

CARBON MARKET BUSINESS BRIEF

CANADA FEDERAL OUTPUT-BASED PRICING SYSTEM (OBPS)

CANADA'S OBPS AT A GLANCE

Years in operation	Began in 2019, with annual compliance periods.
Overall cap & trajectory	<p>The OBPS applies to facilities that emit over 50,000 tCO₂e/year. Facilities that emit over 10,000 tCO₂e in regulated sectors can opt-in to the OBPS at any time.</p> <p>Emission reduction obligations are determined using an output-based standard (OBS), which varies based on the industrial activity and the competitiveness of the sector.</p> <p>The OBPS is currently implemented in Manitoba, Yukon, and Nunavut, and applies to the electricity and natural gas transmission sectors in Saskatchewan. Ontario and New Brunswick were previously covered under the OBPS and have subsequently transitioned to their respective provincial programmes, retroactively as of 1 January 2021, for New Brunswick and on 1 January 2022, for Ontario.</p>
Target(s)	40-45% below 2005 levels by 2030, to reach 443 million tCO ₂ e. Canada's emissions in 2020 were 672 Mt. Canada also intends to reach net-zero emissions by 2050 and set legally binding five-year emission reduction targets.
Emissions Reduced to date	No data available yet
Sectors covered	<p>Sectors covered under the OBPS include:</p> <ul style="list-style-type: none"> • Oil and gas production • Mineral processing • Chemicals • Pharmaceuticals • Iron and steel • Mining and ore processing • Lime and nitrogen fertilisers • Food processing • Pulp and paper • Automotive • Electricity generation • Cement <p>The cement, iron and steel manufacturing, and lime and nitrogen fertilizer sectors have been deemed to have high competitiveness risk – facilities in these sectors have their OBS set accordingly.</p>
GHGs covered	<ul style="list-style-type: none"> • CO₂, CH₄, N₂O, SF₆, PFCs, HFCs <p>The OBPS covers 27% of GHG emissions where the backstop applies.</p>
# of covered entities	217 registered in 2019

Allocation method	OBS is set by industrial activity and is based on the sector's average emissions intensity. OBS for sectors with low or medium competitiveness risk is set at 80% of the sector's average emissions intensity, while OBS for sectors with high risk is set at 90% or 95%.
Trading rules	<p>A facility may comply through any combination of payment of the excess emissions charge; use of surplus credits; use of recognised units (approved provincial offset credits); and use of offset credits.</p> <ul style="list-style-type: none"> • Surplus credits have a five-year expiry limit. • Offset credits have an eight-year expiry limit. • Surrendered compliance units are retired by ECCC. • A facility may choose to voluntarily retire its compliance units.
Use of offsets and linking	Entities can use offset credits from the Federal GHG Offset System (currently under development) and recognised units from approved provincial offset systems (Alberta and British Columbia, since March 2021). The 2019-21 compliance periods did not have compliance unit usage limits, while from 2022 onwards there is a 75% cap.
Other features	N/A
Penalties for non-compliance	If the 15 December compliance deadline is missed, compliance is due at an increased rate of four to one (4:1) by 15 February of the following year. Facilities are required to submit four compliance units for each tCO ₂ e over the emissions limit or four times the excess emissions charge rate.
Use of revenues	All proceeds collected from OBPS compliance payments will be returned directly to regulated emitters to support GHG emission reduction projects and the use of lower-carbon technologies and processes. Proceeds are being returned to the provinces of origin through a merit-based funding stream called Output-Based Pricing System Proceeds Fund including the Decarbonization Incentive Program (DIP) and Future Electricity Fund (FEF). FEF is funded through OBPS-covered electricity generating facilities (utilities) and proceeds from FEF will be returned through funding agreements with federal backstop provinces, as such, they are not open to other emitters.

MAJOR DEVELOPMENTS

Over the past year, progress on the development and implementation of the Federal GHG Offset System has been made. On 17 January 2022, draft protocols for two of the five priority protocols were published for a 30-day consultation: Landfill Methane Recovery and Destruction and Reducing Greenhouse Gas Emissions. The three other priority project types that are being developed are Improved Forest Management, Enhanced Soil Organic Carbon, and Livestock Feed Management. The final regulations for the Federal GHG Offset System are expected in spring 2022.

