November 2026

Institute for Energy Economics
and Financial Analysis

Emerging CCS policy measures in Canada may produce divergent outcomes and increased public exposure

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Key findings

Carbon capture and storage projects in Canada still face weak economics and are dependent on government financial support—transferring risk to taxpayers.

The revised carbon-price schedule will lower the potential revenue ceiling for CCS projects.

Government-backed carbon contracts for difference may not guarantee revenue certainty.

The introduction of investment credits and reduced stringency rates may contribute to an already saturated provincial carbon market.



Executive summary

Despite new carbon capture and storage (CCS) policy measures and additional funding streams, the financial outlook for CCS projects in Alberta remains shaky.

Our previous research noted that rising cost pressures, alongside weak and uncertain revenue streams, threaten the financial sustainability of CCS projects in Alberta leaving them dependent on external financial support.

The May 2026 Canada-Alberta implementation agreement and subsequent Trilateral Memorandum of Understanding (MOU) among the federal government, the province of Alberta and the Oil Sands Alliance, include key fiscal and regulatory adjustments, subject to the conclusion of a definitive agreement expected to be announced shortly.

Even with these policies in place, measures intended to reduce the financial burden of carbon compliance may simultaneously weaken revenue conditions needed to make CCS projects viable. Revised carbon-price schedules lower the potential revenue ceiling for projects, and government commitments to enforce the market price for carbon credits may expose taxpayers to escalating financial liabilities without a guarantee of revenue certainty for project operators.

Reported data from the tier market indicate that credit oversupply is already an existing market condition and the introduction of investment credits plus reduced stringency-based demand from certain emitters risks exacerbating the oversupply.

Expanded financial support for project construction and operating expenditures increases the amount of public capital at risk if projects fail to deliver on their expected performance or emission reduction outcomes.

Ultimately, if the government is set on subsidizing CCS deployment, public exposure should be capped and support should depend on tangible and verifiable outcomes— actual emissions reductions, sustained capture performance, and permanent CO_2 storage.

Canada's taxpayers should be wary of being made to assume a growing share of project risks without a corresponding guarantee of lasting emission reductions or economic benefits.

In a January 2025 report, IEEFA examined the financial risks facing the broader carbon capture and storage (CCS) sector in Alberta, including the proposed Pathways project. In reviewing federal policy and annual performance reports published by two commercial-scale CCS facilities in Alberta (Quest and the Alberta Carbon Trunk Line (ACTL)), IEEFA noted that rising cost pressures, as well as weak and uncertain revenue streams, threatened the financial sustainability of CCS projects.[1] We

[1] IEEFA. Financial Risks of Carbon Capture and Storage in Canada: Concerns About the Pathways Project and Public Energy Policy. December 2024.

concluded these inherently weak economics would leave projects dependent on external financial support to not only proceed but to also maintain operations.

Two notable policy developments have occurred since our report, including the May 2026 Canada-Alberta implementation agreement and a subsequent Trilateral Memorandum of Understanding (MOU) among the federal government, the province of Alberta and the Oil Sands Alliance.[2,3] Both agreements include key fiscal and regulatory adjustments, subject to the conclusion of a definitive agreement expected to be announced shortly.

This briefing assesses the potential implications of these policy developments for CCS projects, with a focus on financial risks and effects on project viability. It also provides a cost update on the ACTL and Quest projects, drawing on their most recent annual performance reports.

[2] Government of Canada. Implementation Agreement for the Canada-Alberta Memorandum of Understanding of November 27, 2025. May 15, 2026. Also see: Government of Alberta. Memorandum of Understanding between Alberta's government, the Government of Canada and the Oil Sands Alliance parties. July 2, 2026.

[3] The Oil Sands Alliance was formerly known as the Pathways Alliance and consists of Canadian Natural Resources Limited, Cenovus Energy, Imperial Oil, Suncor Energy, and Conoco Phillips Canada, which collectively represent more than 95% of Canada's oil production.

