

June 30, 2017

Environment and Climate Change Canada
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Sent via email <Carbonpricing-tarificationcarbone@canada.ca>

Re: Pembina Institute comments on Technical Paper on the Federal Carbon Pricing Backstop

To whom it may concern:

Thank you for this opportunity to provide written feedback on Environment and Climate Change Canada's (ECCC) recently released *Technical Paper on the Federal Carbon Pricing Backstop* (herein the "technical paper"). The Pembina Institute is also grateful for the department's commitment in that document to provide further opportunities for public input as the details of the carbon pricing system are developed.

General comments on the benchmark and backstop

The Pembina Institute strongly supports the federal government's determination to move forward, in partnership with the provinces and territories, with pricing carbon pollution across Canada. It has long been understood that a broadly applied carbon price is an effective and cost-efficient way of reducing emissions, and therefore of protecting the global environment. With the announcement of a national carbon price, and the release of its technical paper, the Government of Canada is moving from understanding to action. A national carbon price backstop is essential to fulfilling Canada's international commitments as a signatory to the Paris Agreement. Just as importantly, carbon pricing will be critical to enhancing Canadian competitiveness and innovation in the emerging low-carbon global economy.

We believe the Government of Canada is striking the right balance in promoting a flexible, yet consistent approach to carbon pricing, as illustrated in its "benchmark" requirements. By encouraging provinces and territories to implement their own carbon pricing systems, subnational governments can ensure that the systems they enact are best-fitted to the economic base of their respective jurisdictions. Since over 80% of Canadians live in provinces that have already put carbon pricing into practice,¹ we agree that the federal approach should continue to build on existing systems to strengthen and extend the incentive to cut carbon pollution across Canada. At the same time, we strongly support the five benchmark criteria² that the federal government has indicated it will require provinces and territories to meet in order to avoid the imposition of the federal backstop.

In general, we support the proposed hybrid design of the backstop instrument as outlined in the technical paper. A downstream carbon levy will provide a consistent market signal to consumers to lower their emissions. Concurrently, an upstream output-based (OB) pricing system can ensure Canada's emissions-intensive and trade-exposed (EITE) industries reduce emissions, while limiting the risks of competitive disadvantage and emissions leakage.

¹ Government of Canada, "Pricing carbon pollution in Canada: how it will work" (May 18, 2017). https://www.canada.ca/en/environment-climate-change/news/2017/05/pricing_carbon_pollutionincanadahowitwillwork.html.

² These criteria are drawn from the 8 principles of the federal carbon pricing benchmark. See *ibid.* For all 8 principles, see Annex 1 of the *Pan-Canadian Framework on Clean Growth and Climate Change* [PCF] and Government of Canada, "Pan-Canadian Approach to Pricing Carbon Pollution" (Oct. 3, 2016). <https://www.canada.ca/en/environment-climate-change/news/2016/10/canadian-approach-pricing-carbon-pollution.html>

A properly designed OB pricing system must be targeted and temporary. In other words, it should only apply to emissions-intensive, trade-exposed (EITE) sectors with true competitiveness concerns, and its initial implementation should present a clearly communicated understanding of how the price treatment will convert to full coverage over time. We recommend the federal government establish clear criteria around these issues. Furthermore, while we support the compliance pathways proposed in the OB pricing system, we suggest that only the highest quality, independently verified emissions offsets be accepted for use as compliance units.

In terms of rates, we support the price schedule the federal government proposed in the federal backstop paper. However, with respect to the emissions coverage of the carbon levy, we suggest that the price be applied as broadly as possible—ideally to all accurately measureable sources of emissions, rather than only to fossil fuel producers or distributors, as currently proposed. Furthermore, if British Columbia broadens the coverage of its carbon tax, as the prospective new government has indicated it will,³ and considering that B.C. sets the benchmark requirement (#2) for emissions coverage,⁴ then the federal benchmark should also be broadened to the same degree to ensure consistency across the country. In particular, non-combustion emissions (such as fugitive emissions from the oil and gas sector, industrial and agricultural process emissions, and emissions from waste) account for over 15% of Canada’s total annual carbon pollution,⁵ and offer some of the cheapest abatement opportunities in the whole economy.⁶ By including these sources, the federal carbon pricing backstop will be able to achieve greater emissions reductions at a lower overall cost.

