



IMPLICATION OF COVERAGE UNDER THE CAP-AND-TRADE SYSTEM FOR GREENHOUSE GAS EMISSION ALLOWANCES

April 2021

Greenhouse gas (GHG) emissions report

GHG emissions from any establishment that emits 10,000 or more metric tons of equivalent CO₂ annually must be reported under the [Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere](#).

Cap-and-trade coverage

All emitters that operate an establishment in a targeted activity sector and whose annual emissions exceed the threshold of 25,000 metric tons of CO₂ equivalent (mt CO₂ eq.) are subject to the [Regulation respecting a cap-and-trade system for greenhouse gas emission allowances](#) (cap-and-trade regulation). Target activity sectors are listed in Schedule A of the Cap-and-Trade Regulation and include mining, industrial manufacturing, electric power transmission and distribution, steam production for industrial purposes and pipeline transportation. The following are excluded from the cap-and-trade system coverage threshold: GHG emissions attributable to mobile equipment, CO₂ emissions from biomass and CH₄ emissions attributable to coal storage.

Emitters that operate an establishment in a targeted activity sector and report annual GHG emissions of 10,000 or more metric tons of equivalent CO₂ from it per the [Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere](#), can also voluntarily join the cap-and-trade system, even if they do not reach the coverage threshold of 25,000 mt CO₂ eq.

Emitters that distribute fuel such as natural gas, propane, heating oil, automotive gasoline and diesel are also subject to the cap-and-trade system. This means that even if an establishment is not subject to the cap-and-trade system, its fuel distributor can transfer the carbon costs for those fuels.

Emitter registration

Any emitter other than a fuel distributor is required to submit its registration application no later than September 1st following the submission of its first declaration for which verified GHG emissions reach or exceed the 25,000 mt CO₂ eq. threshold.

Any emitter other than a fuel distributor able to demonstrate that verified GHG emissions of one of its establishments will reach or exceed the 25,000 mt CO₂ eq. threshold during a given year may register as of June 1st of the preceding year. One of the following documents or information items must be used to demonstrate that emissions will reach or exceed the threshold:

- an environmental impact assessment for the establishment prepared pursuant to section 31.3 of the *Environment Quality Act* (chapter Q-2)
- a mass balance calculation for greenhouse gas emissions which must be based on the emissions attributable to the materials that contribute 0.5% or more of the total carbon introduced in the establishment's process



- a technical calculation using an emission factor used for the purposes of the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15)
- an emissions report made pursuant to the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere, along with data explaining the anticipated production increase.

Any emitter able to demonstrate that 200 or more litres of fuel will be distributed during a given year may register as of January 1st of this same year, but no later than September 1st following the submission of the first emissions declaration covering the distribution of 200 or more litres of fuel.

Any emitter wishing to voluntarily opt-in to the cap-and-trade system must complete and submit the [Application Form to Opt-in](#) no later than May 1st preceding the year as of which the emitter wishes to begin covering their emissions. Thereafter it must register no later than September 1st that precedes the year for which it wishes to begin covering its emissions.

Emission coverage

Since January 1st 2021, an emitter must cover each verified metric ton of equivalent CO₂ of an establishment as of January 1st of the same year when its verified emissions reach the 25,000 mt CO₂ eq. threshold and until December 31 following the third consecutive emissions declaration that is below the 25,000 mt CO₂ eq. threshold. If the requirements are met, the emitter may submit a request to remain covered as an opt-in no later than September 1st of the last year of mandatory coverage.

Any emitter that voluntarily opted-in to the cap-and-trade system must cover each verified metric ton of equivalent CO₂ of an establishment as of January 1st of the year following its registration if registered no later than September 1st. Otherwise, the emitter must cover its emissions as of January 1st of the second year following its registration.

Any emitter having voluntarily opted-in to the cap-and-trade system may choose to cease to cover the emissions of one of its establishments if a request for this purpose was submitted no later than September 1st of the last year of a compliance period. As such, it is then required to cover its emissions until December 31 of the last year of that compliance period. Otherwise, the establishment remains covered until December 31 following the third consecutive emissions declaration below the 10,000 mt CO₂ eq. declaration threshold.

A compliance period lasts three years (the current compliance period covers 2021, 2022 and 2023).

On November 1 following the end of a compliance period (or if that date is not a business day, on the first business day that follows), emitters are required to hold a number of emission allowances in their compliance account that is at least equal to the total quantity of declared and verified GHG emissions for all of their covered establishments during the period in question. In other words, the emitters must remit one emission allowance to the government for every ton of GHG they emit into the atmosphere during that compliance period.