New CCS policy measures create divergent financial outcomes and greater public-sector exposure

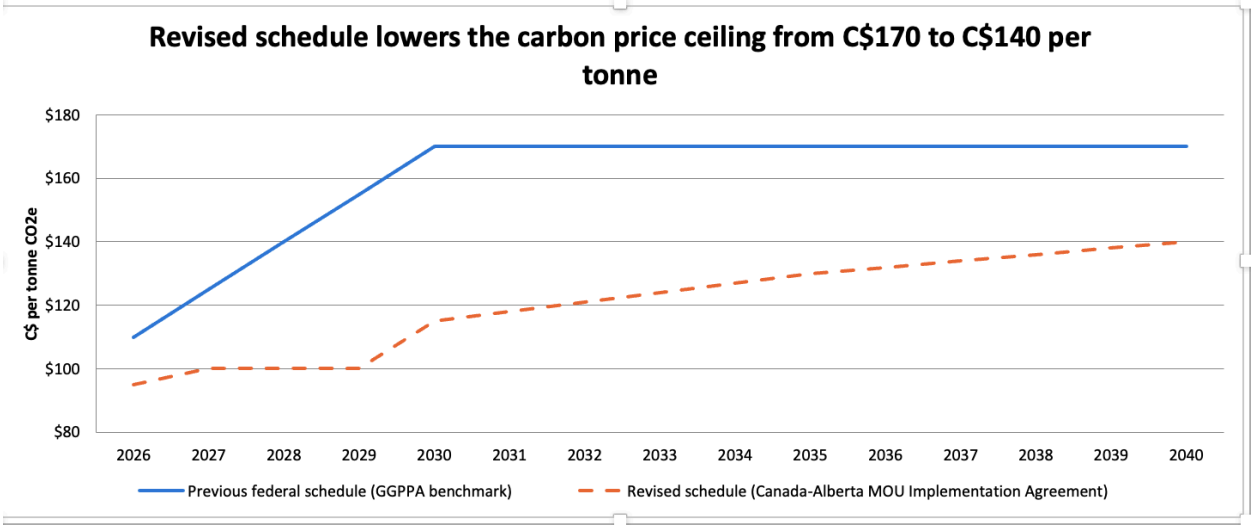
Measures to reduce the financial burden of carbon compliance may weaken revenue conditions needed to make CCS projects viable. Government commitments to regulate the market price for carbon credits also could expose taxpayers to escalating financial liabilities. Incentives that reduce demand for credits, expand the number of credit-generating projects, or introduce new classes of compliance credits may work against the government's price-support objectives, increasing the cost of a price floor. Expanded financial support for CCS project construction and operating expenditure further increases the amount of public capital at risk if projects fail to deliver on their expected performance or emission reduction outcomes.

A revised carbon-price schedule lowers the potential revenue ceiling for CCS projects

The marketing of carbon emission performance credits (EPCs) is the primary revenue source for CCS projects. CCS projects earn one credit for each tonne of CO_2 that is verified as captured and permanently sequestered. Emitters purchase credits to meet compliance obligations incurred when their emissions exceed assigned benchmarks. The Implementation Agreement of the Canada-Alberta Memorandum of Understanding (released May 15, 2026) establishes a revised carbon-pricing trajectory under Alberta's Technology Innovation and Emissions Reduction (TIER) system. The headline carbon price is to rise from CAD$95 per tonne in 2026 to CAD$100 per tonne in 2027, CAD$115 in 2030, and plateau at CAD$140 by 2040.[4] This replaces the previous trajectory, under which the price was expected to reach CAD$170 per tonne in 2030—a reduction of approximately 32% from the previous benchmark.

[4] Government of Canada. Implementation Agreement for the Canada-Alberta Memorandum of Understanding of November 27, 2025. May 15, 2026.

Figure 1:



Source: Government of Canada.

