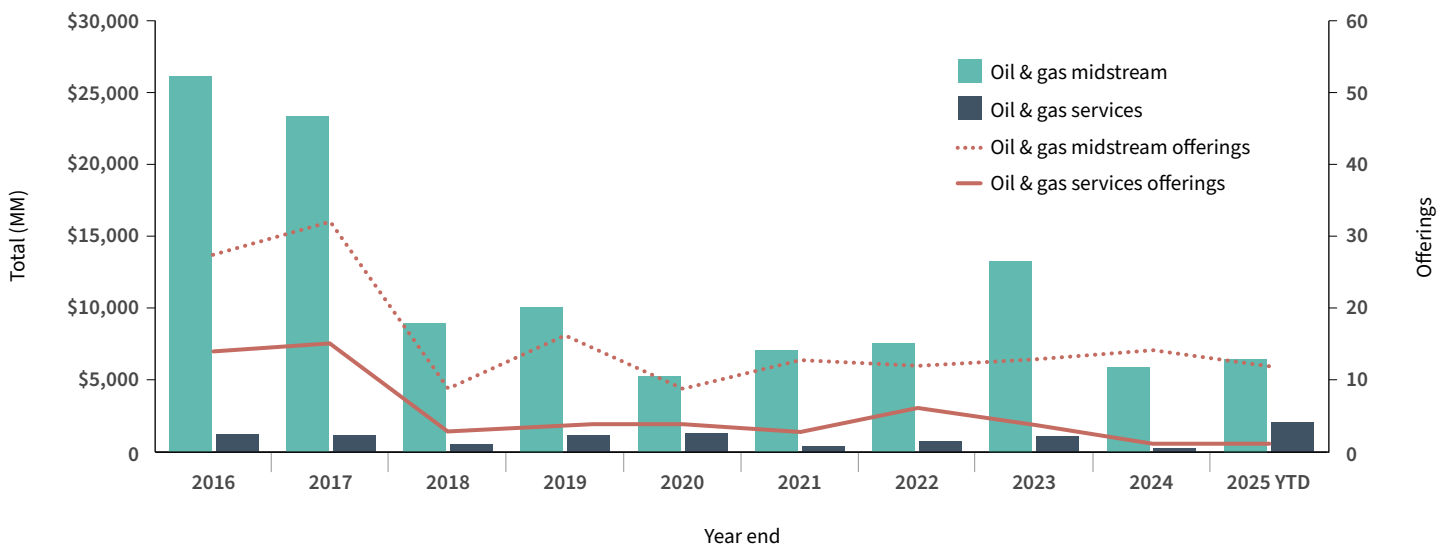


Figure 63 attributes the amounts raised in Figure 62 to securities category, be it equity, debt or both.

**Figure 63: Capital raised through prospectus offerings by AB RIs involved in oil and gas midstream and oil and gas services, by securities category**

