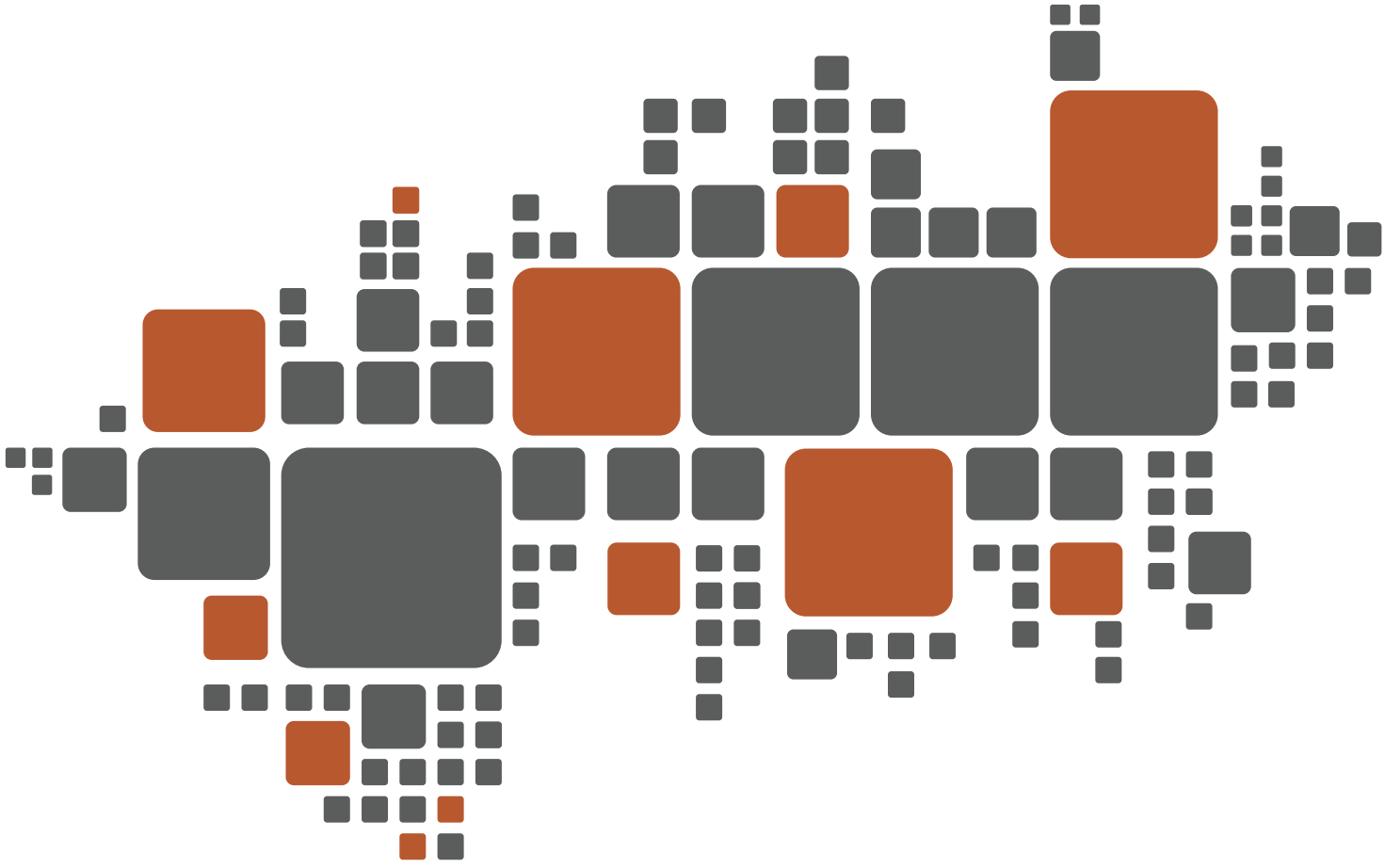
Discussion Paper:

Driving Effective Carbon Markets in Canada



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Purpose

Carbon pricing is the most efficient policy approach to achieve emissions reductions from industrial emitters and is central to Canada's Climate Competitiveness Strategy. It currently covers approximately one-third of Canada's total emissions, including oil and gas and heavy industry. Industrial carbon pricing has stimulated considerable decarbonization in Canada, and significant experience has been gained and lessons learned. There is now an opportunity to make more effective use of this critical measure.

As announced in the Climate Competitiveness Strategy, Canada is engaging provinces and territories to improve Canada's industrial carbon pricing systems. As part of that initiative, this paper seeks feedback on the federal 'benchmark', which sets the minimum national stringency standards that all provincial and territorial systems must meet while allowing flexibility in design to address jurisdictional circumstances.

The federal government is working to update the benchmark to ensure that industrial pricing provides the necessary incentives and framework to drive decarbonization, clean technology investment and competitiveness over the short- and long-term. The proposals and questions in this paper are intended to seek constructive engagement on strengthening and improving the benchmark while maintaining flexibility for provincial and territorial system design.

Core elements of effective and strong carbon markets for Canada

Effective industrial carbon pricing systems would position Canadian industry to contribute to strong economic growth at home and to compete for global market share abroad. To accomplish that, systems must balance the need to protect against carbon leakage[1] and adverse competitiveness impacts with the goal of ensuring that Canadian industry is able to invest and lead in low-carbon technologies and practices.

An effective and strong industrial carbon pricing system requires the following five elements:

1. **Predictable and durable:**
    - Carbon market participants can plan for the future with confidence in the value of their investments.
2. **Cohesive and efficient:**
    - Industrial carbon pricing contributes to the objective of building one Canadian economy, with clear and common requirements across Canada that minimize administrative burden and maximize efficiency.
3. **Incentivize investment**:
    - Carbon markets that function well change behaviour, incentivize investment in both decarbonization and the fast-emerging new sectors of the economy (clean technology and clean energy), and ultimately reduce emissions.
4. **Transparent:**
    - Carbon market participants have all the information they need to make efficient compliance and investment decisions.
5. **Protect competitiveness**:
    - Protect Canadian industry against adverse competitiveness impacts and carbon leakage by keeping compliance costs low.

Context: carbon pricing in Canada

Canada's approach to carbon pricing was designed to recognize the early leadership of Alberta, Quebec, and British Columbia, and to emphasize provincial and territorial flexibility, leaving many decisions – including the type of system – to each jurisdiction. Canada has 10 separate carbon pricing systems for large industrial emitters. Most provinces have opted for an output-based pricing system (OBPS, see text box on page 4), the approach that has been in place in Alberta since 2007 and is also used by the federal government. Quebec is the only province with a cap-and-trade system.

Type of industrial carbon pricing systems across Canada

Cap-and-trade system:

- Quebec (linked with California)

Tax and rebate system:

- Northwest Territories

Federal Output-Based Pricing System:

- Manitoba
- Prince Edward Island
- Yukon
- Nunavut

Provincial Output-Based Pricing Systems:

- British Columbia
- Alberta
- Saskatchewan
- Ontario
- New Brunswick
- Nova Scotia
- Newfoundland & Labrador

With the exception of the Northwest Territories' carbon tax, all these systems create carbon markets to support the delivery of the price signal; that is, the market value of tradable credits or allowances plays a key role in establishing the overall incentive to decarbonize.