Should the federal backstop take effect in any jurisdiction, we support the federal government’s commitment to return all generated revenue to the province or territory of origin. While recognizing that it should seek provincial/territorial input in order to decide the manner in which revenues are returned, the Government of Canada should also identify ways to integrate measures to mitigate impacts on vulnerable populations and EITE sectors, while ensuring the price signal to reduce emissions remains strong, into the design of the return mechanism. It is also essential that revenues collected from and disbursed to backstop jurisdictions are managed as transparently as possible, so that all funds are traceable.

In addition, we support the proposal for the backstop to act not only as a carbon pricing framework applicable in subnational jurisdictions without one, but also as a supplement (“top-up”) to existing systems that are not fully compliant with the principles (#1-4, 8) outlined in the benchmark.⁷ However, we recommend that government provide further clarity about when such a supplement could occur, and about the envisaged federal mechanism to assess whether or not one is needed.

Finally, we strongly suggest that the price backstop be indexed to inflation to ensure that the strength of the price signal cannot deteriorate beyond 2022. In designing the federal backstop, the federal government should conceive itself as laying the groundwork for regular, incremental carbon price increases out to 2030. This is partly why indexing the price is important: although no commitment to price increases beyond 2022 has been made, ensuring price stability through macroeconomic change will provide policy certainty for businesses and investors. Just as important, it will preserve the quality of the incentive to reduce emissions, and help keep Canada on track to achieve its mitigation commitments.

³ British Columbia New Democratic Party[BC NDP – BC Green MOU], “2017 Confidence and Supply Agreement between the BC Green Caucus and the BC New Democrat Caucus,” (May 30, 2017). <https://www.bcndp.ca/latest/its-time-new-kind-government-british-columbia>

⁴ Government of Canada, “Pricing carbon pollution in Canada: how it will work” (May 18, 2017). https://www.canada.ca/en/environment-climate-change/news/2017/05/pricing_carbon_pollutionincanadahowitwillwork.html

⁵ Government of Canada, *National Inventory Report 1990-2015*, Part 3, Annex 9, Table 9-2 (2017).

⁶ ICF International, “Economic Analysis of Methane Emission Reduction Opportunities in the Canadian Oil and Natural Gas Industries,” (Environmental Defense Fund & Pembina Institute, September 2015). <https://www.pembina.org/reports/edf-icf-methane-opportunities.pdf>

⁷ Government of Canada, “Pricing carbon pollution,” *supra* note 4. Also PCF, Annex 1.

Below we comment in more detail on the proposed carbon levy, the OB pricing system, and other issues important to the successful implementation and continuance of the backstop.

Pricing component I: Carbon levy

1.1 Scope of the carbon levy

In general, we support the proposed design of the levy component of the carbon pricing system for backstop jurisdictions, including the proposed price schedule. It is prudent to start the price at a low level (such as \$10/tonne CO₂e), and raise it gradually and with long-term certainty of increases. The proposed price schedule achieves this, though we see opportunities to extend to schedule to align with Canada's 2030 climate target. Further, the use of standard commercial units to express levy rates is good way to facilitate compliance and administration. We reiterate that the levy should apply to all sectors of the economy except EITE sectors, which are expected to be covered by the OB pricing system.

We support the government's decision to apply the levy based on up-to-date global warming potential factors and emissions factors used for Canada's emissions reporting requirements to the UNFCCC. It is also appropriate that the scope of the levy include fossil fuels used (or delivered) in a backstop jurisdiction in liquid, gaseous, and solid forms, as this covers a broad spectrum of GHG emissions. Because the federal government already taxes most fossil fuels, the application of the carbon levy to fossil fuel that is used or delivered (i.e. purchased by non-registered persons) should also be administratively straightforward. However, we suggest that the carbon levy also be applied to other sources of emissions that are accurately measurable, including carbon pollution resulting from industrial processes. Our view is that the levy should, from the outset, be implemented according to a principle of ongoing broadening of application. As the accuracy of measurement with respect to other emission sources improves, ECCC should develop plans to include those sources within the levy component of the pricing framework (at the going rate).