In 2021, the Federal government released an updated Pan-Canadian Benchmark for Carbon Pricing Federal Benchmark for 2023-30 for carbon pollution pricing systems in Canada. This includes a new minimum national carbon pollution price schedule for explicit price-based systems to begin at C\$65 tCO₂e in 2023 and increase by C\$15 per year to C\$170 tCO₂e in 2030.

As part of the review of the OBPS regulation in 2022, on 13 December 2021, ECCC published the Review of the OBPS Regulations Consultation Paper, initiating a 45-day open consultation until 24 January 2022. The Consultation Paper proposed several changes to the OBPS regulations including introducing tightening rates for stringency factors, developing new output-based standards, reviewing existing standards, the deadline for voluntary opt-in application, changes to materiality thresholds and more. The ECCC is proposing an annual tightening rate of 2% to apply to most output-based standards starting in the 2023 compliance period; a rate of less than 2% would apply to sectors that were identified at high risk of carbon leakage and adverse competitiveness impacts – aluminium, cement, iron and steel.

This tightening rate would not apply to the electricity sector, as it would be considered separately under the federal

government's net-zero electricity generation commitment. As part of Canada's economy-wide goal of achieving net-zero emissions by 2050, a Clean Electricity Standard (CES) is in development to mandate the necessary transition for the country's energy system towards non-emitting electricity generation sources as well as meeting the increasing supply of clean electricity for electrification. A CES would align with the federal OBPS, and the two would work in tandem to provide a clear phase-out of fossil fuel-based electricity generation and an incentive for fuel-switching.

Other proposed changes include setting a deadline for voluntary facilities to opt-in to the federal OBPS as opposed to allowing opt-in any time during the year. This would change to abiding by a deadline (not yet finalised but the example suggests 1 April) and starting the compliance period on 1 January of the year after applying for voluntary participation.

The outcomes of the consultation will be reflected in the draft OBPS regulation, which is expected in the first half of 2022, following by a 30-day consultation period. Final Regulations for the post-2022 federal OBPS programme are expected before the end of 2022. Amendments will come into force on 1 January 2023.

MARKET COMMENTARY

Key to achieving Canada's new emissions reduction target of 40-45% below 2005 levels by 2030, the Federal Carbon Pollution Pricing Benchmark plays an important role in shaping the Canadian carbon markets.

Even though the proposed regulatory amendments would only apply to the federal OBPS, there could be implications for the upcoming review of the provincial programmes and the development of new provincial systems in jurisdictions where the federal OBPS continues to operate. The provinces could look towards the federal OBPS for guidance in their design progress. It is also important to consider the possibility of returning to the federal OBPS, which could be a result of political changes in provincial elections or through provincial programmes failing to meet federal stringency. Provinces likely to remain in the Federal OBPS post-2022 are PEI, Manitoba, Yukon and Nunavut. Saskatchewan currently regulates some sectors of industrial emitters with OBPS covering the remaining sectors, however, provincial authorities have indicated in a discussion paper for post-2022 design that they intend to expand their programme to cover all mandated sectors.

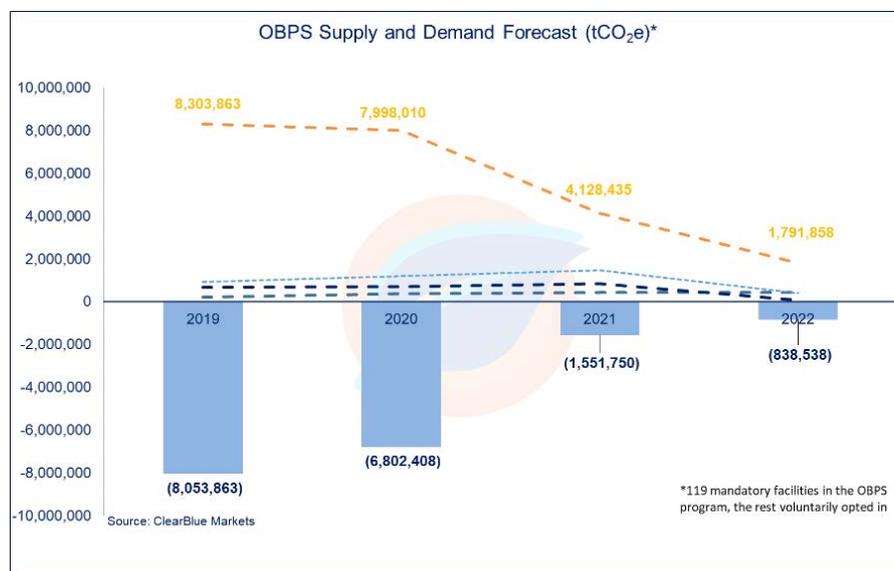
ClearBlue's current OBPS Supply and Demand Forecast can be seen in Figure 1. As depicted by the balance bars in blue, it is expected that there will be a shortage of compliance units (offset credits, recognised units, and surplus credits) in the market to meet the demand from OBPS facilities. Overall, there was a slight covered emission decrease from 2019 to 2020 of approximately 0.5%¹ as a result of the COVID-19 pandemic, while New Brunswick's provincial OBPS programme was approved retroactively to 1 January 2021, marking the province's departure from the federal OBPS.