Output-Based Pricing Systems

In an OBPS system, regulators set emissions intensity performance standards for each sector, activity or facility. Each facility then has an emissions limit on allowable emissions (the amount it can emit without paying a carbon price) that is calculated each year as a function of its production times the applicable emissions intensity performance standards. Each facility has a compliance obligation for each tonne of emissions above its limit. Each facility can also earn tradable performance credits for each tonne they emit below their limit. These credits can be used at other facilities with compliance obligations owned by the same firm, traded between firms, or banked for future compliance periods.

Facilities with a compliance obligation can comply by paying the set 'headline' carbon price to the regulator or by submitting credits, including surplus credits they have banked or acquired from another facility as well as eligible offset credits, where allowed.

This approach keeps total compliance costs low to protect against adverse competitiveness impacts and the risk of carbon leakage while creating a strong, continuous incentive for major decarbonization projects that bring a facility below its emissions limit. A facility that is emitting above its limit can avoid the cost of its compliance obligation by investing in decarbonization. Similarly, a facility that can reduce its emissions below its limit can earn revenue from the credits it can generate and sell to others.

In order for an output-based pricing system to function effectively, it must be designed to ensure there is more demand for credits than the expected supply. This will keep the credit market price close to the headline price, which in turn will create a predictable value that firms can use to estimate

the benefit of investing in decarbonization to avoid compliance costs and to earn revenue from credit generation.

Cap-and-trade Systems

Cap-and-trade systems set a maximum cap on emissions from covered facilities, which decreases over time to drive down emissions, and distribute tradable allowances equivalent to the cap. Facilities must submit allowances or offset credits (where permitted) for all their emissions. Allowances can be both auctioned and distributed for free. Regulators will generally distribute a share of allowances for free to trade-exposed industry to keep their costs low and minimize the risk of competitiveness impacts and carbon leakage. As is the case in an OBPS, facilities have an incentive to reduce emissions even if they receive free allowances since they can then sell excess allowances to other facilities.

Under the *Greenhouse Gas Pollution Pricing Act*, the federal government ensures that all large industrial emitters face a carbon price that is at least as stringent as the minimum national stringency standards to incentivize emissions reductions. Provinces and territories may design their own carbon pricing systems provided they meet common stringency requirements, or they can request the federal OBPS be implemented in their jurisdiction.

The key policy that guides this approach to ensuring a minimum national stringency of carbon pricing systems is the *Pan-Canadian Approach to Pricing Carbon Pollution*. This approach — known as the 'benchmark' — sets stringency criteria that all provincial and territorial industrial carbon pricing systems must meet. The main criteria in the current benchmark include:

- the **carbon price trajectory** – the annual minimum national carbon price for excess emissions (currently set for 2023 to 2030)
- a minimum **common scope** of GHG emissions that all systems must cover
- requirements that systems must maintain the **carbon pollution price signal** on all the GHG emissions they cover by not implementing any measures that could offset, reduce or negate that signal for regulated emitters and for investors
- **OBPS stringency** requirements to ensure that the systems are designed to maintain a marginal price signal aligned with the carbon price trajectory
- requirements that **eligible offset credits** represent real, additional, quantified, unique, verified and permanent GHG emissions reductions
- transparent **public reporting** to enable informed participation in the carbon markets

The federal government conducts regular assessments of provincial and territorial pricing systems to confirm that they meet the benchmark criteria. These assessments include extensive engagement with provinces and territories. If provincial and territorial carbon pricing systems do not meet the benchmark criteria and these issues cannot be resolved through engagement, the Minister of Environment and Climate Change may recommend to the Governor in Council that the federal OBPS be implemented in the province or territory.

Budget 2025 commits that the government will promptly and transparently apply the federal backstop whenever a PT system falls below the benchmark. In each province or territory in which the federal system applies, the federal government returns all carbon pricing proceeds to the jurisdiction of origin.

State of play – challenges with current carbon markets in Canada

While carbon markets are already contributing to industrial decarbonization, market participants, observers and experts have pointed to significant challenges with the suite of current systems.

The following reports and joint letter by Canadian industry discuss challenges with Canadian carbon pricing while acknowledging its effectiveness:

- A roadmap to modernize Canada's large-emitter trading systems
- Carbon Pricing in Transition: How to align Canada's many systems to strengthen competitiveness and climate action
- Market Force: How Canada's carbon markets can be an engine of growth
- Canadian industry proposes five fixes to industrial carbon pricing

Supply and demand

- The average 'market price' for credits, or the 'effective credit price', is a key part of the decarbonization incentive from carbon markets and is driven by the supply and demand balance in the market.
- In order to be effective, an OBPS should generate more demand than supply on an ongoing basis. This will result in a market price that is close to the headline carbon price (the price a firm must pay to the government for a tonne of emissions above its limit if it does not submit credits for those emissions).
    - In some Canadian markets, there is an over-supply of credits or a high risk of imminent over-supply. This can create a market price that is below the headline price.
        - Supply and demand similarly affect allowance prices and the overall price signal in cap-and-trade systems

Long-term predictability

- Policy uncertainty about the price trajectory and the longevity and stringency of existing systems creates investment uncertainty, as the long-term value of avoided compliance costs and future credit generation is crucial for decarbonization investment decisions

Transparency

- Poor transparency around supply, demand, trading volumes and credit price data further impacts predictability and the ability to make informed investment decisions

Market size and fragmentation

- Small markets and those with limited market participation are more likely to lack the liquidity needed to function effectively

- In addition, firms operating in multiple provincial carbon markets cannot use credits across their business portfolio, and face a higher administrative burden and complexity due to the need to comply with multiple pricing systems

Improvements to the federal benchmark are needed to address these challenges.

Beyond the improvements to the benchmark outlined in this paper, there are various other changes that would also improve the effectiveness of industrial carbon pricing, such as improving alignment and harmonization among systems, and considering linking systems over the longer term. The Government proposes to consider these issues outside of benchmark requirements, via further collaboration among federal, provincial and territorial governments.

Strengthening the federal benchmark

The feedback being sought is organized around the second, third and fourth core elements mentioned above: cohesive and efficient, incentivize investment, and transparent. As a central element of pricing systems, competitiveness is considered in all areas.

While it is beyond the scope of this paper to provide options on the price trajectory, the Government recognizes that it will be important to address and welcomes input on that topic.

The Government is also interested in stakeholder views on whether additional changes to the benchmark criteria are needed beyond those presented in this paper. Any proposals should focus on ensuring criteria deliver a minimum level of carbon pricing stringency across Canada while maintaining flexibility for provincial and territorial regulators to design systems to fit the circumstances of their jurisdiction.

Note that most sections below focus on requirements for OBPSs, the most common type of market in Canada. Considerations specific to cap-and-trade systems are discussed separately where needed. The Annexes to this paper provide more details on proposed changes as well as a consolidated list of questions.

Where possible, please provide data and evidence to support your feedback.

Cohesive and efficient: broad coverage

Common scope of coverage

Current requirement: The current benchmark requires that carbon pricing systems maintain a common scope, specifically, that they cover, at a minimum, an equivalent percent of combustion emissions as the federal backstop if it applied in the jurisdiction. It also requires market-based systems to cover industrial process emissions, and to limit eligibility for OBPSs, performance rebates, or the free allocation of allowances to sectors that are at risk of carbon leakage and competitiveness impacts of carbon pricing. However, these criteria were designed when the fuel charge was still in place, and facilities not subject to industrial pricing systems were instead subject to the fuel charge.