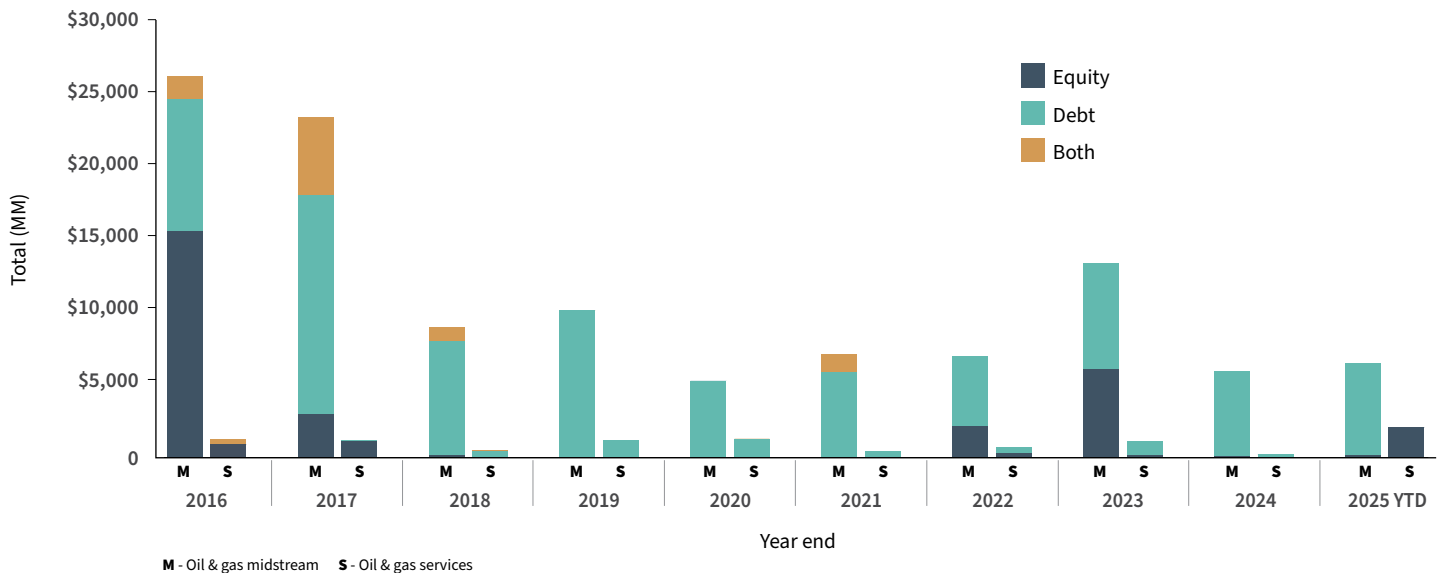


Figure 64 includes information presented in Figure 55 and Figure 62, for comparison.

**Figure 64: Capital raised through prospectus offerings and the number of such offerings, by AB RIs engaged in oil and gas activities and those involved in oil and gas midstream and oil and gas services**

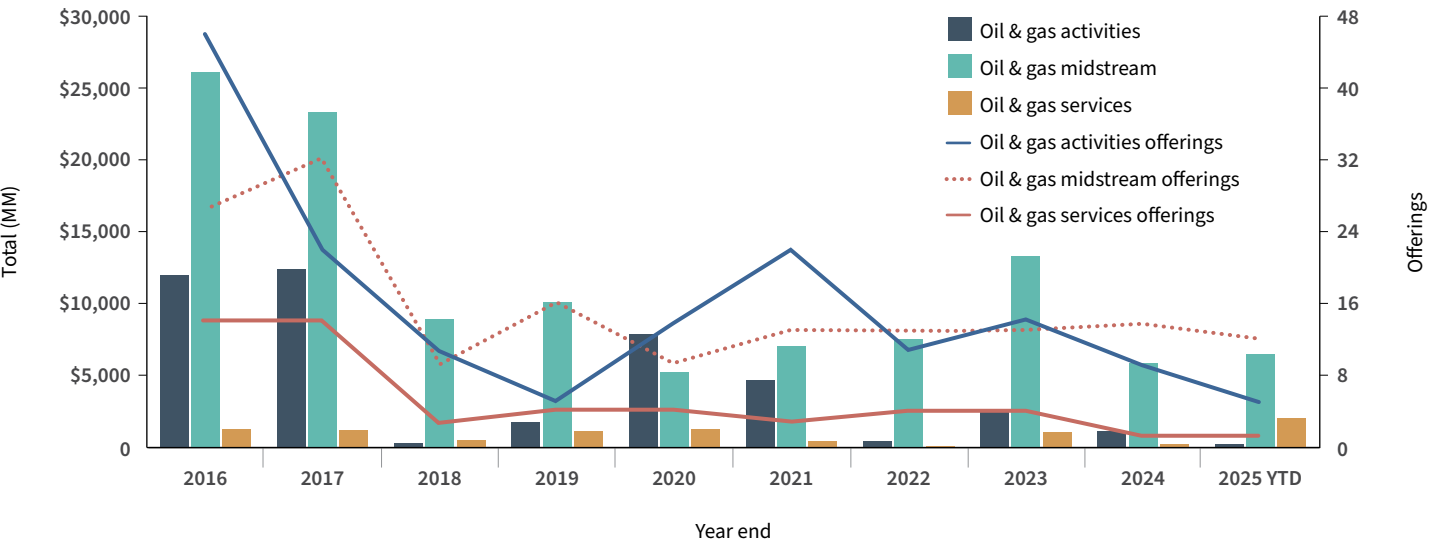


Figure 65 includes information presented in Figure 57 and Figure 63, for comparison.

