

Updated December 2023

Alberta's Tiers at a Glance

Years in operation	<ul style="list-style-type: none"> 2007: Specified Gas Emitters Regulation (SGER) begins 2018: Carbon Competitiveness Incentive Regulation (CCIR) replaces SGER 2020: Technology Innovation and Emissions Reduction (TIER) regulation replaces CCIR
Overall cap & trajectory	<ul style="list-style-type: none"> TIER regulation applies to facilities that emitted 100,000 tonnes of CO₂ equivalent (tCO₂e) or more per year in 2016, or a subsequent year. Emission reduction obligations are determined using either a: <ul style="list-style-type: none"> Facility-specific benchmark; or High-performance benchmark. In most cases, a regulated facility is subject to the less stringent of the two. Beginning in 2023, the stringency of facility-specific benchmarks increases from 1% to 2% annually; the high-performance benchmark is now also subject to an annual tightening rate of 2%. Additionally, oil sands mining, upgrading and in-situ facilities tightening rates will increase 4% annually in 2029 and 2030.
Target(s)	<ul style="list-style-type: none"> Limit oil sands emissions to a maximum of 100 million tCO₂e annually Phase out coal-fired electricity generation by the end of 2030; this is expected to be completed through early action by 2024 Reduce methane emissions 45% from 2014 levels by 2025
Regulated emissions to date	Total regulated emissions in 2022 were 160 MtCO ₂ e, requiring compliance submissions totalling 20.1 MtCO ₂ e.
Sectors covered	<ul style="list-style-type: none"> Ammonia Ammonium nitrate Bituminous coal Cement Electricity Ethylene glycol Hardwood kraft pulp High-value chemicals Hydrogen Industrial heat Natural gas processing Oil sands in situ bitumen Oil sands mining bitumen Softwood kraft pulp
GHGs covered	<ul style="list-style-type: none"> CO₂ Methane



	<ul style="list-style-type: none"> • N2O • HFCs • SF6 • PFCs • NF3
# of covered facilities	Approximately 460
Allocation method	Allocation is based on the facility-specific benchmark or high-performance benchmark approach
Trading rules	<p>Benchmarks can be met by:</p> <ul style="list-style-type: none"> • Reducing facility emissions intensity; • Retiring Emission Performance Credits (EPCs), which can be traded; • Retiring Alberta-based emissions offsets, which can be traded; • Retiring Sequestration Credits, which can be traded; and/or • Paying into the TIER Fund at the prevailing TIER Fund price. <ul style="list-style-type: none"> ○ 2023 TIER Fund Price: C\$65/tCO₂e ○ The TIER Fund Price is aligned with federal benchmark requirements under GGPPA through 2030, which will increase price by C\$15 annually.
Use of offsets and linking	<ul style="list-style-type: none"> • In 2023, no more than 60% of a facility's compliance obligation can be met with EPCs, offsets, or Sequestration Credits (see Table 1 for schedule). • EPCs produced from 2017-2022 have an eight-year expiry following the year the credit was issued. EPCs from 2023 and onward have a five-year expiry. • Emission offsets from 2017-2022 have a nine-year expiry from the year in which the reduction was made. Offsets from 2023 and onwards have a six-year expiry. • Sequestration credits have a six-year expiry starting from the year in which the reduction was made. • Despite the nuances in the language above, EPCs, offsets and Sequestration Credits all have equivalent expiration timeframes based on vintage year of the instrument (see Table 2).
Other features	<p>Sequestration Credits:</p> <ul style="list-style-type: none"> • Emission offsets created using the CCS or EOR quantification protocols may be converted by the offset project developer to sequestration credits in 2023+. • Similar to EPCs and offsets, sequestration credits can be traded, banked, or used to meet a facility's compliance obligation. • Sequestration credits are eligible for stacking with the federal Clean Fuels Regulation (CFR), meaning that the same activity can generate credits both in TIER and the CFR.

Capture Recognition Tonnes (CRTs):

- A facility that initiated the capture of CO₂ and holds the Sequestration Credit generated from the associated emission offset may apply to convert the sequestration credit into a CRT.
- CRTs may only be used for the year in which the CO₂ was sequestered, and they cannot be traded.
- CRTs are deducted from the calculation of a facility's total regulated emissions and are therefore not subject to the credit use limit in TIER.

Penalties for non-compliance A fine of no more than C\$400/tCO₂e for instances where the net emissions for the regulated facility exceeds its allowable emissions.

Use of revenues

- Investing in emission reductions technology;
- Reducing Alberta deficits; and/or
- Supporting the province's energy war room, the "Canadian Energy Centre".

Table 1. EPCs, Offsets and Sequestration Credits Usage Limit

Year(s)	Maximum Percentage of Total Compliance Obligation
2023 or earlier	60%
2024	70%
2025	80%
2026 or a subsequent year	90%

Table 2. EPCs, Offsets and Sequestration Credits (2023+) Expiry

Vintage Year	Last Year of Compliance Eligibility
2017	2025
2018	2026
2019	2027
2020	2028
2021	2029
2022	2030
2023	2028

Major Developments

TIER was launched on 1 January 2020, with a C\$30/tCO₂e compliance fund price. While under the purview of the provincial Alberta government, the TIER programme must maintain minimum baseline standards set by

the federal Output-Based Pricing System (OBPS; see separate Canada federal OBPS brief) to remain as an approved pollution pricing system.



In 2022, a scheduled TIER review took place. The Alberta government solidified in legislation its pricing to match the federal carbon pricing levels out to 2030 (see Table 3) in December 2022, to meet the Federal government's requirements.