The removal of the fuel charge requires rethinking how scope of coverage should work. The government is committed to refocusing federal carbon pollution pricing requirements on ensuring carbon pricing systems are in place across Canada on a broad range of greenhouse gas emissions from industry. Part of this will involve putting in place common scope requirements that clearly define the industrial sources to be covered across jurisdictions to ensuring a level playing field across jurisdictions.

Canada proposes to modify the benchmark to specify the common scope criteria explicitly to ensure consistent minimum coverage across systems. This paper provides three options for comment.

Each option would ensure consistent coverage of a broad range of GHG emissions. They focus on the current scope of facilities and activities covered by industrial carbon pricing systems across Canada and would not require coverage of facilities in sectors that are generally considered non-industrial (agriculture, forestry, fuel distributors, construction, and hospitals and other non-industrial buildings).

With the exception of methane from venting and fugitive sources from conventional oil and gas facilities, which would be exempted to avoid overlap with methane regulations, each option would require coverage of all emission types, including stationary combustion, process and fugitive emissions.

All options would cover the majority of Canada's industrial emissions (75%-80%) and a large number of facilities. They are estimated to cover approximately 40% of Canada's total GHG emissions and in the range of one thousand facilities at a national level. The options vary by the extent to which they balance GHG reduction potential with competitiveness and carbon leakage risks, the number and diversity of market participants that would be covered (which influences market function and liquidity), and in regulatory complexity.

The benchmark would provide flexibility for economy-wide systems, such as Quebec's cap-and-trade system, by recognizing that industrial facilities can be covered either by minimum coverage requirements or via the full carbon price through buying fuel that has had the carbon price levied on it at the fuel distributor level.

A coverage approach can be threshold-based (require systems to cover all facilities emitting more than a particular threshold), activity-based (cover facilities undertaking specific activities) or a combination of the two. The three options currently under consideration are:

1. A **threshold-based approach** that would cover all facilities in specific sectors emitting above a certain level annually. Thresholds under consideration are 10kt per year (Option 1A) and 25kt per year (Option 1B). A 10kt threshold is in-line with the current level of coverage under a number of existing carbon pricing systems in Canada when voluntary participation is considered. This level of threshold would cover a large number of facilities and industrial activities, which would support market function and liquidity. However, Option 1A could create intra-sectoral competitiveness risks in some sectors. These risks could arise when a significant number of smaller facilities fall below the threshold, potentially resulting in a competitive advantage as compared to larger facilities covered by carbon pricing. A 25kt per year threshold would reduce these risks by covering fewer industrial activities where there is a significant split between emissions above and below the threshold. However, the lower number of facilities and activities covered under Option 1B may negatively impact market function and liquidity in smaller provincial systems.

2. An **activity-based approach** that would cover facilities undertaking a specific set of activities. The option for this approach that is under consideration (Option 2) would require coverage of facilities emitting 10kt per year or more carrying out activities set out on a prescribed list. It is proposed that the listed activities be those where the majority of emissions would be covered by the 10kt threshold. This approach is expected to mitigate intra-sectoral competitiveness risks of a 10kt threshold, as described above for Option 1A. Consideration is also being given to a threshold of less than 10kt for conventional oil and gas activities, where large numbers of smaller facilities make up a significant portion of the sector's emissions and have been covered by some provincial carbon pricing systems as "aggregated facilities".

3. A **combination-based approach** that has features of threshold and activity-based approaches, with the objective of having the broadest coverage and GHG emission reduction potential. The option for this approach that is under consideration (Option 3) would set a 10kt per year threshold and cover the same activities as Option 1A, as well as require coverage of facilities emitting less than 10kt per year for conventional oil and gas activities. Although designed to have the broadest coverage of emissions, the difference in coverage compared to the other options is relatively minor.

Please refer to Annex A for additional details on the options under consideration.

Questions

Coverage and scope considerations

- What are the considerations for covering smaller facilities (between 10kt and 25kt) in industrial and manufacturing sectors? For example, how should administrative burden be accounted for?
- What should the minimum coverage threshold be for small oil and gas facilities? What are the considerations for covering small oil and gas facilities emitting less than 10kt annually?
- What are the impacts on intra-sectoral competitiveness (competition between facilities in the same sector) of covering only some facilities, e.g. covering only facilities emitting 10kt or more? How would this affect international and interprovincial competitiveness?

The different approaches to setting minimum coverage requirements

- What are the advantages and disadvantages of a threshold-based approach, an activity-based approach, or a combination of the two?
- What are your views on the options in Annex A? Do you have alternative options to propose?

Incentivize investment

Maintaining the carbon price signal

Current requirement: The benchmark requires that provinces and territories do not take measures that directly offset, reduce, or negate the signal sent by the carbon price in whole or in part. This includes system design features, direct rebates tied to carbon costs, and any non-pricing measures that cancel out or block the price signal.

This criterion would be maintained in the updated benchmark.

A key issue on which the government is seeking feedback is the impact of proceeds return programs and other government funding for industrial decarbonization. Some jurisdictions have implemented or are considering programs that return all or part of the carbon price paid at the facility or corporate level with conditions requiring the funds to be used for decarbonization projects. This type of program can be referred to as an 'Emissions Reductions Account' or ERA.

Some jurisdictions are also considering new compliance pathways that would allow a facility to comply (avoid paying the carbon price) by demonstrating investment in eligible decarbonization projects.

These approaches to returning proceeds are more likely to negatively impact the price signal and demand for credits than competitive or merit-based programs for accessing carbon pricing revenues, as the latter do not tie the amounts received to a facility's compliance payments.[2]

ERAs and similar approaches risk undermining the price signal when funding is used to support 'business as usual' investments (for example, spending on needed capital improvements that also have some

impact on reducing GHG emissions). They also risk undermining market prices for credits by reducing the demand for credits created by compliance obligations, affecting a jurisdiction's capacity to meet the stringency test described below. For these reasons, these approaches do not meet the current benchmark.

That said, the government is interested in views on whether there are feasible options to allow ERAs or similar approaches while maintaining both the price signal and market function.

If these options exist, then the government could update the benchmark to permit their use.

Questions

- What approaches, if any, could allow systems to incorporate ERAs and similar mechanisms that would both maintain the price signal and protect demand in OBPS markets? Can you provide evidence or supportive analysis, and what changes to the benchmark criteria would be needed to enable them?
- For instance, could any of the following conditions on the use of ERAs protect the price signal and market?
    - Limiting eligible spending of ERA funds, for example requiring spending on only specific pre-approved technologies
    - Limitations on the total use of ERAs for compliance (e.g., <5%) to maintain market demand for credits
    - When assessing systems with ERAs against the OBPS 'net demand' tests, reducing forecast demand by the amount of expected use of ERAs

Stringency of output-based pricing systems

Current requirement: The OBPS stringency criterion requires that credit markets are designed to maintain the minimum national carbon price signal, across all regulated emissions. An important distinction is between the 'headline' price set in an OBPS and the market price for tradable credits. OBPSs allow facilities to meet their compliance obligation directly by paying a set price (the headline price) or by obtaining and submitting tradable credits. The price for tradable credits is set by the market through negotiations between buyers and sellers. Under the benchmark, systems must align their headline price with the minimum national carbon price. To ensure market prices stay close to that price, a key requirement is that at the minimum price each year, the forecast expected demand for compliance credits (including offset credits where permitted in a system) must be greater than the expected supply. This is referred to as "net demand."

