

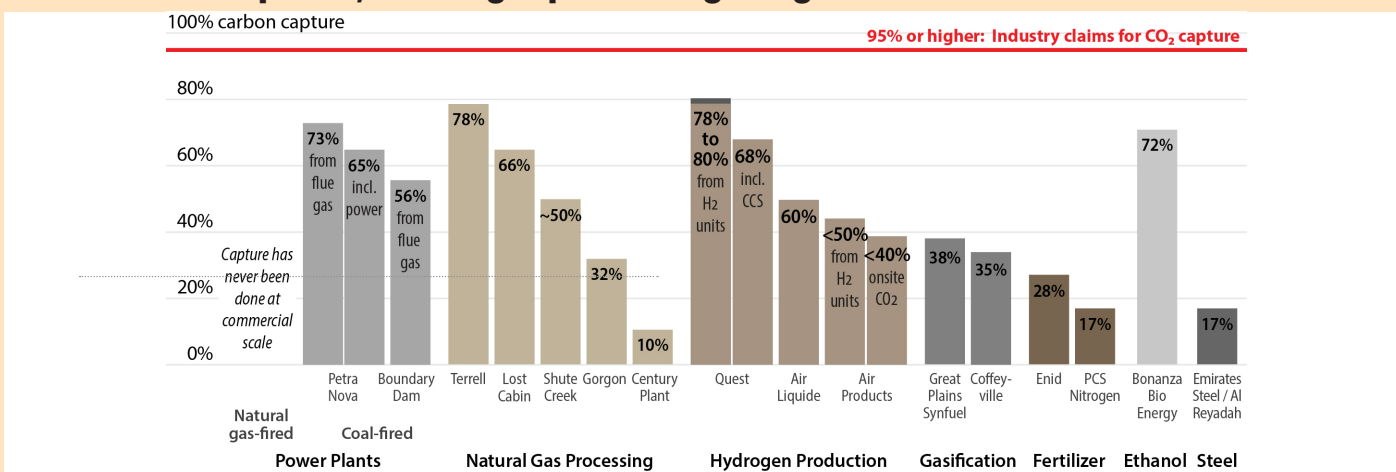
Carbon Capture and Storage in Canada

Financial and environmental risks raise concerns

Economic challenges threaten the ability of the Pathways Alliance project to achieve financial sustainability. The proposed carbon capture hub is likely to confront several adverse industry trends including operating cost escalation, constrained revenues and CO2 capture underperformance.

[IEEFA's latest research](#) shows that without substantial efficiency improvements, the cost per tonne of CO2 captured is likely to exceed the revenue the project can generate from each tonne captured. Under such a scenario, the project will become reliant on continued government subsidies for sustenance.

Real-world capture rates at commercial-scale hydrogen production, coal-fired power plants, natural gas processing and gasification facilities:



Source: IEEFA analyses based on publicly available data.

Large-scale public investment in CCS is misguided.

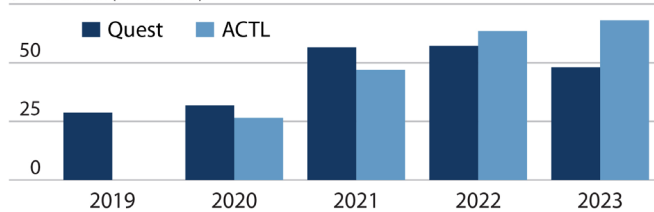
In Alberta, the cost to capture one tonne of CO2 at the two existing commercial-scale facilities in the province is rising substantially and likely exceeds the maximum federal carbon price of CAD\$170 per tonne - a key indicator of future CCS project revenue thresholds.

CCS technology has struggled to achieve meaningful emissions reductions or prove its long-term viability. The lack of demonstrated success and heightened financial risks indicate public investments are unlikely to yield the desired environmental or economic benefits.

Public funding of CCS is a costly gamble that may not yield tangible returns on Canada's journey towards achieving net-zero emissions.

Carbon Capture Operating Costs Rise Sharply in Canada

Total operating expenses at the Quest and ACTL CCS projects
\$75 million (Canadian)



Sources: Shell Canada Energy, Enhance Energy, Wolf Carbon Solutions IEEFA

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