**Figure 65: Capital raised through prospectus offerings by AB RIs engaged in oil and gas activities and those involved in oil and gas midstream and oil and gas services, by securities category**

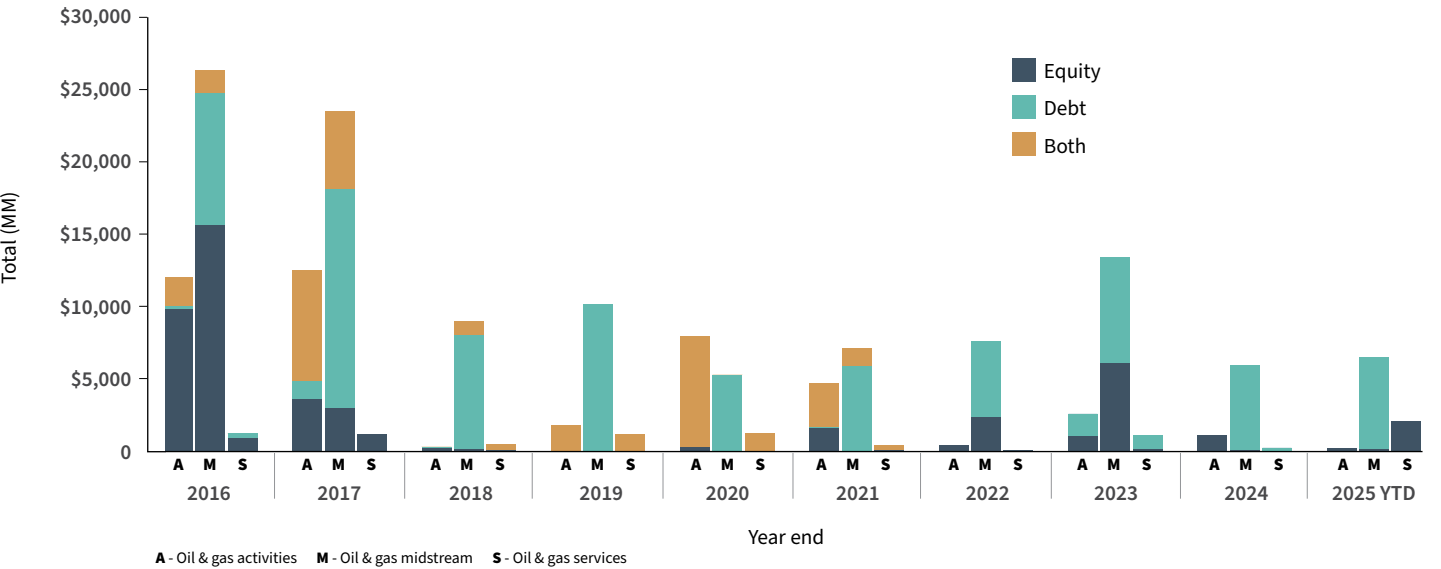


Figure 66 shows the amount of capital raised through prospectus offerings by RIs involved in utilities, lithium, helium and other energy-related sub-industries for which the ASC was the principal regulator, for 2016 to the end of September 2025, and the number of these offerings. The offerings include various types of equity and debt securities, such as common shares, units, debentures, convertible debentures, rights, subscription receipts, bonds and notes. As long as the prospectus was filed in Alberta, the offering is included in Figure 66. The amount raised includes capital raised in Alberta and Canadian jurisdictions outside Alberta, as applicable. The 2025 YTD activity consists of two offerings by two different RIs involved in utilities.

**Figure 66: Capital raised through prospectus offerings and the number of such offerings, by AB RIs involved in utilities, lithium, helium and other energy-related sub-industries**