Ensuring there is more demand for compliance credits than supply should keep market prices for credits close to the minimum national carbon price, with some level of discount due to the transaction costs of buying and selling credits. If systems have significantly more supply than demand, then credit prices can be expected to settle at lower levels. If facilities and investors expect credits to trade for lower prices long term, it can disincentivize abatement opportunities that might otherwise

move ahead if market prices for credits are expected to remain close to the minimum national carbon price.

The Government plans to maintain the annual net demand requirement in the benchmark with potential additions aimed at keeping market prices for credits close to the headline price:

- to address the risk from a large supply of banked credits
- to create a net demand 'buffer' requirement

The annual net demand requirement is primarily assessed through modelling. Where a province or territory believes the modelled results over- or underestimate supply or demand, additional evidence provided by the jurisdiction also informs the assessment. The analysis incorporates estimated offset supply and any credit use limits the system has set. The test is forward-looking. For example, to pass the test conducted in 2022, the analysis had to show annual net demand from 2023-2030. This ensures that changes in supply and demand over time are considered, including the effects of a rising carbon price and tightening performance standards, as well as dynamic impacts expected from other GHG mitigation policies, including tax and other incentives.

Beyond setting performance standards, tightening rates, and compliance use limits, provinces and territories could implement other design features to ensure strong net demand over time. Often referred to as market stability mechanisms, these can include dynamic tightening of performance standards based on supply and demand levels or past market prices, or credit purchasing mechanisms to absorb excess supply. Similarly, some stakeholders have proposed options for 'price floors' or 'price collars' aimed at ensuring market prices for credits stay within a certain range. The Government would welcome the use of these features, and would consider their impact on forecast net demand and price as a potential alternative mechanism to meet any new requirements regarding banked credits or a net demand buffer.

Banked credits

Banked credits are a source of credit supply. The 2022 assessments included only limited consideration of the impact of banked credits on the credit price. In part, this was because most of the proposed provincial pricing systems were relatively new and it was not anticipated that they would accumulate significant credit banks in the near-term. As systems have matured, however, market observers have pointed to increasing downward pressure on market prices from the large credit banks that have developed in some systems.

To reflect the evolution of OBPS markets, the Government plans to improve the net demand requirement by adding a robust requirement that minimizes the potential negative impacts of banked credits on market prices. The benchmark will include tests to estimate the size of credit banks and consider the likelihood that an excess supply of banked credits will negatively impact the market price.

The Government proposes two new requirements. First, that the demand for credits in any given year should be large enough to absorb any credits that would otherwise expire. Second, that annual net demand should be maintained at a minimum at one third of the forecast pre-assessment volume of banked credits.

Net Demand 'Buffer'

The Government is also exploring the value of requiring systems to create a minimum amount of net demand, referred to as a net demand 'buffer'. The purpose of this buffer would be to ensure that systems are designed to have more demand for compliance credits than supply even in situations with higher-than-expected supply or lower-than-expected demand, which can arise because of uncertainties in decarbonization costs, economic growth, or firm behaviour.

To add this requirement, the annual net demand test would be adjusted to require that forecast demand for credits exceed forecast supply by a given amount each year, scaled to reflect the size of the system.

This could increase certainty for regulators and stakeholders that market prices are likely to stay close to the headline price, and therefore incentivize decarbonization investments up to that price level. However, the additional level of compliance obligations required to create the buffer could increase overall compliance costs for facilities.

Annex B describes the proposed banking test and of a possible net demand test to facilitate feedback.

Questions

Net demand test design and alternatives

- Beyond the elements described above and in Annex B, are there other market design elements that should be accounted for in the net demand test?
- Are there complementary or alternative tests to the forward-looking annual net demand test that should be considered when assessing the OBPS stringency criteria?
- Would markets be more stable and outcomes more certain if systems were designed to have annual demand exceed supply by a given amount (i.e. designed with a net demand 'buffer')?
    - If so, what range would be appropriate for the size of such a buffer and how can the requirement be adjusted to reflect different system sizes?
    - Should the requirement for a buffer be tied to a proportion of total compliance obligations, covered emissions, or another metric?

Credit supply and market functionality

- What are the key considerations that affect decisions by credit generators on when to sell or use banked credits in current systems?
    - How would the changes proposed in this paper affect those decisions?
- What evidence and data points to the role of different considerations (price trajectory, market supply and demand, etc.)?
- What metrics should be considered for assessing the risk that banked credits will depress market prices?
- What volume of banked credits can be maintained in a functional market without a significant risk of depressing market prices?
    - Should tests consider this volume relative to covered emissions, credit demand, or net demand in the system?
- How do credit expiry rules affect the manageable volume of credits?

Stringency in cap-and-trade systems

Current requirement: Some current criteria are consistent or similar for both cap and trade and explicit price-based systems: common scope; reporting, offset integrity and maintaining the price signal. A key difference is the test to determine whether a cap and trade system has caps that are equivalent to the federal price trajectory. Rather than a price trajectory, for cap and trade systems the benchmark requires declining annual GHG emissions caps from 2023 to at least 2030 that correspond, at a minimum, to the annual projected emissions levels if the MNCP were applied in the province or territory over the same time period, based on modeling (the 'maximum emissions cap' requirement).

The current requirement reflects the economic theory that, with all else being equal, a cap and trade system that sets caps at a level similar to expected emissions under an explicit price-based system should result in allowance prices that are close to the price in the explicit price-based system.

Banked allowances and offset credits are additional sources of supply. The 2022 assessments included only limited consideration of the impact of these credits on the stringency of cap and trade systems.

Question

- How should the benchmark consider the supply of offset credits and banked allowances that cap-and-trade participants can use for their compliance obligations when assessing emissions caps against benchmark criteria?

Transparency

Public reporting

Current requirement: Provinces and territories must publish regular, transparent reports and/or information on the key features, outcomes, and impacts of their carbon pricing systems, as well as on compliance information and carbon market data where publication could enhance accountability, and carbon market function and oversight.

Market observers, stakeholders and experts have pointed to a lack of timely, public information on key market metrics as impeding industry and investor ability to respond to the carbon price. Key metrics include outstanding compliance obligations, credit supply, credit bank, credit trading prices and trade volumes.

Federal benchmark reporting criteria currently require provinces and territories to publish compliance and emissions data but do not mandate disclosure of credit prices or trading volumes or set specific timelines for reporting. Currently, Quebec (jointly with California) provides comprehensive, systematic reporting of quarterly allowance auction results as well as transaction-based price data for all unit types, and third-party price estimates are available for Alberta's market. Limited or no public information on credit prices is available for other jurisdictions. Most other systems provide public reports but reporting on OBPS results generally lag actual compliance years by one or more years, in part due to deadlines for emissions reporting and compliance, and some jurisdictions have delayed public reporting more significantly.