As indicated above, to support fairness across regions, we support the idea that the backstop should not only introduce a carbon price in subnational jurisdictions that lack one, but also supplement ("top-up") existing systems that are not fully compliant with the principles (#1-4, 8) outlined in the benchmark. However, to ensure clarity, and to assist provinces and territories currently in the process of designing their own carbon pricing systems, we recommend that the federal government provide a detailed explanation of the circumstances under which such a supplement would be required. Does ECCC imagine that there could arise situations of non-compliance beyond a need to (i) expand the coverage of pollution sources, or (ii) increase the stringency of the price at a given time? And will ECCC be tasked with assessing compliance of non-backstop jurisdictions with the benchmark? The federal government should provide further guidance on these questions. This would partly involve further elaboration of expected reporting requirements (beyond "regular, transparent, and verifiable") on provincial and territorial pricing system design decisions, as well as on pricing outcomes and impacts.

1.2 Application of the carbon levy

Application Framework

With respect to the application of the levy, we generally support the framework as proposed: the levy should be charged on fossil fuels used or delivered (i.e. sold) in a backstop jurisdiction—where "use" includes fuel that is combusted, vented, or flared—and should apply comprehensively to fuel produced, imported, or brought into a backstop jurisdiction. This approach will cover a significant amount of GHG emissions. However, as indicated above, we further suggest that the carbon price be applied to other non-combustion emissions that are accurately measurable, such as carbon pollution resulting from industrial processes. We suggest that these emissions sources be included in both the carbon levy and the OB pricing system (though we acknowledge that the majority of these emissions would likely be covered

under the OB pricing system). Non-combustion emissions offer some of the lowest cost abatement opportunities in the entire economy. By including these sources, the federal carbon pricing backstop will be able to achieve greater emissions reductions at a lower overall cost.

In our view, the federal government should update its five benchmark criteria to require that provincial and territorial systems (i.e. in non-backstop jurisdictions) apply a price to all accurately measureable the emissions in order to avoid the imposition of, or supplementation by, the federal system. If including non-combustion emissions by the 2018 start date is found to be infeasible, a delay could be considered to give adequate time for including non-combustion emissions into the carbon pricing backstop (and in provincial and territorial systems). Furthermore, B.C.'s prospective new government has indicated that it wants to broaden the carbon tax to include fugitive sources and slash burning.⁸ As B.C.'s carbon tax—which currently applies to most combustion emissions—is the basis for the federal benchmark requirement (#2), we suggest that if B.C. broadens the coverage, then the federal benchmark should also be broadened to a similar degree to ensure consistency across the country.⁹ This recommendation would be consistent with ECCC's general approach of applying the carbon levy to all fuels used in a backstop jurisdiction, regardless of place of origin.

We also support the principle of making the levy payable by producers and distributors early in each fuel's supply chain, so that average users and consumers will generally purchase only levy-paid fuel. At the same time, we support the flexibility offered to the proposed class of Registered Fuel Distributors (e.g. producers, large wholesale distributors, and natural gas retailers), who may deal in fuel with each other on a levy-deferred basis until that fuel is used, or until it is delivered to another person such as a "non-registered person" (e.g. end-user or non-natural gas retailer).

We agree with ECCC's approach to Registered Fuel Users—namely, that may be able to acquire fuel without the levy being payable, if the fuel is for use at that facility—so long as the associated emissions are covered under the output-based pricing system.

Relief from the levy

Regarding the proposed relief from the carbon levy, the Pembina Institute generally supports a broad application of carbon pricing that includes all sectors and emitting activities above the 50 kt threshold. However, the relief-worthy situations outlined in the technical paper—including for fuel used as a raw material, diluent, or solvent in manufacturing or petrochemical processes—are reasonable, and we do not see major concern with the proposed exemptions. Should further relief of combustion activities be considered (e.g. for further agricultural activities such as the heating of greenhouses), we recommend continuing to apply the carbon levy, but rebating some of the costs proportionally to those operating with higher efficiency, or extending the ability to opt-in to the OB system. Both approaches would protect the sector from unnecessary economic harm, while rewarding high performance and maintaining the incentive to reduce emissions.

Registration Requirements

We support the decision to administer registration requirements on a fuel-by-fuel basis according to the three proposed categories of Distributors, Importers, and defined Users (including industrial facilities covered by the OB system, inter-jurisdictional commercial carriers, waste-burning businesses, and businesses using fuels for non-thermal and non-combustion applications, e.g. as a material or solvent in a manufacturing or petrochemical process). We suggest that the list of Registered Fuel Users should be considered provisional and revisable subject to new data or information regarding emission levels, sources, or accounting methodologies.