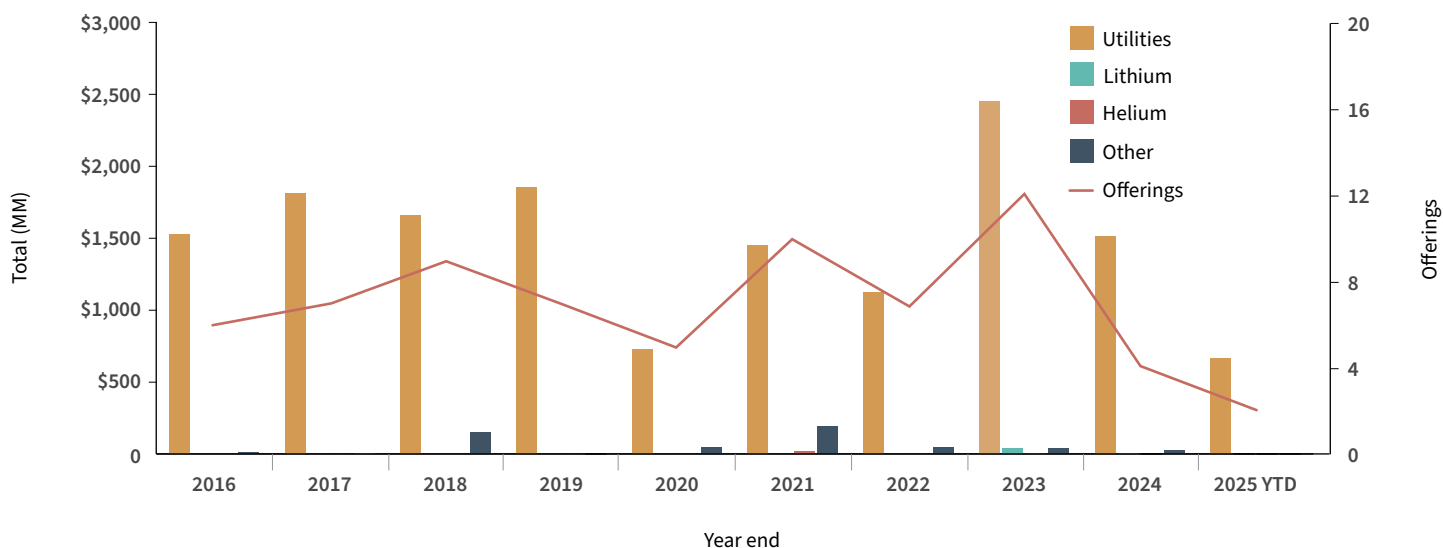


Figure 67 attributes the amounts raised in Figure 66 to securities category, be it equity, debt or both.

**Figure 67: Capital raised through prospectus offerings by AB RIs involved in utilities, lithium, helium and other energy-related sub-industries, by securities category**