As noted in IEEFA's 2024 report, emitters can meet their compliance obligations by paying into the TIER Fund at the prevailing headline carbon price rather than purchasing EPCs. The option, however, removes the incentive for them to buy EPCs at prices that exceed the headline carbon price. Therefore, the revised schedule effectively lowers the maximum revenue that each CCS project can generate per credit sold in Alberta's TIER market. Reports indicate that EPCs and offsets in the TIER market were trading at just over CAD$30 per tonne in July 2025, compared with the CAD$95-per-tonne headline price applicable to 2025.[5] So while the headline price may represent an indicative revenue ceiling, it is by no means a guaranteed selling price for credits. The current substantial discount illustrates that market conditions continue to drive realizable prices well below the headline benchmark.

The extent to which credits can be monetized will continue to depend on supply and demand, but the revised schedule weakens the potential revenue threshold for CCS projects.

Government-backed carbon contracts for difference seek to enforce revenue certainty, but at what cost?

The Canada–Alberta agreement acknowledges its revised headline trajectory alone does not guarantee that credits will command prices sufficient to sustain large-scale CCS investment. To address this gap, the implementation agreement introduces a joint federal–provincial carbon

[5] Foundation Economics. Alberta TIER's 2025 credit retirements: Implications of declining obligations for credit bank and prices. July 9, 2026.

contracts-for-difference (CCfD) mechanism intended to enforce a minimum transfer price for TIER credits and support the effective carbon price.[6]

With CCFDs, the government's carbon price target acts as a benchmark. If the market price falls below that level, it pays the difference; if the market price rises above it, the project may repay the difference, depending on the contract structure. According to the agreement, Alberta intends to set a minimum transfer price for TIER credits beginning in 2030, starting at CAD$60 per tonne and rising incrementally to CAD$110 by 2040. The floor is intended to apply to credits obtained and used to satisfy annual compliance obligations, subject to the agreement's provisions for grandfathered credits. The CCfD contracts are intended to cover as much as 75 million tonnes of emissions reductions, with the Canada and Alberta governments each assuming an equal share of the costs and a maximum liability of CAD$600 million for each.

For CCS developers, this could improve revenue predictability and reduce the risk that weak EPC prices undermine investment returns. Neither measure, however, should be interpreted as an unconditional guarantee of revenue for each tonne of CO_2 captured. Given the substantial gap between the headline carbon price and prevailing market prices, a key uncertainty is whether the government allocation is sufficient to uphold the carbon prices it signals it will guarantee. For example, if a CCfD guarantees $130/t of CO_2 and the market price is $100/t, a $30/t shortfall across 20 million tonnes would generate a $600 million government liability; if the shortfall widens to $50/t, that same budget would be exhausted after just 12 million tonnes. Eligibility requirements, limits on covered tonnes, and other contractual conditions may constrain payouts and prevent the budget from being exhausted as quickly. These hypothetical figures, however, illustrate that CCfDs are not a foolproof mechanism for securing project revenues and that CCS project advocates remain exposed to carbon-market volatility.

Increasing public resources allocated to CCfDs may improve revenue certainty for project developers, but they also transfer carbon-price risk to the public balance sheet and increase taxpayer exposure. This is particularly relevant because certain policy interventions may exacerbate these risks by contributing to the oversupply of carbon credits, depressing market prices and widening the gap between market and guaranteed prices.

Ultimately, CCfD protection will depend on which projects and emissions reductions qualify, the duration and strike price of individual contracts, and the funding available within the governments' combined liability limit.

[6] Government of Canada. Implementation Agreement for the Canada-Alberta Memorandum of Understanding of November 27, 2025. May 15, 2026 (1.5).

Investment credits may contribute to an already saturated carbon credit market

The trilateral MOU introduces Alberta's TIER Direct Investment program, which allows the issuance of investment credits based on project capital expenditure and operating costs. Eligible amounts are limited to 50% of qualifying capital expenditure and up to 50% of eligible operating costs directly attributable to an approved project, net of other specified government support.[7] Unlike EPCs, which are generated when a facility performs better than its assigned emissions benchmark, investment credits are based on capital expenditure—not a verified quantity of CO_2 captured and stored. They can be used toward TIER compliance obligations, subject to applicable expiry restrictions, and may enter the compliance system before the associated CCS infrastructure has delivered its anticipated emissions reductions.