The Government is considering maintaining current criteria and expanding public reporting requirements to include data on market prices and transaction volumes as well as setting deadlines for reporting to ensure timely information to support stringency. A key issue, particularly for smaller markets, will be setting requirements that allow for more limited reporting where publication would create competitiveness risks for facilities.

Annex C provides additional details on the proposed changes.

Questions

Key market data and metrics

- What type of credit price information is required to support decision making?
    - For example, is minimum, maximum and average volume-weighted credit price information in a given reporting period sufficient?
- What challenges exist in reporting these metrics?
- Is information on trading volumes required?
- What other metrics should systems consistently publish?

Reporting frequency and transparency

- For systems where compliance periods extend beyond a single year, what interim reporting requirements could be implemented to ensure timely access to relevant market data?
- What reporting frequency, for instance quarterly or annually, is feasible for OBPS carbon markets, and what operational or technical constraints could impact this schedule?
    - What time delay is acceptable between a reporting period and publication?

Confidentiality and practical constraints

- What operational, technical, or regulatory constraints might limit a jurisdiction's ability to publish this data, and what solutions would be recommended to address those constraints?
- Which methods or strategies, such as data aggregation, masking, or delayed publication, would be most effective to maintain confidentiality when reporting price and market trade data while ensuring meaningful transparency?
- What should be considered justifiable grounds for limiting publication of transaction data due to competitiveness concerns for individual facilities?

Benchmark assessment process

Current requirement: The initial benchmark, introduced in 2016, applied from 2019-2022 to assess provincial and territorial systems annually. The current benchmark, introduced in 2021, effectively sets a four-year cycle for assessments. The Government assessed systems in 2022 for the 2023-2030 period and committed to a re-assessment in 2026 for the 2027-2030 period. The benchmark indicates that once in place, the federal backstop will remain in place until the next scheduled assessment. It also indicates that the Government will monitor provincial and territorial systems and reassess any major changes in between scheduled assessments to ensure they meet the benchmark criteria and has the ability to stand up the backstop if not.

The government is considering whether changes to this process are required to increase assurances that systems will remain sufficiently stringent. Such assurances could provide additional certainty for provinces, territories, industry, and investors to support long-term decarbonization projects.

This could be accomplished by changes to assessment periods, the minimum backstop application period, timelines for assessments, and publication of benchmark assessment details.

Questions

- Should the next benchmark assessment cover a shorter or longer timeframe? What are the advantages/disadvantages?
- How often do systems need to be reassessed to ensure designs are generating sufficient demand to maintain credit prices?
- Is the current minimum four-year backstop application period sufficient to provide clarity for investment decisions?
- Should the government publish details of benchmark assessments? If so, which information is needed to support market function and at what step in the process?

Engagement scope and process

Engagement this winter will inform an updated benchmark. Stakeholders are asked to provide written comments in response to this paper by Friday, January 30, 2026, via email to tarificationducarbone-carbonpricing@ec.gc.ca to inform this update. Through winter 2026, ECCC officials will also lead technical engagement with provinces and territories.

Once the updated benchmark is published, the government will set out next steps on federal assessments and decisions on where to apply the federal 'backstop' output-based pricing system (OBPS).

As outlined in the State of Play section, while this engagement will not cover issues related to linking, harmonization of carbon markets, and enhancing liquidity, the Government of Canada proposes to play a convening role to explore these broader issues with interested provinces and territories.

There are additional actions provinces and territories can take, beyond those discussed in this paper, that can help them meet the benchmark criteria and ensure effective, predictable pricing systems. These include implementing carbon contracts for difference (CCFDs) as the federal government has done through the Canada Growth Fund. These actions could significantly increase confidence in future price levels, but are outside of the scope of the federal benchmark.

Once any updates to the benchmark are published, the federal government will engage on potential updates to the federal Output-Based Pricing System Regulations to ensure a strengthened backstop system.

Canada recognizes that some provinces have introduced or proposed changes that may impact the stringency of their systems. The government's view is that these changes increase uncertainty for investors and industry. The government will continue to monitor the stringency of provincial and territorial pricing systems during the engagement period. Once the benchmark is updated, all provinces and territories will need to clearly demonstrate that their system meets the standards in the benchmark.

Annex A) Common scope – minimum coverage options

As described in the body of this document, three options are being considered for setting revised common coverage requirements. The three options under consideration differ in terms of how facilities are included, either based on an emissions threshold, the types of activities, or a combination of both. This annex sets out additional details for each option. The estimated impacts of the options on emissions, facility and activity coverage are summarized below and compared to the estimated current coverage of existing systems.

Under all options, it is proposed that carbon pricing systems would be required to cover:

- The GHGs listed in Schedule 3 to the Greenhouse Gas Pollution Pricing Act (GGPPA)
- GHGs from the following emission types for all covered facilities:

    - stationary fuel combustion
    - industrial process
    - industrial product use
    - venting (except for methane emissions from NAICS 211110)
    - flaring
    - fugitive (except for methane emissions from NAICS 211110)
    - on-site transportation
    - waste
    - wastewater emissions

Methane emissions from venting and fugitive emissions sources from facilities undertaking the activities in NAICS 211110 - Oil and gas extraction (except oil sands), would be exempted to avoid overlap with oil and gas methane regulations.

Beyond these common requirements, details of the specific options under consideration are outlined below.

Option 1: Threshold-based approaches

Options 1A and 1B would cover all facilities in industrial and manufacturing sectors emitting at or above a certain annual threshold.

Option 1A

Carbon pricing systems would be required to cover facilities in industrial and manufacturing sectors emitting 10kt CO2e or more per year. Specifically, carbon pricing systems would be required to cover facilities undertaking any activities in sectors or sub-sectors in the following NAICS codes: 211 (Oil and gas extraction), 212 (Mining and quarrying (except oil and gas)), 221112 (Fossil-fuel electric power generation), 31-33 (Manufacturing), 486 (Pipeline transportation).

Option 1B

Carbon pricing systems would be required to cover facilities in industrial and manufacturing sectors emitting 25kt CO2e or more per year for activities in the same sectors and sub-sectors listed for Option 1A.

Option 2: Activity-based approach

Under this approach, a list of activities would be published in the benchmark and carbon pricing systems would be required to cover facilities undertaking these activities.

It is proposed that the listed activities include industrial and manufacturing activities for which it is feasible for carbon pricing systems to cover the majority (>75%) of emissions in a sub-sector with a threshold of 10kt per year. This approach would cover key activities where most of the emissions would be covered and would be expected to mitigate risks of adverse impacts on intra-sectoral competitiveness. That is, it would seek to cover all facilities undertaking an activity so as not to provide a competitive advantage to smaller facilities producing the same products.
Based on a preliminary assessment of activities meeting the criteria above, carbon pricing systems would be required to cover:

- facilities carrying out an activity listed below and that emitted 10kt of CO2e or more per year
- facilities emitting less than 10kt per year and undertaking the activities in NAICS 211110 - Oil and gas extraction (except oil sands), such that the majority of emissions from this sector would be covered

Option 3: Combination approach

This approach would specify both thresholds and activities with an objective of covering the broadest scope of emissions. This approach would be most effective at covering a wide range of facilities and maximizing emissions coverage, it would therefore be most effective at incentivising reductions from carbon pricing.