⁸ BC NDP – BC Green MOU, *supra* note 3.

⁹ Benchmark requirement #2. See Government of Canada, "Pricing carbon pollution," *supra* note 4.

Inter-Jurisdictional Commercial Transportation Requirements: Scope & Aviation

We commend the government for its sound commitment to the broad coverage of emissions, including emissions from fuel used for intra-jurisdictional (backstop-only) travel *and* from fuel used for those portions of inter-jurisdictional and international journeys that occur within a backstop jurisdiction. These requirements have been thoughtfully designed to include reasonable entitlements to relief from they levy for carriers in certain situations. Still, we would specify that, for all carriers, the entitlement to relief should apply only to the fuel used *for the portion* of an inter-jurisdictional journey that occurs outside the backstop jurisdiction—not to the full journey.¹⁰

We strongly support the federal government’s commitment to bring carbon pricing to intra-Canada aviation, and commend it for taking leadership in this area. Competitiveness concerns have long been a reason for exempting aviation from carbon pricing systems. With carbon pricing coming to all parts of Canada, and with a carbon levy in place for alternative transport options, inter-jurisdictional and broader competitiveness concerns should ease. This will pave the way for carbon pricing to finally be applied on a consistent, national basis to a major source of carbon pollution.

Furthermore, with carbon pricing being adopted in ever more regions of the world, we suggest that the federal government engage with other countries, sub-national jurisdictions, and organizations (e.g. California and the International Civil Aviation Organization) that have implemented, or are implementing, robust carbon pricing systems, in order to establish an international framework for applying carbon pricing to the aviation industry. (Similar initiatives could be supported for international marine, rail, and road transportation.) The Government of Canada should consider the ways in which it might prefer the domestic carbon pricing structure for aviation established under the national backstop to interact with, or provide a model for, future multilateral carbon pricing regimes for international aviation.

Pricing component II: Output-based pricing system

The Pembina Institute supports the inclusion of an output-based (OB) pricing system in the federal backstop. As proposed, this system represents a novel approach that helps to ensure that Canada’s emissions-intensive, trade-exposed (EITE) sectors fairly contribute to Canada’s climate efforts. At the same time, the OB system will protect these industries from legitimate competitiveness pressures that may result.

Through the Pembina Institute’s engagement and analysis for the development of Alberta’s output-based allocation system¹¹ and the B.C. EITE working group,¹² we have defined the following design principles to ensure that an OB pricing system is as effective and efficient as possible. We ask that the federal government give consideration to these principles as it seeks to maintain and promote strong climate policy:

1. *Maintain the incentive to reduce carbon pollution:* Any measures taken to address competitiveness concerns with respect to carbon pricing for (EITE) sectors should maintain or promote the incentive to reduce pollution.
2. *Be targeted:* Mitigation measures should only apply to EITE sectors that have demonstrated material competitiveness impacts due only to carbon pricing policy differences between jurisdictions.

¹⁰ Environment and Climate Change Canada [ECCC], *Technical Paper on the Federal Carbon Pricing Backstop* (2017), 14-15. Cf. language regarding relief in “Road and Rail” section to that in “Marine” and “Aviation” sections.

¹¹ Alberta Climate Leadership Panel, *Climate Leadership: Report to Minister* (2015). <https://www.alberta.ca/documents/climate/climate-leadership-report-to-minister.pdf>

¹² British Columbia EITE Roundtable discussions (2016).

3. *Be transparent:* Any support for EITE sectors must be justified by data and analysis.
4. *Be consistent and fair:* The broad framework for assessing and addressing EITE competitiveness pressures should be consistent across sectors and firms subject to the OB pricing system—and, to the extent possible, aligned with the stringency of climate policies outside of the OB system.
5. *Be temporary:* Any support should be transitional in nature and be phased out when carbon pricing and/or regulatory equivalency with other jurisdictions is achieved.
6. *Be simple:* Any EITE mechanism should be simple to implement, administer and comply with.^{13, 14, 15}

Adherence to these principles will be critical to maintain the credibility and effectiveness of the resultant policy. These principles guide the remainder of our feedback, with a view to ensuring that the OB pricing system maintains investment (and investor confidence) in Canadian industries while motivating the development and use of innovative and efficient technologies (both economically and environmentally).