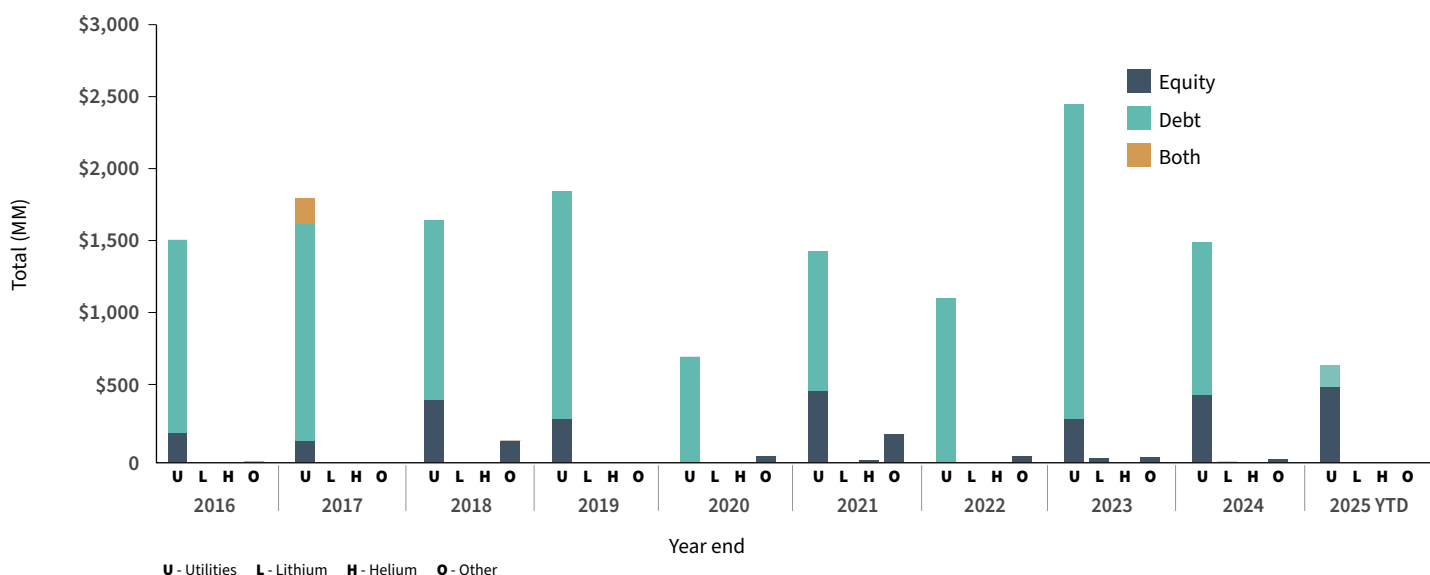




Figure 68 lists all sustainable financings by energy-related RIs for which the ASC was the principal regulator, for 2022 to the end of September 2025. These are also referred to as “transition” and “green” financings. There were four sustainability-linked note financings and a green bond financing, with all being prospectus offerings. All are accounted for in previous figures in this section. No sustainable financings have occurred YTD in 2025.

Sustainability-linked bonds and notes are securities for which the proceeds can be used for various purposes. They are linked to improved performance related to certain sustainability criteria or key performance indicators, such as the RI’s GHG emissions, water management, health and safety or diversity of its directors. These bonds and notes typically specify varied borrowing costs associated with attaining or failing to attain the specified targets (decreased or increased coupon rate, respectively).

Green bonds are similar to sustainability-linked bonds and notes, but their proceeds must be used for a specific environmental improvement project(s), such as the RI’s reduced GHG emissions, water management, etc.

**Figure 68: Sustainable financings by energy-related AB RIs**

RI TYPE	AMOUNT (MM)	SECURITIES TYPE	DATE CLOSED	DATE DUE	COUPON
Oil & gas midstream	\$400	Sustainability linked notes	Q2 2023	Q2 2033	5.36%
Oil & gas midstream	\$400	Green bond	Q4 2022	Q4 2049	7.75%
Oil & gas midstream	\$900	Sustainability linked notes	Q4 2022	Q4 2032	6.10%
Oil & gas activities	\$100	Sustainability linked notes	Q3 2022	Q4 2027	7.25%
Oil & gas activities	\$200	Sustainability linked notes	Q1 2022	Q2 2027	7.25%

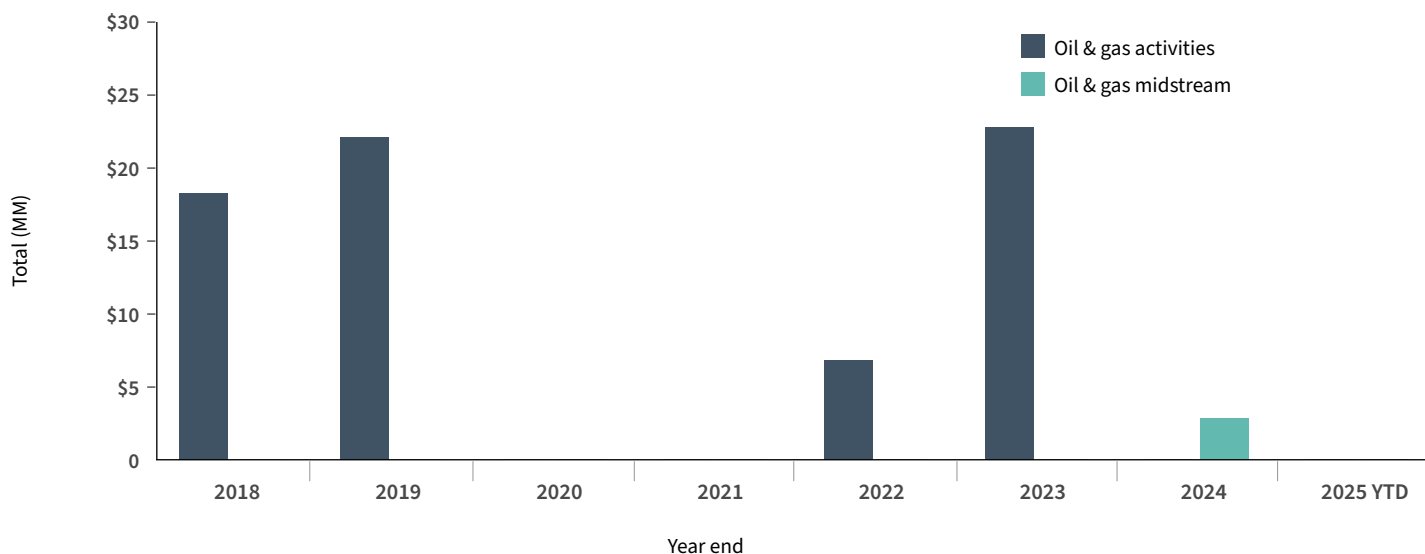
Figure 69 lists sustainable credit facilities initiated by RIs engaged in oil and gas activities and RIs involved in oil and gas midstream for which the ASC was the principal regulator, for 2022 to the end of September 2025. These account for all of the sustainable credit facilities identified by staff for energy-related RIs. No new sustainable credit facilities have been identified by staff since 2022.