Carbon pricing systems would be required to cover facilities in industrial and manufacturing sectors emitting 10kt CO2e or more per year for the same activities listed for Option 1A and facilities emitting less than 10kt per year and undertaking the activities in NAICS 211110 - Oil and gas extraction (except oil sands), such that the majority of emissions from this sector would be covered.

Preliminary list of activities proposed for inclusion under Option 2[3]

Oil and gas and Mining

- Heavy and Light oil production
- Natural gas production, processing and gas gathering
- Offshore Oil Production
- In situ oil sands, oil sands mines and upgraders
- Natural Gas, oil and CO2 Pipelines
- Refineries
- Metal, Diamond, Potash, Salt and Coal Mining

Chemicals and fertilizers

- Petrochemicals - iso-octane, aromatic hydrocarbons, styrene, ethylene, propylene, and higher olefins
- Industrial gas manufacturing - hydrogen
- All other basic inorganic chemical manufacturing - carbon black, phosphine, nuclear fuels, and titanium dioxide

- Other basic organic chemical manufacturing - ethylene glycol, ethanol, methanol, ethylene oxide, and citric and lactic acid
- Resin and synthetic rubber manufacturing - polypropylene, polyethylene
- Artificial and synthetic fibers and filaments manufacturing - Nylon
- Fertilizer production (except potash fertilizers)

Other manufacturing

- Primary Iron and Steel Mills and Ferro-Alloy Manufacturing (Integrated facilities, DRI-EAF steelmaking, EAF steelmaking, Ferro-Alloy)
- Secondary steel-making (Hot rolled steel including hot wire drawing)
- Primary Aluminium
- Base Metal Smelters and Refineries
- Iron Ore Pelletizing
- Cement
- Lime
- Gypsum
- Pulp and paper mills
- Autos
- Polystyrene Foam Products
- Brick
- Glass
- Wet Corn Milling
- Sugar

Fossil fuel-fired electricity

Estimated impacts of the options on emissions, facility and activity coverage

Incenting Emissions Reductions - Higher coverage of emissions creates higher emission reduction potential

Option 1 (Single Threshold: 10kt, 25kt)

- *Option 1A: 10kt threshold* – 273Mt emissions covered[4], equivalent to 39% of Canada's emissions[5]
- *Option 1B: 25kt threshold* – 264Mt emissions covered, equivalent to 38% of Canada's emissions (marginally lower potential for emissions reductions)

Option 2 (Activity-Based)

- 278Mt emissions covered, equivalent to 40% of Canada's emissions

Option 3 (Combination)

- 284Mt emissions covered, equivalent to 41% of Canada's emissions (marginally higher potential for emissions reductions)

Supporting Market Function - More participant diversity supports better market function

Option 1 (Single Threshold: 10kt, 25kt)

- *Option 1A: 10kt threshold* – 1,395 facilities and 184 activities[6]
- *Option 1B: 25kt threshold* – 765 facilities and 132 activities (lower support for market function)

Option 2 (Activity-Based)

- 1,177 facilities emitting 10kt or more per year, and oil and gas facilities emitting less than 10kt per year (~900 aggregates / ~25,000 Petrinex facilities), and 90 activities

Option 3 (Combination)

- 1,395 facilities emitting 10kt or more per year, and oil and gas facilities emitting less than 10kt per year (~900 aggregates/ ~25,000 Petrinex facilities), and 184 activities (highest support for market function)

Mitigating Intra-sectoral Competitiveness Risks - by minimizing coverage of activities with a high risk of covered facilities competing with non-covered facilities

Option 1 (Single Threshold: 10kt, 25kt)

- Option 1A: Likely to cover some facilities that are competing with facilities not subject to carbon pricing (highest risk)
- Option 1B: Lower likelihood than 1A of covering some facilities that are competing with facilities not subject to carbon pricing

Option 2 (Activity-Based)

- Designed to cover the majority of emissions from activities to mitigate intra-sectoral competitiveness risks (lower risk)

Option 3 (Combination)

- Likely to cover some non-oil and gas facilities that are competing with facilities not subject to carbon pricing

Existing Carbon Pricing Systems

Existing carbon pricing systems are estimated to cover 252Mt of emissions on a mandatory basis (36% of Canada's emissions) and 595 facilities. When both mandatory and voluntary facilities are included, existing carbon pricing systems are estimated to cover 274-281Mt of emissions (between 39% and 40% of Canada's emissions), 1,456 facilities emitting 10kt or more per year, as well as small oil and gas facilities (up to 25,000 Petrinex facility types reporting as aggregated facilities).[7]

Annex B) Stringency of output-based pricing systems

The OBPS stringency test specifies that systems must be designed to maintain a marginal price signal equivalent to the MNCP across all covered emissions. The assessments are based on federal modelling, with provincial and territorial input. Results must show that the projected sum of all regulated facilities' compliance obligations, adjusted for any compliance use limits, is greater than the projected sum of tradeable units created in that year after industries have responded to the price signal in a given compliance period, that is, that the marginal price is holding. This assessment considers model results as

well as information provided by the jurisdiction, such as alternative modelling results or compliance data. This test can be referred to as the 'annual net demand test'.

Offset credit generation is considered as part of the annual net demand test, with forecasted supply for each year either generated within the model or added to model results.

Modelling

The assessment relies on ECCC's multi-region, multi-sector, computable general equilibrium model of the Canadian economy (EC-PRO). EC-PRO captures important differences between provinces and territories and simulates the response of the main economic sectors in each jurisdiction, and their interactions with each other, including interprovincial and international trade. To accommodate analysis of energy and climate policies, the model incorporates information on energy use and emissions.

A key input into the EC-PRO modelling is the Department's annual greenhouse gas emissions projections, along with the underlying energy and economic forecasts. As noted in the benchmark text, benchmark assessment modelling considers the expected impact of other GHG emissions mitigation measures. Exact measures to include in modeling is determined before the assessment period and includes measures from the most recent "Reference Case" and in some cases relevant and impactful measures included in the "Additional Measures" scenario.

To derive estimated annual compliance obligations and credit supply for each system, provincial systems are modelled based on provincial and territorial estimates of effective average performance standards or free allocations by sector. The model then forecasts how firms will react to the full MNCP and their performance standards along with other climate measures. A key general assumption is that all firms will undertake any emissions reduction options that are lower cost than the full MNCP for that year.

Adjustments

Model results show compliance obligation or credits generated by sector, which are then adjusted for real-world data and policy design features which are not fully represented in the modelling. Key adjustments made to emissions and compliance obligations include the following:

- Partial coverage: to reflect where only a portion of a sector participates, due to eligibility thresholds, etc.
- Compliance-use limits: only a portion of compliance obligations are eligible to be met via tradable credits, that is, only a portion represents demand for credits.
- Projected offset credit supply where exogenous to the model.

Results are shared with provinces and territories who can provide 'conflicting information' if they believe model results for a sector are inaccurate. If this information is sufficient and reliable, the modelling results are adjusted to reflect this input, including for other provinces and territories where relevant. This is particularly relevant for credit supply from projected technological changes which are subject to potential uncertainty and timelines.

An OBPS is deemed to meet the annual net demand test if the final adjusted model results show more total demand (compliance obligations) than total credit supply created in the system each year.

Banking risk

EC-PRO modelling of OBPSs assumes all credits are sold in the year they are earned. In all Canadian systems, however, credits can be banked and submitted for compliance, or sold, in a later year.

