



# TIER carbon capture

## Fact sheet

If information in this document conflicts with the Standard for Developing Benchmarks (the Standard), *the Emissions Management and Climate Resilience Act* (the Act) or the Technology Innovation and Emissions Reduction Regulation (the Regulation), then the standard, act and/or regulation prevail over this document.

### Overview

The Technology Innovation and Emissions Reduction (TIER) Regulation is central to emissions management in Alberta. Alberta's industrial carbon pricing and emissions trading system provides incentive for regulated facilities to invest in the capture and storage of carbon dioxide (CO<sub>2</sub>). Facilities regulated under TIER may have the designation of large emitter, opt-in or aggregate. There are several carbon capture scenarios described below including how to report the CO<sub>2</sub> in the TIER annual compliance report.

### Large emitter or opt-in facility captures CO<sub>2</sub> and geologically stores onsite or sends to acid gas injection

The facility would see direct benefit from the stored CO<sub>2</sub> not being emitted or included in total regulated emissions in the annual compliance report. There are required reporting fields in Section B4 of the compliance report form for on-site storage or export for acid gas injection.

### Large emitter or opt-in facility captures CO<sub>2</sub> and sends it to another large emitter or opt-in facility

The regulated facility that captures CO<sub>2</sub> to be geologically stored at another regulated facility (other than acid gas injection) reports it in Section B4 of their compliance report as exported CO<sub>2</sub>. It is not reported as an emission in Sections B1-B3 of the compliance report. This exported CO<sub>2</sub> is included in total regulated emissions to account for potential subsequent release.

### Large emitter or opt-in facility receives and geologically stores CO<sub>2</sub> from another large emitter or opt-in facility

The facility would see benefit from importing the CO<sub>2</sub> and geologically injecting it onsite. The stored CO<sub>2</sub> is not an emission in the annual compliance report for this facility and imported CO<sub>2</sub> is subtracted from total regulated emissions. The import and injection of CO<sub>2</sub> are required reporting fields in Section B4 of the compliance report form where a further description is provided. This benefit is not available to an aggregate facility under TIER, but conventional oil and gas sites could apply to opt-in under TIER if the eligibility is met.

### Large emitter or opt-in facility captures CO<sub>2</sub> and sends it to an offset project for CCS or EOR storage

The CO<sub>2</sub> sent from a regulated facility to be geologically stored at an offset project using the carbon capture and storage (CCS) or enhanced oil Recovery (EOR) quantification protocols is eligible for emissions offsets. The facility that captures the CO<sub>2</sub> reports it in Section B4 of their compliance report as exported CO<sub>2</sub>. It is not reported as an emission in Sections B1-B3 of the compliance report. This exported CO<sub>2</sub> is included in total regulated emissions to account for potential subsequent release.

The offset project would be the owner of the verified and serialized emission offset (Note: acid gas injection is not an offset opportunity.) There may be a contractual relationship between CO<sub>2</sub> exporter and the offset project.

### Sequestration credits

Emission offsets created using the CCS or EOR quantification protocols may be converted at the request of the emission offset project developer to sequestration credits. This conversion cannot be undone.

Sequestration credits are similar to emission performance credits (EPCs) and can be traded, banked or used to meet a facility's compliance obligation. Sequestration credits expire six years from the year the sequestration occurred.

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.

The process for creating a sequestration credit from an associated emission offset is shown in Figure 4

### Capture recognition tonnes

A facility that initiated the capture of CO<sub>2</sub> and holds the sequestration credit generated from the associated emission offset may apply to convert the sequestration credit into a capture recognition tonne. This conversion cannot be undone.

Capture recognition tonnes may only be used for the year in which the CO<sub>2</sub> was sequestered, and they cannot be traded. Capture recognition tonnes are deducted from the calculation of a facility's total regulated emissions and are therefore not subject to the credit use limit in TIER.

The process for creating a capture recognition tonne from an associated emission offset is shown in Figure 4

### Credit generated by EOR and CCS projects

The offset project quantifies the emission offsets by the difference of the injected mass of CO<sub>2</sub> and the project emissions including any discount or holdback required by the protocol. Emission offset reports must be verified before serialization.