1.3 Scope of the Output-Based Pricing System

Included Facilities and Sectors: Threshold and Opt-In

The paper indicates that “the output-based pricing system will apply to all industrial facilities that emit 50 kilotonnes (kt) or more.”¹⁶ We support a threshold of 50 kt since it aligns pricing obligations with current federal facility-level GHG reporting requirements. Leveraging the current GHG reporting program maintains administrative simplicity for both government and industry while providing the data necessary to operate and adapt the program as needed.

Further, with the anticipated expansion of the Greenhouse Gas Reporting Program to facilities with annual emissions as low as 10 kt, the government is laying the necessary groundwork for its ability to ensure compliance—and to offer further flexibility to industry (as lower-emitting facilities will have the choice of either remitting the levy or fulfilling the administrative requirements to participate in the OB pricing system).¹⁷ The option to allow facilities that emit less than 50 kt per year to “opt in” to the OB system allows for consistent and fair treatment of facilities producing the same products (while also, as ECCC notes, avoiding the perverse incentive to increase emissions to join the OB system). The opt-in option could also have the added benefit of incentivizing the improved measurement and data of emissions from facilities emitting less than 50 kt per year, which, as noted, currently fall below the emissions threshold for reporting.

To maintain consistent and fair treatment within the OB pricing system, we recommend that facilities are provided one opportunity annually to decide on inclusion or exclusion within the system. This ensures the program remains simple to administer, transparent to the public, and provide a fair opportunity to all industrial facilities to evaluate and decide on the best approach.

Emissions-Intensive Trade-Exposed Industries

¹³ British Columbia Climate Leadership Team, *Recommendations to Government*, (October 2015). http://engage.gov.bc.ca/app/uploads/sites/116/2015/11/CLT-recommendations-to-government_Final.pdf

¹⁴ Ecofiscal Commission, *Provincial Carbon Pricing and Competitiveness* (2015). <https://ecofiscal.ca/reports/provincial-carbon-pricing-competitiveness-pressures/>

¹⁵ BC EITE Roundtable discussions (2016)

¹⁶ ECCC, *Technical Paper on the Federal Carbon Pricing Backstop*, 17.

¹⁷ ECCC, “Greenhouse Gas Emissions Reporting Program: Consultations—Expansion of the GHGRP,” (last modified May 5, 2017). <https://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=F891687A-1>

The technical paper suggests that the OB pricing system will apply to “all industrial facilities that emit 50 kt or more of CO₂e per year,” and provides no definition of what sectors are to be included (though it delineates specific exemptions for certain buildings, waste, and wastewater). This broad application to all industrial sectors does not provide the targeted application to emission-intensive trade-exposed industries that is necessary for the program to be successful.

The OB pricing system is, by design, a subsidy provided to high emitting facilities. If the program is not targeted only to those sectors that can demonstrate a material competitiveness impact and need for the program, it would be unfair to other parties within the OB pricing system and to all parties participating in climate programs more broadly. Maximizing the benefit of the OB carbon pricing system can only be achieved if it is only applied where and when it is necessary.

The OB pricing system should therefore only apply to sectors that demonstrate a real competitiveness challenge based on being both emissions intensive and trade exposed. However, this evaluation must also be targeted, and should focus specifically on competitiveness issues that arise from Canada’s adoption of stronger climate policy compared to specific competitor jurisdictions. If the OB pricing system is misused to address any other regional, market, resource quality, or technological issue, its success may be constrained. Sectors that cannot demonstrate material competitiveness pressures should not be included in the carbon levy.

For transparency, we recommend that the federal government provide guidance on what sectors qualify under the OB pricing system. This could best be accomplished by explicitly identifying those sectors that are, in the government’s view, exposed to competitiveness and leakage challenges, with the supporting assessment and criteria used and updated as necessary. Alternatively, if the criteria used to determine whether OB allocations are warranted could be publicly defined, the government could seek further input on the sectors to be included. Success would then depend on the transparency of the final decision for each sector.

Covered Emissions

We are supportive of the coverage outlined for the OB pricing system within the technical paper. Covering all emission sources that are currently accurately measureable—including emissions from both fuel combustion and from synthetically produced GHGs (e.g. from industrial processes and product use)—ensures that the full carbon footprint of industries are accounted for and that all possible reduction opportunities are pursued. In some instances, non-combustive sources of emissions may represent low-cost reduction opportunities that would not be motivated if these emissions were excluded.

