



PERSPECTIVES

Canada's Oil and Gas Emissions Cap: Options for the ECCC Proposal



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INTRODUCTION

Options to cap and cut emissions from the Canadian oil and gas sector were proposed by Environment and Climate Change Canada (ECCC) in July 2022. Reducing oil and gas sector emissions is necessary for Canada to achieve its economy-wide greenhouse gas (GHG) targets 40-45% by 2030 and net zero by 2050. The oil and gas sector includes three segments: upstream extraction, transmission pipelines, and downstream operations. Upstream extraction is by far the largest portion of the sector emission in Canada, accounting for 83% of scope 1 emissions. Within upstream extraction, there are several subsector categories of emissions. Natural gas production and processing is the largest emitting subsector, accounting for 25% of sector scope 1 emissions followed by in situ oil sands (23%), oil sands upgrading (14%), conventional light oil production (9%), and oil sands mining (8%). Heavy conventional oil production and frontier oil production (including offshore), make up just 3% and 1% of total sector emissions respectively.

The ECCC ministry has proposed two regulatory options to cap emissions:

- The first option is a cap-and-trade program under the Canadian Environmental Protection Act (CEPA).
- The second option is a modification of the existing carbon pricing system under the Greenhouse Gas Pollution Pricing Act (GHGPA).

In both cases, the emissions cap will be designed to work with current and future regulatory measures to reduce emissions from the oil and gas sector. The use of a time-limited compliance mechanism in the form of offset credits will be considered for use by ECCC, but over the long-term, the expectation is that emissions reductions will come directly from the oil and gas sector, and compliance will not be met by purchasing offset credits from other sectors. After all, if Canada is to meet its net zero ambitions, it must achieve direct emissions reductions from the entire economy, including the oil and gas sector.

SCOPE OF THE PROPOSED EMISSIONS CAP

ECCC outlined five principles that will guide the development of the oil and gas sector emissions cap:

1. The sector will be held accountable for its emissions.
2. The cap will align with Canada's ambitious climate commitments and will move to deliver significant emissions reductions in the near-term.
3. The approach will seek to achieve emissions reduction objectives while minimizing impact to workers and communities.
4. The approach will manage competitiveness challenges to minimize the risk of carbon leakage while also maximizing opportunities to invest in sector decarbonization.
5. The approach will provide long-term clarity for the industry to help achieve the oil and gas sector's contribution to Canada's 2030 climate change target.

ECCC would apply the cap to all of Scope 1 (i.e., direct emissions) and is considering coverage of Scope 2 (indirect emissions from purchased energy). Scope 3 emissions (i.e., all other indirect emissions sources including end-use combustion of fossil-based fuels) would not be included in the proposed regulation. The Scope 1 cap will cover direct emissions at upstream oil and gas facilities including carbon dioxide and methane.

The emissions cap would apply to all GHGs from oil and gas sector activities. ECCC noted that many sources of oil and gas sector methane are currently exempt from carbon pricing as they are regulated under CEPA. CEPA commits Canada to achieving at least a 75% reduction of methane below 2012 levels by 2030. Reductions of methane achieved under the proposed CEPA regulations will contribute to the total oil and gas sector emissions reductions required under the cap.

ECCC stated that if modification to the existing carbon pricing system (i.e., option 2) is chosen, the federal Output-based Pricing System (OBPS) would be amended to remove exemptions so that carbon pricing would apply to methane. ECCC acknowledged some methane emissions are

difficult to quantify with accuracy and has committed to support the continuous improvement of methane measurement and monitoring.

ECCC stated that the emissions cap would include broad coverage of the oil and gas sector but recognizes that many emissions originate from small facilities. In the European Union and California cap-and-trade systems, only those facilities that emit more than 25 ktCO₂e per year are regulated. In Canada's OBPS system, facilities that emit more than 10 ktCO₂e per year are regulated. ECCC is seeking feedback on whether consideration should be given to facility emissions thresholds such as those that currently exist in the carbon pricing systems referenced above.

OPTION 1: CAP-AND-TRADE

ECCC stated that a cap-and-trade option would be regulated under CEPA. The cap-and-trade system would be additional to existing regulations and carbon pricing systems such as the OBPS and its provincial equivalents. Emissions reductions achieved by the oil and gas sector would then count toward compliance obligations in both programs.

The cap would establish the total volume of GHG emissions allowable for a specified period. The cap would decline over time according to an annual schedule. Allowances would be distributed for each tonne of emissions allowed under the cap. Emitters would then be required to remit allowances for each tonne of carbon dioxide equivalent emitted. Emissions allowance would be fully or partially distributed through auctioning. Allowances that are not auctioned would be allocated for free. The mechanism for distributing allowances will be determined by ECCC at a later date.

Auctioning of emissions permits is expected to create a level playing field for market participants. ECCC outlined some details for how emissions permits would be auctioned. Qualified bids would be ordered from high to low and processed in that order until the maximum quantity of allowances available is reached. The price per allowance that all participants pay is the price of the last bid processed (i.e., clearance price). The auction frequency could range from weekly to quarterly. ECCC stated that auction proceeds would be invested into sector decarbonization and measures to mitigate carbon leakage risk.

