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RADICLE

CARBON MARKET BUSINESS BRIEF

ALBERTA

ALBERTA'S TIER AT A GLANCE

Years in operation	2007: Specified Gas Emitters Regulation (SGER) begins 2014: First phase of SGER concludes 2018: Carbon Competitiveness Incentive Regulation (CCIR) replaces SGER 2020: Technology Innovation and Emissions Reduction (TIER) regulation replaces CCIR

Overall cap & trajectory	• TIER regulation applies to facilities that emit 100,000 tonnes of carbon dioxide equivalent (tCO_2e) or more per year in 2016, or a subsequent year.
	• Emission reduction obligations are determined using either a:
	  • Facility-specific benchmark; or
	  • High-performance benchmark.
	• In most cases, a regulated facility is subject to the less stringent of the two benchmark approaches for that facility.
	• The stringency of facility-specific benchmarks will increase by 1% annually beginning in 2021 until reaching the high-performance benchmark; the high-performance benchmark is not subject to annual tightening.

Target(s)	• Limit oil sands emissions to 100 million tCO_2e • Phase out coal-fired electricity generation by 2030 • Reduce methane emissions by 45% by 2020
Emissions Reduced to date	95.4 million tCO_2e were reduced under SGER from 2007 to 2017
Sectors covered	TIER covers the following products: • 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	The following specified gases are covered under the regulation: • CO_2 • Methane • N_2O • HFCs • SF_6 • PFCs • NF_3
# of covered entities	Approximately 460
Allocation method	Allocation is based on the facility-specific benchmark or high-performance benchmark approach.

Trading rules	Benchmarks can be met by:
	• Reducing facility emissions intensity;
	• Retiring Emission Performance Credits (EPCs), which can be traded;
	• Retiring Alberta-based emissions offsets (Offsets), which can be traded; and/or
	• Paying into the TIER Fund at prevailing TIER Fund price.
	  • 2020 TIER Fund Price: $30/tCO$_2$e
	  • 2021 TIER Fund Price: $40/tCO$_2$e (price aligns with 2021 federal benchmark requirements under GGPPA).
	  • 2022 TIER Fund Price: Anticipated to be $50/tCO$_2$e (price alignment with 2022 federal benchmark requirements under GGPPA)

Use of offsets and linking	No more than 60% of a facility's compliance obligation can be met with EPCs or Offsets.
Other features	N/A
Penalties for non-compliance	A fine of no more than C$200/tCO$_2$e, by which the net emissions for the regulated facility exceeds its allowable emissions.
Use of revenues	Revenue from TIER is used for: • Investing in emission reductions technology; • Reducing Alberta deficits; and/or • Supporting the province's energy war room, the "Canadian Energy Centre".

MAJOR DEVELOPMENTS

TIER launched on 1 January 2020, with a $30/tCO$_2$e TIER Fund price. In November 2020, a Ministerial Order established that the 2021 fund price would rise to $40/tCO$_2$e, to maintain Alberta's jurisdiction over its industrial carbon pricing programme. This was done in the context of the federal government's Greenhouse Gas Pollution Pricing Act (GGPPA) which can be imposed on provinces and territories that do not meet the federal benchmark criteria, and where the price rises by $10/tCO$_2$e every year.

In March 2021, the Supreme Court of Canada released a decision upholding the constitutionality of the GGPPA, with the majority strongly endorsing carbon pricing as an essential legislative tool. Alberta has not yet legislated to increase its 2022 fund price but is anticipated to increase the fund price to $50/tCO$_2$e to align with the federal GGPPA minimum carbon price requirements.

MARKET COMMENTARY

The Alberta carbon market is opaque and complex, with Alberta compliance-grade Offsets and EPCs (collectively, the "Alberta Credits") trading through bilateral agreements. Volatility in Alberta Credit prices can be significant due to this lack of transparency and is affected by key factors based on:

1. market conditions;
2. policy risk; and
3. commercial positioning.

Market conditions include the cyclicality of demand and supply and perceived market fundamentals, such as the impact of market participants' banking behaviour. Policy risk represents the anticipated, speculated or actual changes to provincial and federal carbon pricing programmes and structures. Commercial positioning relates to a market participant's percentage of total market supply or demand and the execution or influence of their trading strategy. Table 1 highlights a range of historical pricing impacts associated with each of these factors.

TABLE 1.
Alberta carbon pricing impacts

Factor	Carbon Price Impact
Market conditions	C$2 - 5/t$CO_2$e
Policy risk	C$5 - 10/t$CO_2$e
Commercial positioning	$2-5/t$CO_2$e

Policy risk has had the most significant impact on market price historically, with up to $20/t$CO_2$e in market pricing movement observed from 2019 to the beginning of 2021. This pricing volatility has been tied directly to anticipated and actual charges to Alberta's carbon pricing programme.

The Canadian federal government has imposed an increasing minimum carbon price across all provincial carbon programmes, rising to $50/t$CO_2$e by 2022. This factor is the single largest contributor to the Alberta market price and provides an incentive for suppliers to hold Alberta Credits for future higher-priced compliance years. In December 2020, the Canadian Federal government released a plan to increase the federal carbon tax by $15/t$CO_2$e per year from 2023, up to $170/t$CO_2$e by 2030. Further details have not been released on how this will interact with the minimum carbon price across Canadian carbon programmes.

Alberta market pricing volatility is anticipated to increase over time as the market ceiling price increases in alignment with the Federal GGPPA. With increased market pricing volatility, the impacts of policy risk, market conditions and commercial positioning on carbon price become more significant going forward.

The 2021 TIER Fund price is $40/t$CO_2$e and Graph 1 illustrates how policy changes have impacted market prices by up to $20/t$CO_2$e over the last two years. The upcoming 2020 compliance deadline of 30 June 2021 will likely have few Alberta Credits retired for compliance, as the current market price exceeds the $30/t$CO_2$e 2020 TIER Fund price. Any Alberta Credits with a vintage of 2014 or older will be submitted for compliance as they expire after the 2020 compliance year.

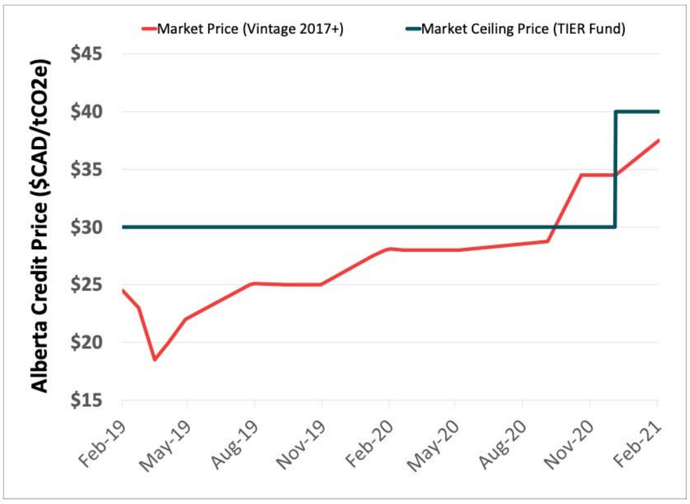

FIGURE 1
Historical indicative Alberta Credit prices
Source: Radicle Group Inc., www.radiclebalance.com

Trading conditions have showed the continued resilience of the Alberta market to absorb changes in policy and preserve overall upward pricing momentum. The development or evaluation of a robust trading strategy requires Alberta market participants to carefully monitor and time transactions around the intricate interplay between changing market conditions, evolving policy risks and relevant commercial positioning.

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

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