As the application of existing sub-national carbon pricing systems broaden to keep pace with the increasing measurement accuracy of previously difficult-to-measure GHG sources (such as fugitive methane from agriculture or oil and gas), the OB pricing system should similarly be expanded to include these sources.

Output-Based Standards

We support the initial establishment of the output-based standards at a “best-in-class”, top-quartile or better, rate as outlined. To drive reductions from Canada’s current baseline, wherever possible the top-quartile rate should be established based on national top-quartile production. Further, the definition of top-quartile should be reviewed yearly to ensure its ambition aligns with emerging data on a sector’s GHG performance.

These standards must also be established both technology- and resource quality-neutral, and not provide a subsidy to facilities based on operations with outdated technology or with a resource that is inherently more carbon-intensive than other sources. In all cases, only one OB standard should be established for

each product produced from an industrial facility under the OB pricing system, and facilities should be compared solely on their GHG performance in producing the same product.

Finally, the OB pricing system should act as a transition policy to reach an economy-wide carbon price applied to all GHG emissions. As more and more international carbon pricing (or alternate climate policy approaches) align with Canadian pricing stringency, any competitiveness pressures over the medium to long-term will be alleviated—rendering the OB pricing system unnecessary. As such, we recommend that the credit allocation rate established for each sector in the OB pricing system gradually decrease over time through ongoing application of systemic ramp-down rates. We recommend that these rates apply at a minimum of 1 to 2 percent per year, and are determined for each sector individually in recognition of their differential capacities for reducing emissions. This signal for ongoing strengthening within the program is critically important to maintain the medium- and long-term incentive for facilities to continually seek abatement opportunities.

1.4 Application

Reporting and Verification Requirements

While the reporting and verification requirements as outlined in the paper address industry reporting requirements, it is important to note the need for public-assurance reporting associated with the OB pricing system. Transparent and timely reporting of the results and need for the OB pricing system is necessary to maintain trust in the program. Since the OB pricing system inherently provides a subsidy to high-emitting facilities, it is critically important that the federal government consistently demonstrate that this subsidization is necessary to maintain the competitiveness of Canadian industrial sectors.

Other issues

1.5 Revenue

The federal discussion paper makes clear that provinces and territories implementing their own carbon pricing systems will ultimately have more autonomy over key system design questions, including how levied monies will be used. Only if provinces or territories choose not to price carbon will the federal rules apply. In the case of federal imposition of the backstop, it is important that the federal measure be implemented so as to avoid, as much as possible, the appearance of punitive action. In this regard, it is essential that the collection and return of revenue from backstop carbon pricing be executed transparently, so that backstop jurisdictions have assurance that revenues are in fact fully returned. At minimum, the federal government should publish the amounts annually collected from each backstop jurisdiction, as well as descriptions of how matching amounts were returned. For the collection stage, when levies or other payable amounts are remitted to the Receiver General of Canada, the federal government may wish to consider the creation of a fund for backstop revenues that is separate from the Consolidated Revenue Fund of Canada. This would promote transparent discussion of the effects and opportunities of national carbon pricing.

As implied above, the Pembina Institute is strongly supportive of returning all backstop revenue to the provinces. Our general recommendation is that the federal government should work together with the provinces and territories that will be covered under the federal backstop to identify best uses for the revenue. We believe that a key objective for the use of revenue should be to mitigate any adverse impacts on low-income, rural and northern, and other vulnerable populations that may arise from higher energy costs associated with the carbon levy. To preserve the incentive to reduce emissions, these rebates should be designed based on averages rather than actual costs to individuals. We also believe that revenue may be used to alleviate identifiable competitiveness pressures on EITE industries. We consider the OB pricing system to be a good approach for this. However, we note that the amount of revenue returned to

the EITE industries must not exceed the amount collected from these actors, and that OB subsidies should decline annually as the program transitions to full coverage.

In addition to alleviating adverse impacts on vulnerable populations and EITE industries, the revenue could also be used to decrease other discretionary taxes (such as through personal and corporate income tax cuts); to invest in future growth sectors that can facilitate the transition to a clean economy, while also providing strategic economic growth opportunities (such as by investing in scientific research and R&D for clean tech solutions); and by investing in projects that yield a demonstrable reduction in carbon pollution (such as green infrastructure, including public transit and energy-efficient public buildings).