Table 3. Alberta TIER Fund Price

	(\$CAD/tCO ₂ e)
2023	\$65
2024	\$80
2025	\$95
2026	\$110
2027	\$125
2028	\$140
2029	\$155
2030	\$170

Changes as an outcome of the TIER review include the programme's tightening rates, credit usage limits, and compliance cost containment rules. From 2020-2022, the stringency, or tightening rate, of facility-specific benchmarks increased 1% annually. Beginning in 2023, the stringency of all facility-specific benchmarks will increase by 2% annually. Oil sand mining and upgrading had a one-time stringency calibration adjustment moving from 2020 to 2021. For oil sands mining, upgrading, and in-situ facilities, the tightening rate will be increased to 4% annually in 2029 and 2030. Starting in 2023, the stringency of high-performance benchmarks will increase by 2% annually. These changes are bullish for demand.

EPCs, offsets, and sequestration credits (collectively "TIER Credits") may be used up to a limit to satisfy a facility's compliance obligation for a single year (see Table 1 above), increasing the demand for TIER Credits as the usage limit goes up over time. In 2023, the expiration timeframe for TIER Credits shortened (see Table 2 above); this incentivises organisations to retire TIER Credits more rapidly than before, to mitigate the risk of long-term banking and lack of retirement that can lead to oversupplied market conditions.

In October 2022, Danielle Smith of the United Conservative Party was elected Premier of Alberta. Smith continues to protect the province's energy industry through opposition to climate related federal regulation. Smith's provincial climate plan currently targets net-zero emissions by 2050 without interim emissions-reduction targets. The plan seeks to increase oil and gas production over the next four years under the assumption that the near-term time horizon for emission reductions will be extended, yet still allow the province to meet its 2050 net-zero target. In this way, the provincial plan is misaligned with the federal plan to achieve interim targets, such as a 42% reduction in emissions in oil and gas by 2030.

The next federal election, on or before 20 October 2025, could have major implications on the Alberta carbon market forward looking. From a policy risk perspective, it will be important to follow how the government decides to enable CCUS build out in Canada. Those projects may have a significant effect on supply and demand balances, though CCUS projects take years to build and require strong price signals so advance notification of these projects will be visible to market participants.

Market Commentary

From a market perspective, trading credits under the TIER programme is intricate and opaque. Alberta compliance-grade offsets, EPCs and sequestration credits are traded through bilateral agreements directly between counterparties and require the establishment of direct relationships or brokered deal matching. Overall credit supply and demand levels will vary based on several factors, but the market's volatility can generally be grouped into one of the categories listed below:

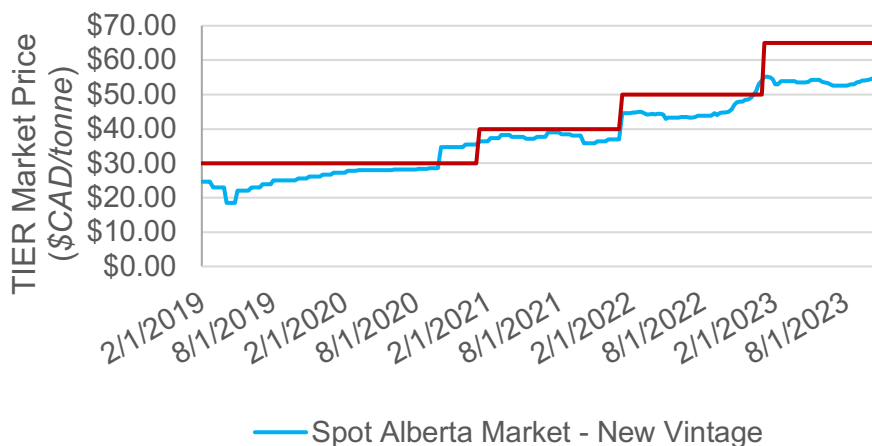
1. market conditions, reflecting the overall supply-demand balance;
2. policy changes; and,
3. commercial positioning.

Policy changes have had, by far, the largest impact on secondary market pricing historically. Any enacted or perceived future policy changes tend to dictate the overall level of secondary market prices. Further to this, political risk is stacked as the provincial government regulates TIER, but is subject to overall steering guidance that is set at the federal level. As can be seen in Figure 1, while



there has been a general pricing trend higher in advance of yearly cap increases, the majority of price movements have come in sync with year-end Ministerial Orders to align TIER pricing with federal levels. Going forward, now that the TIER Fund Price levels are set to 2030, it will remain to be seen when the market will respond (step change).

Figure 1. Historical Indicative Alberta TIER Prices



Source: BMO Radicle Inc., www.radiclebalance.com

Intercontinental Exchange (ICE) plans to launch physically delivered AB Emissions Offsets Futures and AB Emissions Performance Credit Futures by mid-November 2023; this may bring improved transparency to the market.

As has been seen in other compliance carbon markets over the last year, overall volatility remains very nuanced and subject to numerous external market forces. Developments of healthy trading strategies under TIER require a sophisticated understanding of the risks and opportunities involved and an understanding of how the political landscape and market fundamentals interact over time.

Useful Links

[TIER Regulation Fact Sheet](#)

[Alberta Emission Offset System](#)

[Alberta TIER Regulation Homepage](#)

References

[Technology Innovation and Emissions Reduction Regulation](#)

[Alberta Environment and Parks, Compliance Year 2020 LFE/Opt-In Compliance Workshop](#)

[Summary of 2020 Compliance Results](#)

[TIER Carbon Capture Fact Sheet](#)

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