Nonetheless, we see an increase in demand in 2021, which is attributed to a rise in Saskatchewan's coal and diesel power output due to a declining OBS for coal-fired generation. Meanwhile, a decrease in demand in 2022 is due to the 75% compliance unit usage limit in force, as well as Ontario exiting the OBPS programme as its provincial EPS came into effect 1 January 2022. With Ontario leaving the federal OBPS, Ontario entities must utilise or sell any surplus credits they generated in 2021 or previous compliance periods (in they were banked). As surplus credits generated and/or purchased in the Federal OBPS are not fungible in the Ontario EPS programme, if they are not optimised by the 2021 compliance deadline of 15 December 2022, they lose their value.

As the government is currently in the process of developing the Federal GHG Offset System, the relevant volume of offset credits was not available to the OBPS market for the 2019 or 2020 compliance period deadlines. ECCC published the draft regulations for the offset system in March 2021, and the final regulations were initially expected to be published in Fall 2021 but have been postponed to spring 2022. Once the regulations have been finalised and project development can commence, there will be further delays in bringing offset credits to market due to the lead time to register projects and issue credits, typically more than a year.

¹ The 0.5% decrease was determined by comparing the electricity usage rates from 2019 to 2020 in Ontario, specific facility electricity usage data, and looking at the electricity usage rate changes in other jurisdictions such as California and Quebec. An average of the values (0.5%) was taken.

Credits from approved projects in active provincial offset registries will be eligible under the OBPS and are known as recognised units. Currently, only five protocols in Alberta’s offset system have been approved: Aerobic Composting, Aerobic Landfill Bioreactor Projects, GHG Emission Reductions from Pneumatic Devices, Reducing GHG Emissions from Fed Cattle, and Selection for Low Residual Feed Intake for Beef Cattle. Although the British Columbia offset system has been approved, there are currently no approved protocols.



	2019	2020	2021	2022
Balance incl. Offsets and Surplus Credits	(8,053,863)	(6,802,408)	(1,551,750)	(838,538)
Demand for Compliance Units	8,303,863	7,998,010	4,128,435	1,791,858
Total Offset and Recognized Units Supply for OBPS	203,896	382,007	438,069	418,761
Indirect Surplus Credits Supply	678,066	691,874	845,166	80,357
Surplus Credits Supply (incl. Indirect SC)	910,000	1,207,409	1,474,922	401,785

FIGURE 1
OBPS Supply and Demand Forecast (tCO₂e)

USEFUL LINKS

- [Environment and Climate Change Canada, Pan-Canadian Framework on Clean Growth and Climate Change](#)
- [Environment and Climate Change Canada, Pricing pollution: how it will work](#)
- [Environment and Climate Change Canada, Output-Based Pricing System](#)
- [Environment and Climate Change Canada, Technical paper: federal carbon pricing backstop](#)
- [Environment and Climate Change Canada, Review of the federal Output-Based Pricing System Regulations](#)
- [Environment and Climate Change Canada, Federal GHG Offset System](#)
- [Environment and Climate Change Canada, List of Recognized Offset Programs and Protocols for the Federal OBPS](#)
- [The Federal Carbon Pollution Pricing Benchmark](#)
- [Review of the OBPS Regulations: Consultation Paper](#)

REFERENCES

[Environment and Climate Change Canada, Canadian Environmental Sustainability Indicators: Progress towards Canada's greenhouse gas emissions reduction target](#)

[Minister of Environment and Climate Change Canada Mandate Letter](#)

[Environment and Climate Change Canada, Output-Based Pricing System Regulations](#)

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