With increasing carbon prices, there is a strong incentive for facilities to hold onto credits earned in earlier years of the benchmark period and either sell them or submit them for their own compliance in later years. Banking is a feature of these markets and can provide benefits such as incentivizing early action by a firm or smoothing compliance costs. In systems with strong annual net demand and investor confidence in the long-term viability of the market, future years can be expected to absorb banked credits, and a steady-state volume of banked credits can be maintained.

However, in practice, if a significant bank of credits accumulates, it creates the risk of downward pressure on prices if enough of the bank is sold in a short period of time. Unforeseen economic events or policy uncertainty can cause credit holders to market more credits than can be used for compliance, which could lead to prices dropping. Because of this, banked credits pose a risk to the desired supply and demand balance and thus could negatively impact the marginal price signal in OBPS markets. This risk is directly related to the volume of banked credits relative to the size of the system.

Proposed approach to addressing the risk of banked credits

To minimize the risk to market prices from banked credits, the benchmark would set two new requirements related to banked credits:

a) 'expiry test': that demand in any given year is large enough to absorb any credits that would otherwise expire without use in a scenario where all facilities maximize banking behaviour, up to the final assessment year
b) 'magnitude test': that net demand in any given year is large enough to absorb enough banked credits to limit the risk of banked credits depressing the price

For both tests, the first step would be to estimate the expected bank of credits entering the first year of the assessment period. Assessments would use real-world data where possible and projections for any gap between historical information and the first assessment-year. For example, if assessing systems in 2026 for the 2027-2030 period, assessments would use the most recent data available from provinces or territories, likely 2024 data, and make assumptions about demand, supply and banking behaviour for 2025 and 2026 to calculate the expected bank entering 2027.

Expiry test

The 'expiry test' would assume all credit holders bank their credits for as long as possible and have 'perfect information' about the market within the assessment period (i.e., can foresee total supply and demand for assessment years). The supply of credits expiring beyond the assessment period would be assumed to be marketed during the assessment period. While in reality, credit holder behaviour will vary and holders do not have full information, these assumptions are useful for testing the risk that some credits may not be able to be marketed at full price due to expiry dates.

The test would assume that credits are marketed in the latter of the final assessment period year or their expiry year unless this leads to oversupply, in which case credits would be sold in previous years as long as there is sufficient demand to absorb them. For example, if 8Mt of credits are expiring in 2029,

and the system has only 5Mt of 'unmet' net demand in that year, 2Mt in 2028, and 1Mt in 2027, the model would assume those 8Mt of credits are used for compliance in those years and would not expire.

The goal of the test would be to assess whether any credits would be at risk of expiring without use. Assuming that credits would be marketed within the assessment period mitigates the risk that future uncertainty results in credits being prematurely banked without sufficient demand, even where systems do not incorporate expiry rules or where banked credits are currently limited. Systems would meet the test as long as modeled demand at the benchmark price is sufficient so that no banked credits are projected to expire without being used. This is designed to mitigate the risk that there is insufficient demand in the future due to emissions-intensity improvements over time. Where there is no excess of any particular vintage of existing credits, economic growth and sufficient annual tightening of standards should typically limit the risk of expiring credits.

Magnitude test

The 'magnitude test' would use modeled net demand test results and assume that banked credits are marketed every year during the assessment period, with the oldest vintages of credits used first, up to the total level of forecast net demand in the system in that year. This treats net demand as the ability of the system to draw down the bank of credits without affecting the marginal price signal. The remaining volume of banked credits would be the 'excess bank' of credits and would be assumed to be carried forward into the following year.

The magnitude test would seek to ensure that the projected excess bank does not exceed a manageable size relative to the size of the system itself. The overall goal would be to ensure that the excess bank in each year is unlikely to significantly lower prices even if a large share of it is marketed in a single year.

Since the magnitude of potential price impacts depends on the size of the bank relative to the size of the system and volume of demand, a key question is what metric to compare the excess bank against when setting the maximum acceptable size of the excess bank.

There are three potential metrics to assess the size of the bank:

- gross demand
- total covered emissions
- annual net demand

The Government proposes that the magnitude test would consider annual net demand relative to the size of the pre-assessment bank of credits. This 'minimum-demand approach' would require that for each year of the assessment period net demand must be no less than the specified threshold.

Maintaining a persistent level of net demand mitigates the risk to the price of factors external to the market that can influence the decision to market banked credits. Beyond the initial year of the assessment, this would be assessed according to the average net demand over multiple years to account for small deviations over time between annual decarbonization outcomes relative to tightening of standards.

Explicitly tying annual net demand to the estimated pre-assessment bank of credits gives a clear threshold for systems to meet and can be directly targeted by regulators. Relying on net demand rather than gross demand or covered emissions allows the metric to be sensitive to the options available for

mitigating the banking risk. In other words, this metric would directly account for changes to supply, demand, compliance-use limits, or the historical bank.

By setting the threshold according to pre-assessment outcomes, the proposed approach does not require estimating future banking behaviour over the assessment period. Relative to an approach that compares against an annual bank of credits, there is less risk that mis-specified banking behaviour results in either a system being more stringent than necessary or not being able to sufficiently absorb marketed credits.

The Government is considering a net demand threshold of 1/3 of the pre-assessment bank. This implies that the bank, if marketed, could be absorbed within 3 years without depressing prices. Setting the threshold at this level is expected to result in a stable market and a sustainable volume of banked credits. A more stringent requirement would increase the future stringency of the system and further incentivize banking, limiting the need for that stringency in the earlier years. Conversely, a less stringent requirement may neither increase the incentive to bank nor allow the market to sufficiently absorb banked credits in the near-term.

Net demand buffer

The Government is also exploring the value of requiring systems to create a minimum amount of net demand or a net demand 'buffer'. This concept is related, but distinct from addressing the risk from banked credits. Like the 'magnitude test' a net demand buffer would require that systems are designed to deliver projected credit demand in excess of annual supply. However, in this case the purpose and assessment would be independent from the volume of banked credits.

The objective would be to account for uncertainty in future decarbonization, economic growth, firm behaviour, and the risk of external shocks to the Canadian economy. The outcome would be increased certainty for regulators and stakeholders that the market would continue to function well and deliver the desired price signal and emissions outcomes. Having a net demand buffer may also mitigate some of the issues associated with small or concentrated markets. It could, however, increase average compliance costs for any market, regardless of size, requiring consideration of competitiveness impacts.

Assessment

The assessment of an OBPS design would determine if a draft proposed system meets the current net demand test as well as the proposed new expiry test, magnitude test, and – if pursued – a net demand buffer test. If not, PTs would have to consider adjustments to ensure their systems meet each test.

As with the net demand test, provinces and territories would have flexibility in determining how best to meet the requirements of the banking tests. Tightening performance standards would create more demand for credits and shrink the estimated excess bank. Increasing compliance-use limits for credits would similarly increase the effective demand for credits and reduce estimated banked credit volumes. Retiring certain vintages of credits or adjusting banking rules could also resolve the issue.