This new class of credits rewards capital deployment without requiring that the corresponding emissions reductions take place. The investment credits will also potentially compete with EPCs for a finite share of regulated emitters' demand.

The program is intended to reduce the effective cost of investment and encourage the development of projects that might otherwise be uneconomic. The net effect will depend on the program's detailed implementation, including the eligible investments, issuance volumes, expiry rules and how investment credits interact with existing credit-use limits. Nonetheless, the policy creates a risk that support intended to accelerate CCS deployment will increase the volume of compliance instruments available to the market without creating an equivalent increase in underlying demand.

While the support is valuable in a capital-intensive sector where developers face substantial upfront costs, it also creates the possibility that more CCS projects will be developed, expanding the capacity to generate future emissions-reduction credits and further adding to supply.

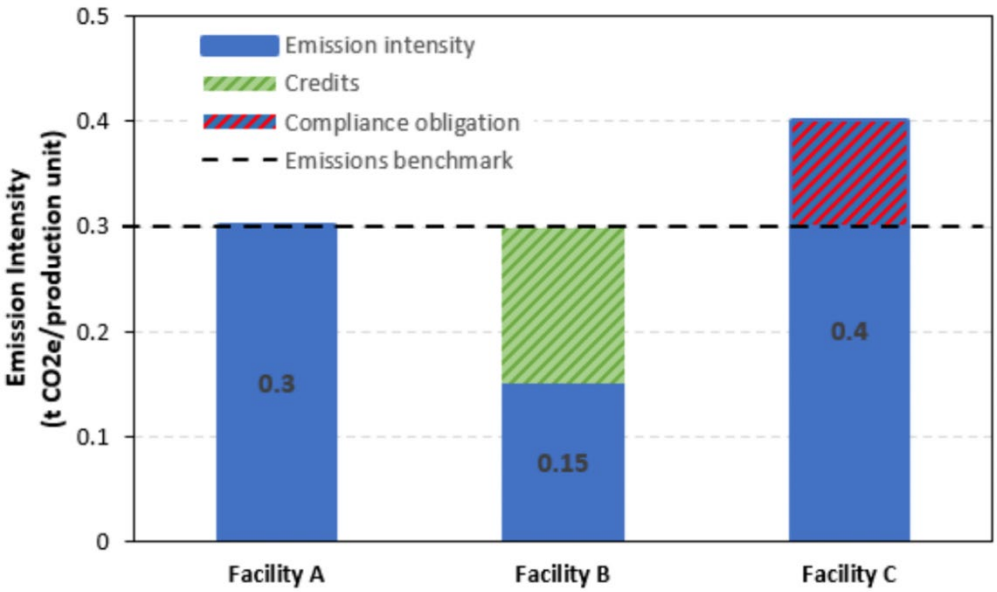
[7] Government of Canada. Implementation Agreement for the Canada-Alberta Memorandum of Understanding of November 27, 2025. May 15, 2026 (1.4).

Reduced stringency for Pathways could weaken demand for compliance credits

The trilateral MOU proposes to ease annual emission benchmark stringency rates for members of the Oil Sands Alliance, from 2% in 2027 to 1% from 2031 through 2040—subject to the fulfillment of certain conditions,.[8,9] Under Alberta's TIER system, emission benchmarks establish the allowable emissions intensity a facility is allowed to produce. These benchmarks become progressively stricter each year through an annual tightening rate, with the goal of reducing facility emissions intensity over time. At the end of each compliance period, a facility's emissions are assessed against the benchmark, and any excess creates a compliance obligation that can be met either by purchasing eligible credits or paying into the TIER fund.

Figure 2:

TIER facility emissions benchmarking and performance



Source: Government of Alberta.