To protect against excessive market power, limits on bidding and the number of allowances a facility can hold may be implemented. Currently, the European Union Emissions Trading System (EU ETS) and Western Climate Initiative (WCI), which includes California and Quebec, limit bids based on the total available allowances on auction. In WCI, for example, there are also holding limits on the volume of allowances that can be held in excess of compliance requirements. These are measures that ECCC is currently contemplating to prevent a small number of market participants from gaining an unfair advantage in the market. ECCC is also considering an allowance reserve to create market price stability.

Free allowances are those that are distributed at no cost to emitters. Distribution of free allowances can help to mitigate carbon leakage risk. Often, free allowances are allocated on an output basis. This helps to reduce the incentive to curtail production and gives new entrants the same access to free allocations as existing facilities. Free allocations are used in the EU ETS, WCI, New Zealand, and were used by the now defunct Nova Scotia cap-and-trade programs. Prorating of free allocations could be used by ECCC in instances where demand for allowances is greater than the cap level.

The use of carbon offsets in a cap-and-trade program provides a lower-cost compliance option for regulated emitters. To ensure emissions reductions occur within the oil and gas sector, the use of offset credits would be time limited. The option to use offsets would decline over time and would eventually be phased out as a compliance option under the oil and gas emission cap. By way of example, offsets are not permitted in the EU, New Zealand, and Nova Scotia programs, but in Quebec and California, offsets can be used for up to 8% and 4%, respectively, of total covered emissions.

Other compliance flexibilities that ECCC is considering include credit banking (allowing facilities to hold credits for future compliance years) and multi-year compliance periods (providing flexibility when compliance obligations must be met). In other programs, compliance periods range from one year (EU, New Zealand) to three years (WCI).

To mitigate price volatility, other jurisdictions generally set a floor price at auction to mitigate low prices. Low prices reduce the incentive to invest in emission reduction technology and undermine the overarching goal of reducing sector emissions. Other mitigations for low prices include adjusting the number of allowances available in future auctions and introducing banking limits.

While low prices undermine the emissions reduction program, excessively high prices are also an outcome that regulators generally try to avoid. Persistently high emissions allowance prices can cause economic shock, higher energy prices, and pose long-term carbon leakage risk. To mitigate against high prices, an allowance reserve could be made available if prices meet certain levels. Other jurisdictions may also set aside allowances that only become available at auction if price levels are exceeded. The volume of allowances sold at auction could also decrease when certain banking levels are reached.

OPTION 2: ENHANCED CARBON PRICING

The second option to cap emissions from the oil and gas sector is to modify the existing carbon pricing system under the GHGPA. Under this approach, the current carbon pricing system would be modified (for the oil and gas sector only) if the sector is not on track to achieve the emissions trajectory. If changes are required, they would include:

1. An oil and gas specific carbon price.
2. Modification to the current carbon pricing system (e.g., more stringent product benchmarks under an output-based system).
3. Criteria for the oil and gas sector related to restrictions on trading, minimum coverage, and consequential changes to economy-wide carbon pricing systems.

The existing federal OBPS program would be modified to ensure that the oil and gas sector meets the emissions trajectory to achieve 2030 and 2050 targets. If the sector is on track, no additional measures would be needed. If the sector is not on track, and further reductions are needed, the benchmark criteria for the OBPS would be amended to set out an oil and gas-specific carbon price as well as other measures such as benchmark stringency. ECCC is proposing that for provinces where oil and gas sector emissions make up less than 0.5% of total emissions from the sector, the jurisdiction would be exempt from the OPBS benchmark criteria.

Emissions forecasting reports would be used to form the basis for whether the oil and gas sector is on track to meet emission reduction targets. The oil and gas emission price would then

be adjusted accordingly. In addition to the emissions price, product benchmarks could also be adjusted. The benchmark criteria would be evaluated by ECCC at five-year intervals. ECCC notes that higher stringency of performance-based standards increases the average costs to the oil and gas sector and increases the risk of emissions reductions from decreased production and the potential for carbon leakage. It remains to be seen how ECCC will address carbon leakage risk posed by increasing the stringency of performance-based standards.

The ECCC is also considering other OBPS benchmark criteria (in addition to price and stringency of performance-based standards). Like the cap-and-trade option, this could include restrictions on trading and use of offsets to ensure reductions with the sector. Offsets and surplus credits may be permitted as a near-term flexibility mechanism, but this flexibility would decline over time. Further, consistent with current OBPS benchmark criteria, the marginal price signal must be equivalent to the minimum national carbon price. This requires credit demand to exceed credit supply. As decarbonization occurs, surplus credits must be absorbed with increased stringency of performance-based standards. Again, this poses a carbon leakage risk to the sector and would need to be addressed by ECCC.

CONCLUSION: EMISSIONS CAP DECISION TO BE COMMUNICATED IN LATE 2023

The ECCC ministry stated that the form of the emissions cap will be communicated in late 2023. Regardless of which of the two regulatory options is used to cap emissions, this policy will have significant impacts on Canada's oil and gas sector. Organizations should begin to prepare asset optimization plans that include weighing the deployment of GHG reduction technology against alternative production strategies.

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