Sustainable credit facilities are intended to incentivize RIs to improve performance related to certain sustainability criteria or key performance indicators, such as an RI’s GHG emissions, water management, health and safety, or diversity of its directors. These loans typically specify varied borrowing costs associated with attaining or failing to attain the specified targets (decreased or increased coupon rate, respectively). Note that many of the RIs that have sustainable credit facilities often have other credit facilities in place that do not have sustainability criteria attributed to them.

**Figure 69: Sustainable credit facilities for energy-related AB RIs**

RI TYPE	CURRENT CREDIT FACILITY AMOUNT (MM)	DATE DUE
Oil & gas activities	\$700	Q3 2023
Oil & gas midstream	\$1,000	Q3 2022
Oil & gas midstream	\$3,000	Q3 2022
Oil & gas activities	\$450	Q2 2022
Oil & gas activities	\$2,000	Q1 2022
Oil & gas activities	\$700	Q4 2021
Oil & gas activities	USD \$1,265	Q2 2021
Oil & gas midstream	\$750	Q2 2021
Oil & gas midstream	\$1,000	Q1 2021

Figure 70 shows clean energy-related project funding provided by the Government of Canada (through Natural Resources Canada) to RIs engaged in oil and gas activities and RIs involved in oil and gas midstream for which the ASC was the principal regulator.<sup>24</sup> For 2018 to the end of September 2025, there have been 16 funding events to 10 different RIs, totalling \$69 million. In 2025 YTD, there have been no funding events for RIs engaged in oil and gas activities and RIs involved in oil and gas midstream for which the ASC was the principal regulator

**Figure 70: Government of Canada clean energy-related funding provided to AB RIs engaged in oil and gas activities**

The Government of Canada and various provincial governments are sources of capital for RIs with projects that utilize emerging, unproven technologies that may not otherwise meet funding criteria. Staff intend to continue to monitor this type of funding and provide additional information in future reports.

<sup>24</sup> [www.natural-resources.ca/science-and-data/funding-partnerships/opportunities/current-investments/21146](https://www.natural-resources.ca/science-and-data/funding-partnerships/opportunities/current-investments/21146)

## 7. Energy Advisory Committee

The Energy Advisory Committee (**EAC**) provides the ASC with information and advice on matters related to the energy industry and securities law and regulatory policy relevant to it, such as environmental-related disclosure. It is comprised of volunteer members (**Members**) with experience in these areas that are appointed to three-year terms. Meetings are normally held three times per year and are attended by Members and select ASC staff and Executive Management.

The EAC's mandate is to:

- Provide a formal channel of communication between the ASC and outside experts.
- Review and provide feedback on issues and current developments regarding the:
  - Evaluation and disclosure of oil and gas resources and related information.
  - Disclosure of other energy-related matters.
  - Disclosure of information concerning environmental-related matters pertaining to energy.
- Provide input and recommendations on current and proposed Alberta securities laws and regulatory policies relevant to energy and the environment.
- Provide informal advice and opinions on issues, trends and current developments concerning energy and the environment.

The ASC thanks the Members for their contributions.

### CURRENT MEMBERS:

**Robyn Bourgeois**

Birchcliff Energy Ltd.

**Steven J. Golko**

Sproule

**Derek Kreba**

Karve Energy Inc.

**Nicole Labrecque**

Cenovus Energy Inc.

