



**Smart Prosperity
Institute**

SUBMISSION

TO ENVIRONMENT AND CLIMATE CHANGE
CANADA ON THE TECHNICAL PAPER FOR A
FEDERAL CARBON PRICING BACKSTOP

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Introduction

Smart Prosperity Institute welcomes the opportunity to provide comments to the Government of Canada on the Proposed Federal Carbon Pricing Backstop. Smart Prosperity Institute (formerly Sustainable Prosperity) is a national research network and policy think tank based at the University of Ottawa. We deliver world-class research and work with public and private partners – all to advance practical policies and market solutions for a stronger, cleaner economy.

Smart Prosperity Institute has nine years of experience exploring how best to design carbon pricing mechanisms, including carbon taxes and cap-and-trade regimes. As such, we look forward to further opportunities that will be made available to provide further input as the details of the system are developed. This initial feedback is presented at the level of principles and outstanding questions for system design; our feedback via future consultation will go into further depth and detail.

Smart Prosperity Institute's comments on design principles are presented first, followed by some outstanding questions we would suggest be given consideration.

Design Principles

Fortunately, there is now a large body of real world experience to guide the development of environmental policies such as carbon pricing regimes, with an increasing number of studies showing how to design policies so that they support both environmental outcomes, economic realities and incent clean innovation in the process. The OECD has done perhaps the most extensive research on this topic, looking at countries around the world and finding that design plays a major role in the effectiveness of policies to spur innovation. The OECD's main finding is that environmental policies that drive innovation share three key features: **flexibility, stringency, and predictability**.^{1,2} Each design feature is discussed in more detail below.

Flexibility

Traditionally, environmental policies prescribed specific technologies or processes to achieve environmental goals, such as mandating that a particular scrubber be installed on a smoke stack or that one material be replaced with another. While this approach is simple and encourages

¹ The OECD also includes 2 other characteristics, incidence (i.e. does the policy target directly the externality, or is the point of incidence a proxy for the pollutant?) and depth (i.e. are there incentives to innovate throughout the range of potential objectives (down to zero emissions?).

² Johnstone, N., Hascic, I., and Kalamova, M. (2010) Environmental Policy Characteristics and Technological Innovation, *Economia Politica*, XXVII, n. 2, OECD. Retrieved from: <https://www.oecd.org/env/consumption-innovation/48097418.pdf>



compliance, it creates no incentive for firms to do better or to innovate. In contrast, policies that allow businesses and households flexibility in meeting environmental objectives create an incentive to innovate because they can select the least-cost method of compliance, including by adopting clean innovations. By putting a price on carbon emissions, firms have an incentive to find new ways to reduce their impact as much as possible because there is a financial reward for doing so.

Stringency

Stringency refers to how strict a policy is, and can be thought of as how much change the policy induces. More formally, the OECD defines it as “the policy-induced cost of polluting.”³ When policies are not stringent, they are more likely to lead to firms and industries meeting the new standards through small, marginal changes in their practices. However, stringent, world-class environmental standards discourage pollution, and by creating incentive for firms to avoid the cost newly-associated with polluting, they create the impetus for behavioural change and encourage new innovations to be created and adopted.

By design, stringency induces change. The OECD has studied the stringency of environmental policy in detail and found that, at the level of country, sector and firm, more stringent environmental policy generally has neutral or positive effect on productivity. At the sector level, a tightening of environmental policy is associated with a short-term increase in sector-level productivity growth for the most technologically advanced country-industry pairs; at the firm level, those firms already technologically-advanced show an increase in productivity, while the least productive third of firms, see a negative impact on their productivity.⁴ This suggests that stringent policy induces disruption, with those that start from positions of lower productivity and/or technology adoption being the least resilient and able to benefit.

For policy makers, a key challenge is to manage the adjustment period for affected firms and industries, and help them to gain market advantage from the stronger environmental performance that comes from meeting stringent targets.

Predictability

If governments would like their environmental policies to draw in private capital to invest in clean innovation—and motivate inventors and entrepreneurs—one of the most important things they can do is give as much certainty as possible about the trajectory of increasing policy stringency over several years. Predictability means companies can be more sure that their investments and actions to reduce emissions (and save on carbon pricing costs) will be

³ <http://www.oecd.org/environment/do-environmental-policies-matter-for-productivity-growth.htm>

⁴ Albrizio, S., T. Koźluk and V. Zipperer (2014), “Empirical Evidence on the Effects of Environmental Policy Stringency on Productivity Growth”, *OECD Economics Department Working Papers*, No. 1179, OECD Publishing, Paris.