A less-stringent benchmark trajectory reduces future compliance obligations relative to a more stringent alternative by lowering the number of credits emitters need to acquire. The wider TIER market depends on the compliance obligations of regulated emitters to generate demand for EPCs and other eligible instruments. If revised benchmarks reduce obligations relative to the previous trajectory, demand for credits may be lower. The market was already carrying a substantial surplus

[8] Government of Canada. Implementation Agreement for the Canada-Alberta Memorandum of Understanding of November 27, 2025. May 15, 2026 (1.3).
[9] Oil Sands Alliance members must achieve emissions targets via CCS and demonstrate clear action towards further reduction to receive reduced stringency rates.

of credits before the recent measures were announced, and reduced stringency could constrain demand relative to the previous policy trajectory.

Data on the stock of accumulated credits, volume of new credits issued, and obligations that regulated emitters must settle suggest that oversupply is not merely a hypothetical future scenario but likely an existing market condition.[10] Sources estimate active EPC and offset holdings in July 2026, totalled 46 million tonnes—more than three times the estimated 2025 compliance obligations, with additional credits still awaiting issuance.[11]

The introduction of investment compliance credits plus reduced stringency-based demand from emitters risks exacerbating some of the market imbalances that the government's price-support initiatives intend to address.

ACTL & Quest: Operating cost pressures ease, but upward trend and volatility persist

In the previous report, IEEFA identified an upward trend in the operating costs of both the Quest facility and the Alberta Carbon Trunk Line (ACTL). These increases were particularly concerning because they were not accompanied by commensurate growth in the absolute quantities of net CO_2 captured.[12] The report cautioned that if operating costs continued to escalate at historically observed rates over the life of a project, the resulting cost per tonne of net CO_2 captured could reach levels that make breakeven or sustained profitability highly improbable.

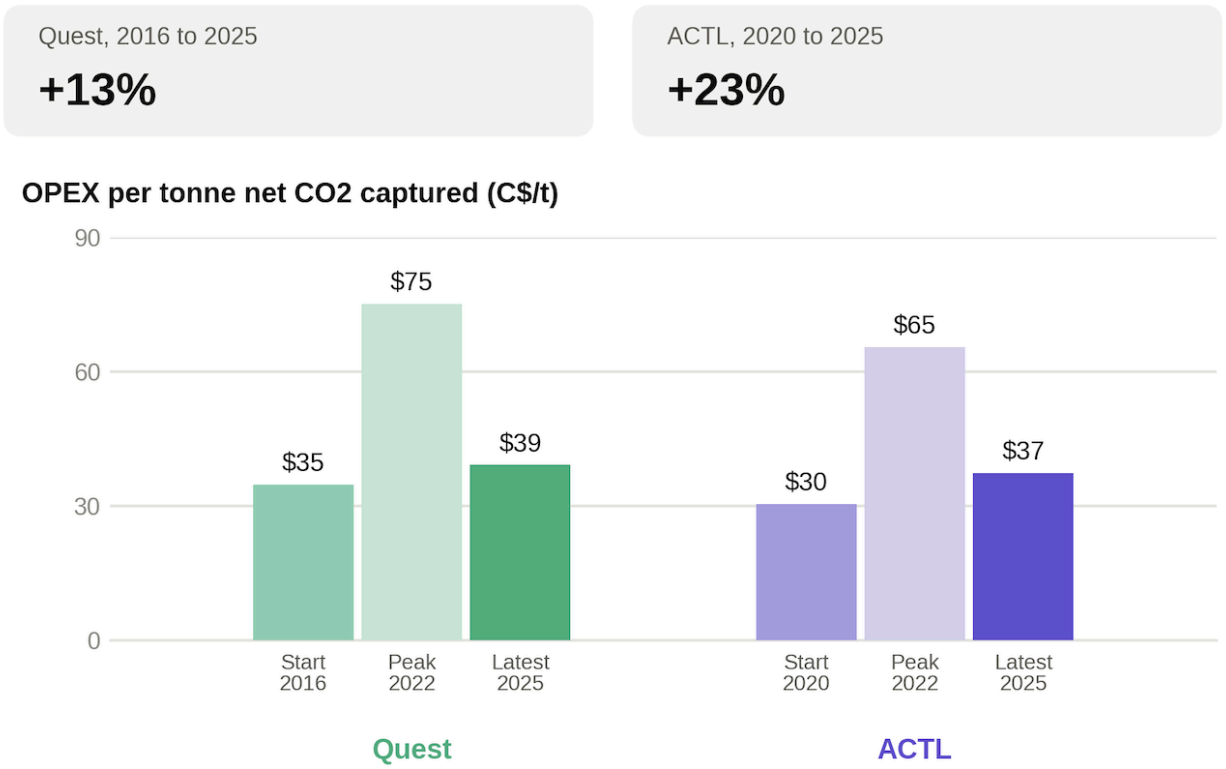
The most recent performance reports from Quest and ACTL suggest that operating cost pressures at both facilities have eased from 2022/23 peaks, but underlying risks remain.