**Dr. John Lacey**

Enjay Holdings Alberta Ltd.

**Chad Lemke**

GLJ Ltd.

**Ian McDonald**

CNOOC International

**Lesley Mitchell**

Deloitte LLP

**Larry Petropoulos**

BMO Capital Markets

**Mike Verney**

McDaniel & Associates Consultants Ltd.

**John Zahary**

Altex Energy Ltd.

## 8. Contact information

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**Alberta Securities Commission**

Suite 600, 250 – 5th St. SW  
Calgary, Alberta, T2P 0R4

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## 9. Glossary

The following terms and their respective definitions concern oil and gas activities, as defined in NI 51-101 *Standards of Disclosure For Oil and Gas Activities*. They are sourced from section 1.1 of NI 51-101 and CSA Staff Notice 51-324 *Revised Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities*.

**“anticipated results”** means information that may, in the opinion of a reasonable person, indicate the potential value or quantities of resources in respect of the reporting issuer’s resources or a portion of its resources and includes:

- (a) estimates of volume;
- (b) estimates of value;
- (c) areal extent;
- (d) pay thickness;
- (e) flow rates; or
- (f) hydrocarbon content.

**“audit”** in relation to reserves data, the process whereby an independent qualified reserves auditor carries out procedures designed to allow the independent qualified reserves auditor to provide reasonable assurance, in the form of an opinion that the reporting issuer’s reserves data (or specific parts thereof) have, in all material respects, been determined and presented in accordance with the COGE Handbook and are, therefore, free of material misstatement.

Because of

- (a) the nature of the subject matter (estimates of future results with many uncertainties);
- (b) the fact that the independent qualified reserves auditor assesses the qualifications and experience of the reporting issuer’s staff, assesses the reporting issuer’s systems, procedures and controls and relies on the competence of the reporting issuer’s staff and the appropriateness of the reporting issuer’s systems, procedures and controls; and
- (c) the fact that tests and samples (involving examination of underlying documentation supporting the determination of the reserves and future net revenue) as opposed to complete evaluations, are involved; the level of assurance is designed to be high, though not absolute.

The level of assurance cannot be described with numeric precision. It will usually be less than, but reasonably close to, that of an independent evaluation and considerably higher than that of a review.

**“COGE Handbook”** means the “Canadian Oil and Gas Evaluation Handbook” maintained by the Society of Petroleum Evaluation Engineers (Calgary Chapter), as amended from time to time.

**“commercial”** when a project is commercial this implies that the essential social, environmental, and economic conditions are met, including political, legal, regulatory and contractual conditions.

Considerations with regard to determining commerciality include:

- economic viability of the related development project;
- a reasonable expectation that there will be a market for the expected sales quantities of production required to justify development;
- evidence that the necessary production and transportation facilities are available or can be made available;
- evidence that legal, contractual, environmental, governmental, and other social and economic concerns will allow for the actual implementation of the recovery project being evaluated;
- a reasonable expectation that all required internal and external approvals will be forthcoming. Evidence of this may include items such as signed contracts, budget approvals, and approvals for expenditures, etc.
- evidence to support a reasonable timetable for development. A reasonable time frame for the initiation of development depends on the specific circumstances and varies according to the scope of the project. Although five years is recommended as a maximum time frame for classification of a project as commercial, a longer time frame could be applied, where, for example, development of economic projects are deferred at the option of the producer for, among other things, market-related reasons or to meet contractual or strategic objectives.

**“contingent resources data”** means:

- (a) an estimate of the volume of contingent resources; and
- (b) the risked net present value of future net revenue of contingent resources.

**“effective date”** in respect of information, means the date as at which, or for the period ended on which, the information is provided.

**“evaluation”** means, in relation to reserves data or resources other than reserves, the process whereby an economic analysis is made of a property to arrive at an estimate of a range of net present values of the estimated future net revenue resulting from the production of the reserves or resources other than reserves associated with the property.

**“first point of sale”** means the first point after initial production at which there is a transfer of ownership of a product type.

**“forecast prices and costs”** means future prices and costs that are:

- (a) generally accepted as being a reasonable outlook of the future;
- (b) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the reporting issuer is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in subparagraph (a).