A final revenue-related issue worthy of consideration is how the government should direct revenues generated from the carbon levy that will eventually be applied to inter-jurisdictional Canadian air travel. We recommend that the government explore potential creative uses for backstop revenue derived from this important subset of aviation activity. This could include further supporting the International Civil Aviation Organization's efforts to establish global market-based measures to reduce emissions from international aviation.

1.6 Comments on 2020 review

In its interim 2020 report, the government should assess current approaches to the protection of vulnerable Canadians under the national carbon pricing benchmark, and provide further guidance (and potentially new policy direction) in light of early experiences. This will complement the government's early study of how to preserve the competitiveness of EITE sectors by helping to ensure that any potential cost increases from carbon pricing are (i) mitigated for those people and businesses at risk of being disproportionately affected, and so (ii) experienced equitably across different segments of society. To maintain alignment through to the overall review in 2022, the 2020 report should present first ministers with holistic guidance on the treatment of EITE sectors and vulnerable populations.

More broadly, the 2020 review should focus on the environmental and economic performance of carbon pricing regimes in place, and to adjusting policy direction to ensure carbon pricing systems continue to continue to Canada's climate objectives. Beyond this, the review could be used to share experiences across jurisdictions, including best practices and approaches to the protection of vulnerable Canadians and the treatment of EITEs. Finally, the interim review should initiate the formal planning process for climate policy and carbon pricing beyond 2022.

1.7 Looking beyond 2022

The federal government should also consider how the carbon price will change after 2022. At minimum, the federal government should index the carbon price (the levy rates) to inflation to ensure that the effective marginal price signal is maintained after 2022, and does not decrease over time (i.e. in real terms). Ideally, though, the Government of Canada should commit to annual price increases at a pre-established rate (i.e. \$10 per tonne) from 2022 to 2030.

We also recommend the federal government, in partnership with the provinces and territories, develop a plan for carbon pricing post 2022. This includes a discussion on what role carbon pricing will play in achieving Canada's climate commitments under the Paris Agreement. Current measures, while important, do not yet achieve the roughly 200 Mt reduction needed; consequently, additional measures are needed.¹⁸

¹⁸ Dave Sawyer and Chris Bataille, "Taking Stock: Opportunities for Collaborative Climate Action to 2030—Policy Brief 2: The Pan-Canadian Framework on Clean Growth and Climate Change," (Decarbonization Pathways Canada, March 2017). <https://www.enviroeconomics.org/single-post/2017/03/31/Taking-Stock-Opportunities-for-Collaborative-Climate-Action-to-2030>

Carbon pricing is an important tool to help close this gap. Well-designed regulations are another. Implementing a stronger carbon price would dampen the need for regulation, while a static or only slightly increased carbon price will place stronger reliance on regulation (likely at higher cost). The federal government, together with its sub-national partners, needs to determine the additional measures Canada must take to meet its targets. Defining how Canada plans to achieve its climate targets well in advance is important, as this provides investment certainty, and will lower the overall effort and costs needed to achieve the targets by allowing businesses and individuals to include these longer-term costs in their near-term investment decisions.

Lastly, the federal backstop should not inadvertently discourage provincial leadership on carbon pricing after 2022. We encourage the federal government to continue to incentivize strong subnational action, including by disbursing the Low Carbon Economy Fund to subnational governments who have demonstrated commitment to climate action beyond the measures contained in the Pan-Canadian Framework on Clean Growth and Climate Change.

1.8 Implementation and timing of the backstop

We believe the Government has adopted a judicious approach to the implementation of the levy and output-based components of the carbon pricing backstop, with the former expected to come into force next year (2018), and the latter in the year following (2019). The drafting of legislation and regulation to enable this enormously important shift in Canada's underlying economic policy structure will, understandably, take time. We support the decision to apply the levy fully to all fuels used in industrial facilities during the interim period between when the carbon levy and OB system each become operational.

Conclusion

The Pembina Institute welcomes the opportunity to share with the Government of Canada its views on carbon pricing, a key policy for Canada as it works to implement its Nationally Determined Contribution under the Paris Agreement. We appreciate the opportunity to provide comments on the Government of Canada's technical paper, and broadly support the design and implementation principles outlined. We look forward to continuing to collaborate with the government as it further refines and advances its approach.