Figure 1: CO<sub>2</sub> not included in compliance obligation for TIER regulated facility that captures CO<sub>2</sub> and sends to acid gas injection or geologically stores onsite

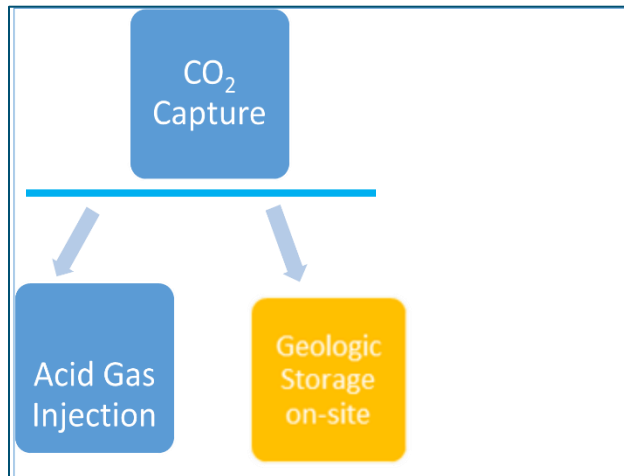
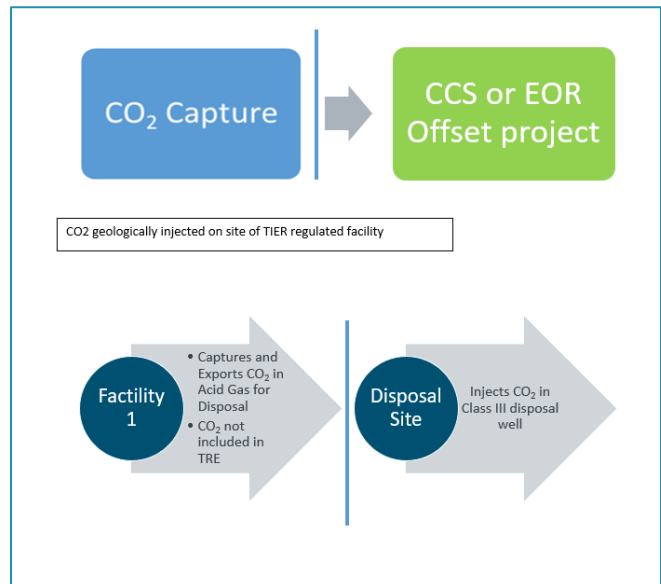


Figure 2: TIER regulated facility that captures CO<sub>2</sub> also reports CO<sub>2</sub> emissions and exported CO<sub>2</sub>, the CO<sub>2</sub> stored onsite is not included in compliance obligation for large emitter or opt-in



Figure 3: CO<sub>2</sub> is included in compliance obligation for facility that captures CO<sub>2</sub> and exports to a geological storage offset project that receives credit for net sequestration



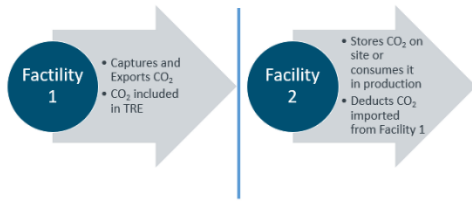
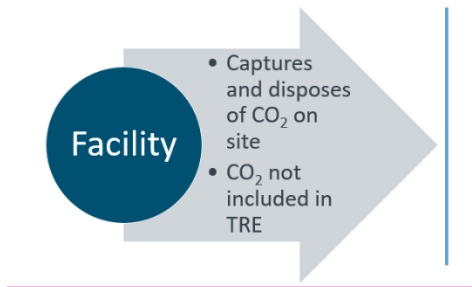
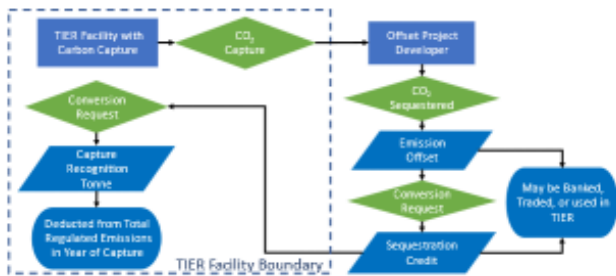


Figure 4: Credit flow-chart for creation of sequestration credits and capture recognition tonnes originating from the associated emissions offset



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