**“future net revenue”** means a forecast of revenue, estimated using forecast prices and costs or constant prices and costs, arising from the anticipated development and production of resources, net of the associated royalties, operating costs, development costs, and abandonment and reclamation costs.

**“gas”** includes natural gas, conventional natural gas, coal bed methane, gas hydrates, shale gas, and synthetic gas.

**“gross”**

- (a) In relation to a reporting issuer’s interest in production or reserves, its “company gross reserves,” which are the reporting issuer’s working interest (operating or non-operating) share before deduction of royalties and without including any royalty interests of the reporting issuer.

- (b) In relation to wells, the total number of wells in which a reporting issuer has an interest.

- (c) In relation to properties, the total area of properties in which a reporting issuer has an interest.

**“independent”** in respect of the relationship between a reporting issuer and a person or company, means a relationship between the reporting issuer and that person or company in which there is no circumstance that could, in the opinion of a reasonable person aware of all relevant facts, interfere with that person’s or company’s exercise of judgement regarding the preparation of information which is used by the reporting issuer.

**“net”**

- (a) In relation to a reporting issuer’s interest in production or reserves, the reporting issuer’s working interest (operating or non-operating) share after deduction of royalty obligations, plus the reporting issuer’s royalty interests in production or reserves.
- (b) In relation to a reporting issuer’s interest in wells, the number of wells obtained by aggregating the reporting issuer’s working interest in each of its gross wells.
- (c) In relation to a reporting issuer’s interest in a property, the total area in which the reporting issuer has an interest multiplied by the working interest owned by the reporting issuer.

**“oil”** includes crude oil, bitumen, tight oil and synthetic crude oil.

**“oil and gas activities”** includes the following:

- (a) searching for a product type in its natural location;
- (b) acquiring property rights or a property for the purpose of exploring for or removing product types from their natural locations;
- (c) any activity necessary to remove product types from their natural locations, including construction, drilling, mining and production, and the acquisition, construction, installation and maintenance of field gathering and storage systems including treating, field processing and field storage;
- (d) producing or manufacturing of synthetic crude oil or synthetic gas;

but does not include any of the following:

- (e) any activity that occurs after the first point of sale;
- (f) any activity relating to the extraction of a substance other than a product type and their by-products;
- (g) extracting hydrocarbons as a consequence of the extraction of geothermal steam.

**“preparation date”** in respect of written disclosure, means the most recent date to which information relating to the period ending on the effective date was considered in the preparation of the disclosure.

**“product type”** means any of the following:

- (a) bitumen;
- (b) coal bed methane;
- (c) conventional natural gas;
- (d) gas hydrates;
- (e) heavy crude oil;
- (f) light crude oil and medium crude oil combined;
- (g) natural gas liquids;
- (h) shale gas;
- (i) synthetic crude oil;
- (j) synthetic gas;
- (k) tight oil.

**“property”** includes:

- (a) fee ownership or a lease, concession, agreement, permit, licence or other interest representing the right to extract oil or gas subject to such terms as may be imposed by the conveyance of that interest;
- (b) royalty interests, production payments payable in oil or gas, and other non-operating interests in properties operated by others; and
- (c) an agreement with a foreign government or authority under which a reporting issuer participates in the operation of properties or otherwise serves as "producer" of the underlying reserves (in contrast to being an independent purchaser, broker, dealer or importer).

A property does not include supply agreements, or contracts that represent a right to purchase, rather than extract, oil or gas.

**“prospective resources data”** means:

- (a) an estimate of the volume of prospective resources, and
- (b) the risked net present value of future net revenue of prospective resources.

**“qualified reserves auditor”** means an individual who:

- (a) in respect of particular reserves data, resources or related information, possesses professional qualifications and experience appropriate for the estimation, evaluation, review and audit of the reserves data, resources and related information; and
- (b) is a member in good standing of a professional organization.

**“qualified reserves evaluator”** means an individual who:

- (a) in respect of particular reserves data, resources or related information, possesses professional qualifications and experience appropriate for the estimation, evaluation and review of the reserves data, resources and related information; and
- (b) is a member in good standing of a professional organization.

**“qualified reserves evaluator or auditor”** means a qualified reserves auditor or a qualified reserves evaluator.

**“reserves”** means proved, probable or possible reserves.

**“reserves data”** means an estimate of proved reserves and probable reserves and related future net revenue, estimated using forecast prices and cost.







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