More broadly, provinces and territories may also choose to implement other design features to ensure strong net demand over time, such as market stability mechanisms, dynamic tightening of performance standards, or credit purchasing provisions. In these cases, the federal Government would consider the impact of these features on forecast net demand and adjust banking test findings as appropriate. Doing

so would require technical engagement with provinces and territories to understand the intent, design, and scale of these measures in much the same way that other input is currently incorporated.

Annex C) Public reporting

Given the benefits to increased transparency in industrial carbon markets, such as improved consistency and comparability across systems, strengthened accountability, and increased market confidence, the Government proposes changes to the benchmark to enhance public reporting in the following areas:

- Requiring the collection of credit trading prices for all transactions and publication of volume-weighted average, minimum and maximum credit trading prices, disaggregated by vintage and credit type and distinguishing between inter-firm and intra-firm trading.
- Requiring publication of trading volumes, that is, the quantity of credits that are bought, sold or transferred between entities in the system in given reporting period.
- Requiring timely reporting of estimated supply and demand.
- Establishing a minimum frequency of reporting and maximum time lag between a reporting period and publication: quarterly reporting periods and publication lags of no more than one month after the end of the period.

The benchmark could include provisions allowing systems to limit reporting where this is necessary to protect commercially sensitive information.

The Government is seeking feedback on the value of these proposals for market stringency and function and alternative proposals, as well as potential competitiveness concerns and possible solutions. For example, where only a single trade may occur in a given reporting period, some facilities may have concerns that reporting on transaction volumes could allow competitors to back-calculate sensitive commercial information such as production levels. Potential solutions could include aggregating data into longer reporting periods if necessary.

Annex D) Discussion questions

Cohesive and efficient: broad coverage

Common scope of coverage

Coverage and scope considerations

- What are the considerations for covering smaller facilities (between 10kt and 25kt) in industrial and manufacturing sectors? For example, how to account for administrative burden?
- What should the minimum coverage threshold be for small oil and gas facilities? What are the considerations for covering small oil and gas facilities emitting less than 10kt annually?
- What are the impacts on intra-sectoral competitiveness (competition between facilities in the same sector) of covering only some facilities, e.g. covering only facilities emitting 10kt or more? How would this affect international and interprovincial competitiveness?

The different approaches to setting minimum coverage requirements

- What are the advantages and disadvantages of a threshold-based approach, an activity-based approach, or a combination of the two?
- What are your views on the options in the Annex A? Do you have alternative options to propose?

Incentivize decarbonization investment

Maintaining the carbon price signal

- What approaches, if any, could allow systems to incorporate ERAs and similar mechanisms that would both maintain the price signal and protect demand in OBPS markets? Can you provide evidence or supportive analysis, and what changes to the benchmark criteria would be needed to enable them?
- For instance, could any of the following conditions on the use of ERAs protect the price signal and market?
    - Limiting eligible spending of ERA funds, for example requiring spending on only specific pre-approved technologies
    - Limitations on the total use of ERAs for compliance (e.g., <5%) to maintain market demand for credits
    - When assessing systems with ERAs against the OBPS 'net demand' tests, reducing forecast demand by the amount of expected use of ERAs

Stringency of output-based pricing system

Net demand test design and alternatives

- Beyond the elements described above and in Annex B, are there other market design elements that should be accounted for in the net demand test?
- Are there complementary or alternative tests to the forward-looking annual net demand test that should be considered when assessing the OBPS stringency criteria?
- Would markets be more stable and outcomes more certain if systems were designed to have annual demand exceed supply by a given amount (i.e. designed with a net demand 'buffer')?
    - If so, what range would be appropriate for the size of such a buffer and how can the requirement be adjusted to reflect different system sizes?
    - Should the requirement for a buffer be tied to a proportion of total compliance obligations, covered emissions, or another metric?

Credit supply and market functionality

- What are the key considerations that affect decisions by credit generators on when to sell or use banked credits in current systems?
    - How would the changes proposed in this paper affect those decisions?
- What evidence and data points to the role of different considerations (price trajectory, market supply and demand, etc.)?
- What metrics should be considered for assessing the risk that banked credits will depress market prices?

- What volume of banked credits can be maintained in a functional market without a significant risk of depressing market prices?
    - Should tests consider this volume relative to covered emissions, credit demand, or net demand in the system?
- How do credit expiry rules affect the manageable volume of credits?

Stringency in cap-and-trade systems

- How should the benchmark consider the supply of offset credits and banked allowances that cap-and-trade participants can use for their compliance obligations when assessing emissions caps against benchmark criteria?

Transparency

Public reporting

Key market data and metrics

- What type of credit price information is required to support decision making?
    - For example, is minimum, maximum and average volume-weighted credit price information in a given reporting period sufficient?
- What challenges exist in reporting these metrics?
- Is information on trading volumes required?
- What other metrics should systems consistently publish?

Reporting frequency and transparency

- For systems where compliance periods extend beyond a single year, what interim reporting requirements could be implemented to ensure timely access to relevant market data?
- What reporting frequency, for instance quarterly or annually, is feasible for OBPS carbon markets, and what operational or technical constraints could impact this schedule?
    - What time delay is acceptable between a reporting period and publication?

Confidentiality and practical constraints

- What operational, technical, or regulatory constraints might limit a jurisdiction's ability to publish this data, and what solutions would be recommended to address those constraints?
- Which methods or strategies, such as data aggregation, masking, or delayed publication, would be most effective to maintain confidentiality when reporting price and market trade data while ensuring meaningful transparency?
- What should be considered justifiable grounds for limiting publication of transaction data due to competitiveness concerns for individual facilities?

Benchmark assessment process

- Should the next benchmark assessment cover a shorter or longer timeframe? What are the advantages/disadvantages?

- How often do systems need to be reassessed to ensure designs are generating sufficient demand to maintain credit prices?
- Is the current minimum four-year backstop application period sufficient to provide clarity for investment decisions?
- Should the government publish details of benchmark assessments? If so, which information is needed to support market function and at what step in the process?

[1] Carbon leakage is the risk of production or investment, and associated emissions, moving to another jurisdiction to avoid paying a price on carbon pollution.

[2] If a facility knows it will receive back the entire amount it pays in carbon pricing, its incentive to invest to avoid that payment is minimal. If it faces the possibility of receiving an undetermined amount of funding, it faces a stronger incentive to invest to avoid having to make the payment.

[3] Preliminary list based on an assessment of estimated percentage of sector emissions covered by facilities emitting over 10kt per year for all activities other than conventional oil and gas.

[4] Emissions coverage is estimated based on 2023 emissions reported to the GHGRP and data reported through the Petrinex system for British Columbia, Alberta, Saskatchewan and Manitoba.

[5] Canada's emissions are the 2023 emissions reported in the 2023 National Inventory Report: greenhouse gas sources and sinks (NIR).

[6] Activities are counted based on activities set out the in Schedule 1 of the federal Output-Based Pricing System Regulations or specified on the List of Additional Industrial Activities. Where an activity is not listed in one of these sources, best estimates to assign one activity per product were made.

[7]Best estimates of coverage from mandatory and voluntary participants in carbon pricing systems in place in Canada in 2024. Assumes that facilities that can participate voluntarily in systems are covered, with the exception of small oil and gas facilities. The range represents the approximate coverage of small oil and gas facilities, from no coverage to full coverage, in provinces that enable aggregate facilities to participate on a voluntary basis. The estimates do not include fuel distributors in Quebec.