Reported operating costs reduced largely due to declines in power and energy expenditure. However, the bulk of these declines occurred in 2023-24. The rate of cost moderation has slowed considerably with 2025 data showing a marginal reversal and unit costs edging upward again. Operating expenditure per tonne of net CO_2 captured increased at ACTL's from CAD37.14 million in 2024 to CAD37.42 million 2025. Quest operating expenditures per tonne rose from CAD35.35 million in 2024 to CAD39.16 million per tonne in 2025, an 11% increase. Quest's deteriorating performance was led by a 15% decline in net CO_2 captured in 2025, showing that technical challenges also affect project profitability.

[10] Foundation Economics. 2025 Alberta TIER Compliance Results: Declining Obligations and rising EPCs point to ongoing oversupply. September 25, 2026.
[11] Foundation Economics. Alberta TIER's 2025 credit retirements: Implications of declining obligations for credit bank and prices. July 9, 2026.
[12] In our analysis "Net CO_2 captured" is used interchangeably with "CO_2 Avoided", as referenced in Alberta CCS annual performance reports. Both terms refer to net quantity of CO_2 captured after deducting emissions associated with the capture, transport and storage processes.

Figure 3:

ACTL & Quest – Operating cost volatility



Source: Shell Canada Energy, Enhance Energy Inc., Wolf Carbon Solutions Inc., and Northwest Redwater Partnership.

The 2026 annual performance reports, which haven't been published yet, will provide further insight on cost trends especially amid heightened energy market volatility due to the Iran conflict.

While some of the data may be positive, we are unconvinced that the underlying cost and performance risks have been brought under control. It is premature to conclude that one or two years of cost moderation are proof of sustained improvements in project economics especially as the longer-term trend of cost escalation persists.

The financial risks associated with operating CCS infrastructure remain material, particularly considering the extended operating lifespan anticipated for these projects. Cost volatility introduces significant uncertainty into long-term economic outcomes and further compounds these risks. Should historic levels of cost escalation resume, operating cost improvements prove difficult to sustain or projects record weakness in capture efficiency, the resulting increase in cost per tonne of net CO_2 captured will continue to challenge the economic viability of proposed and operating facilities.

Conclusion

The Canada-Alberta implementation agreement and subsequent Trilateral MOU with the Oil Sands Alliance represent a substantial effort to improve the commercial conditions for CCS deployment in Alberta. Although these interventions may make projects more attractive to investors, they do not eliminate key financial risks. Rather, the agreements effectively transfer the risks to taxpayers. Measures announced—including carbon credit price support, investment credits, and operating cost assistance—ultimately reinforce the central concern of our previous report: Large-scale CCS deployment remains dependent on external subsidies. The revenue model is fragile and is exposed to material uncertainty due to persistent credit oversupply, insufficient credit demand and long-term operating cost volatility.

Ultimately, if the government is set on subsidizing CCS deployment, public exposure should be capped and support should depend on tangible and verifiable outcomes— actual emissions reductions, sustained capture performance, and permanent CO_2 storage—–rather than simply subsidizing project construction costs or operating cost deficits. In accordance with the polluter-pays principle, polluters should bear the burden of CCS deployment, retaining benefits if they succeed or absorbing financial losses if they fail.

Canada's taxpayers should be wary of being made to assume a growing share of project risks without a corresponding guarantee of lasting emission reductions or economic benefits.

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The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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