DOI: <http://dx.doi.org/10.1787/5jxrjnb36b40-en> Of note, the authors find that “At the aggregate economy level, a negative effect on productivity growth is found one year ahead of the policy change. This negative “announcement effect” is offset within three years after the implementation.”



worthwhile. On the flip side, uncertainty and a lack of predictability mean they may not make the best longer-term investments, but may instead make decisions purely on lowest cost in the present.

Because the carbon price is the primary driver of emissions reduction action on the part of regulated entities, government has the unique ability to shape and provide a level of certainty and predictability. Environmental policies that chart out a predictable path for increasing levels of stringency can significantly reduce the “policy risk” that chills investment in clean innovation and emissions reductions.

Combining Flexibility, Stringency and Predictability in the Carbon Pricing Backstop

A well-designed carbon price -- achieved either through a tax or emissions trading system -- is a perfect example of how flexibility, stringency, and predictability work together to create a cost-effective environmental policy that spurs innovation.

Carbon prices are flexible by nature. They internalize the cost of carbon, providing a market incentive for firms to find the best and least-expensive ways to reduce emissions. The more stringent the policy (i.e. the higher the price and the wider the coverage), the greater the impetus for firms to act and to innovate. However, introducing the pricing system at a high price may not allow firms and entrepreneurs the time needed to invent and implement solutions to reduce both carbon and costs. The solution is to create a predictable policy trajectory, whereby carbon prices rise over time, starting at a modest level and then ramping up predictably. This predictability could be coupled with additional flexibility by building in a review process, where on a set timeline – and well in advance of the end of the current price/quantity schedule -- an expert advisory group reviews the price based on a set of pre-defined criteria (which supports predictability in the review outcome).

Designed this way, carbon pricing would come with little short-term shock to the economy yet it would create the expectation of longer-term stringency in order to drive investment in clean innovation from the outset. Further, the need for high public financing in low-carbon solutions would decline over time as the market takes over and provides both more demand and more clean innovation solutions.

The carbon pricing backstop, as proposed in the technical paper, does well in terms of meeting the criteria of flexibility, and provides a reasonable increase in stringency in the first few years. **However, to increase predictability (and stringency), the pricing schedule should be extended beyond 2022. Clarification of the review process (and the inputs it will need) is also important in ensuring success.**

If governments fail to provide the policy predictability that will cause regulated industries to take action and to draw in private investment, they may need to instead increase levels of public spending and subsidies to make up the difference. Better policy predictability means more private investment and less government spending.



Questions for Consideration

As noted above, the technical paper outlines a carbon pricing regime that, on balance, meets the three criteria of stringency, flexibility and predictability (though additional predictability is desirable). However, it also raises a number of questions that Smart Prosperity Institute would suggest be given consideration, including:

1. How will the carbon pricing backstop interact with the myriad of policies and programs already in place in federal and provincial governments? As the Pan-Canadian Framework on Clean Growth and Climate Change notes, there are numerous carbon mitigation initiatives already in place. The interaction of the pricing regime with these initiatives can impact compliance costs, degree of incentive to innovate, and overall environmental effectiveness.
2. In particular, the low-carbon fuel standard has the potential to interact with the carbon pricing backstop. As we noted in our [policy brief](#) on this subject, the interactions differ with different types of carbon pricing (i.e., taxes, cap-and-trade regimes or hybrid approaches). As the low-carbon fuel standard is still under development, it remains unclear how these policies will interact, particularly given that some provinces have their own low carbon fuel standards in place (BC) or under development (ON).
3. While it appears from reading the document that both domestic offsets and international credits will be eligible for use towards compliance in the system, it is not fully clear. Greater clarity and detail on this would be useful.
4. Greater clarity on any whether or not there may be provision for inter-provincial trading of units (be they offsets or OBA compliance units), or limits on the amount of trading/offsets would be useful.
5. Clarity on the process for how OBA standards will be developed would be helpful, as would clarity on enforcement and penalties for non-compliance.