Allocation of Emission Units without Charge

Given the potential impact of the cap-and-trade system on their production costs and their limited capacity to transfer their carbon cost to their clients, “emission-intensive and trade-exposed (EITE)” emitters are considered to be more vulnerable to carbon leakage.



Aiming to maintain the competitiveness of these businesses and foster innovation in these sectors, the Québec Government introduced in the cap-and-trade system a mechanism to reduce the risk of carbon leakage, the “allocation of emission units without charge.” Table A Part I in Schedule C of the Cap-and Trade Regulation lists the activities eligible for the allocation of emission units without charge.

The number of emission units allocated annually to EITE emitters is calculated on the basis of the production and of their GHG emissions. Intensity targets are established by taking into account the type of GHG emissions of the emitter: combustion, fixed process and other (mainly fugitive) and as such, the various reduction options available. To maintain the incentive for innovation and environmental performance improvement, the intensity targets are progressively reduced over the years.

An intensity target approach allows businesses that increase their production to receive more emission units without charge. However, since intensity targets decrease each year, these businesses still need to improve their performance levels, failing which they will have to purchase ever-greater quantities of emission allowances as time goes by. Conversely, businesses that reduce production will receive fewer emission units without charge.

Purchase of emission allowances

Emitters can obtain emission allowances in a variety of ways in order to cover their GHG emissions. In addition to emission units allocated without charge, they can acquire emission units at auction or purchase them from other emitters or cap-and-trade participants. Early reduction credits (issued only once, in January 2014) and offset credits may also be used.

The minimum price of a GHG emission unit sold at auction increases by 5% plus inflation each year. Since auctions are jointly held by Québec and California, the auction minimum price corresponds to the higher of the annual minimum price of both governments, once converted into the same currency.

As an indication, in supposing that the highest minimum price remains California’s until 2030 and taking into consideration the significantly higher value of the U.S. dollar and assuming an annual inflation rate of 2%, the following table provides an example of the potential evolution of the annual minimum price from this year to 2030.

Potential evolution of the minimum annual joint price in USD from 2021 to 2030									
2021 ¹	2022	2023	2024	2025	2026	2027	2028	2029	2030
\$17.71	\$18.95	\$20.28	\$21.70	\$23.22	\$24.85	\$26.59	\$28.45	\$30.44	\$32.57

¹ The minimum estimated price for 2021 is the one that applied during the February 17, 2021, auction.

The settlement price may be higher than the minimum annual price. As an example, the settlement price at the February 17, 2021, auction was 17.80 USD (22.58 CAD).



Impact of the carbon cost on fuel

Aside from the carbon cost stemming from GHG emissions at their establishments, industrial emitters subject to the Québec cap-and-trade system incur a carbon cost for their mobile equipment. Establishments that are not subject to cap-and-trade system incur a carbon cost that is incorporated into the cost of all fossil fuels that they acquire. The following table shows the impact of the carbon cost on some fuels, per the price of emission units. Since fuel distributors can choose to transfer part or all of the carbon cost to their clients, the real invoiced cost may be different.

Fuel	Emission Factor ¹	Cost of carbon per the price of emission units	
		\$20/ton	\$30/ton
Automotive gasoline	2.361 mt CO ₂ eq./kl	4.7¢/litre	7.1¢/litre
Diesel fuels	3.007 mt CO ₂ eq./kl	6.0¢/litre	9.0¢/litre
Light oil	2.735 mt CO ₂ eq./kl	5.5¢/litre	8.2¢/litre
Heavy oil	3.146 mt CO ₂ eq./kl	6.3¢/litre	9.4¢/litre
Propane	1.544 mt CO ₂ eq./kl	3.1¢/litre	4.6¢/litre
Natural gas	1.889 mt CO ₂ eq./1,000 m ³	3.8¢/m ³	5.7¢/m ³

¹ [Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere](#), Table 30-1, September 1, 2020

The following equation may be used to calculate the carbon cost (in ¢/litre or ¢/m³) for a given emission unit price:

$$\text{Carbon cost} = \frac{\text{Emission Factor} * \text{Emission unit sales price}}{10}$$

For information, according to the most recent report on carbon market (2020), the cost of offset credits is approximately 18% below the price of emission units. Up to 8% of emissions can be covered by offset credits.

The aftermarket price of emission allowances can be higher or lower than the auction minimum price. Several analytical sources, such as California Carbon Info, Carbon Pulse and Bloomberg, attempt to predict the market price of emission allowances.

The above sources are useful in estimating the impact of the carbon cost on a given emitter.

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