



THE SCHOOL OF PUBLIC POLICY

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COMMITTEE ON ENERGY, THE ENVIRONMENT AND NATURAL RESOURCES

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Good morning. Thank you for inviting me to appear before your Committee on this very important issue. It is a privilege to speak to you today.

Canada faces a challenge in reducing emissions and simultaneously protecting the quality of life and economic growth that we enjoy. Adaptation to and mitigation of climate change is a complex problem, and the various policy solutions should be weighed very carefully.

From the perspective of the atmosphere, the source of the emissions do not matter: a tonne is a tonne is a tonne, regardless of whether the emissions come from Alberta or Ontario, or the oil sands or an auto plant.

Given this, the best policies to reduce emissions are those that ensure the lowest cost emission-reduction options are chosen first, regardless of where in Canada these emissions come from.

The policy options we have available are pricing, regulations, or a combination of both. Any policy action has costs and benefits, winners and losers, and political consequences. From an economic perspective, we should, where possible, strive for policies that achieve the maximum benefit at the minimum cost. That is why economists are almost universally in favour of emissions pricing via taxes or a cap and trade system. By contrast, political feasibility often depends on the *visibility* of costs and benefits, which is why regulatory solutions are often preferred due to their less explicit costs.

Pricing mechanisms create the incentive for individuals and firms to change their behaviour and choose the lowest-cost emissions-reduction option. This may be choosing to not emit at all, or to invest in technology to reduce emissions. The lowest-cost way to reduce emissions is for everyone to face the same price.

I do want to emphasize, however, that emissions pricing is not a silver bullet. In particular, pricing of emissions requires that the emissions be easily measurable. For those emissions

that are not, regulation is a better policy solution. An example of where a regulatory solution may be more appropriate is fugitive emissions from oil and gas production.

I have so far spoken in generalities, but I was asked to specifically comment on how the economic benefits of Canada's oil and gas sector can be balanced with the need for credible policies to reduce emissions.

I am afraid my answer will seem simplistic to some, but I believe we are already there. Environment and Climate Change Canada has an estimate of the social cost of carbon for 2016 of \$43 per tonne. What the social cost of carbon measures is the cost associated with each tonne of carbon dioxide emitted in 2016; it can also be thought of as the benefit associated with not emitting a tonne of carbon dioxide.

Alberta and BC have carbon taxes, which are levied on the combustion of fossil fuels. Quebec and Ontario have a cap and trade system, and the new federal carbon tax will mean there is emissions pricing across Canada. The prices associated with these systems are lower than the current estimated cost of emissions – the social cost of carbon I mentioned. But, by 2022, provinces with carbon taxes will be pricing emissions in line with the social cost of carbon. However, unless Ontario and Quebec significantly tighten their emissions caps, prices are not likely to rise to the same level. The federal government has an important role in ensuring the price of emissions is harmonized across provinces.

From my perspective, Canada already has credible environmental policies in place, or has committed to put them in place. Given we have committed to pricing emissions, any economic development – no matter what sector of the economy – is entirely appropriate. If a company finds it profitable to invest in Canada, even in the presence of a \$50 or \$100 per tonne carbon tax, there is no other policy action needed.

In fact, there may even be scope to eliminate pre-existing, unnecessarily costly approaches to lowering greenhouse gas emissions. These are policies that have a higher cost per tonne than pricing does. For example, the Ecofiscal Commission report on biofuels found the cost per tonne of emissions reductions from biofuels ranges from \$128 to \$596.

Other policies may even increase the cost of our environmental policies, further sacrificing economic benefits. A key principle of economic efficiency is treating all individuals and firms the same, so they face the same incentives. Policies such as phasing out coal or the cap on oil sands emissions effectively create a two-tier system, where specific types of economic activity are favoured over others. In the case of the oil sands cap, the economic activity and emissions are valued up until the 100 mega-tonne cap, at which point the economic activity has zero value and avoiding an additional tonne of carbon dioxide has infinite value.

This type of policy eliminates any consideration of the relative costs and benefits of the economic activity versus the reduction in emissions.

An issue often raised in the context of meeting Canada's emissions targets is that Canada is a small economy, and a small contributor to global emissions. That doesn't mean we should do nothing, but there are concerns about how acting alone to reduce emissions will affect the economy. One major concern is carbon leakage, where economic activity leaves for a country with less stringent environmental policy, reducing economic activity here without reducing global emissions. A second concern is that policies increase the costs of Canadian firms, making them less competitive in a global market.

In this situation, there may be scope for additional policies to mitigate these effects. For example, BC lowered corporate income taxes, whereas Alberta is pursuing output subsidies for energy-intensive and trade-exposed sectors. The output subsidies lower firms' production costs, preventing leakage, but keep the incentives of carbon pricing.

That said, however, even a \$50 per tonne carbon tax is not exceptionally burdensome on the oil and gas sector. To illustrate, for the oil sands overall, average emissions are 65 kg per barrel – at \$50 per tonne, that's \$3.25 per barrel in additional costs. For perspective, the National Energy Board estimates the cost of no additional pipelines at \$10 per barrel. The costs of a carbon tax are swamped by the benefit of additional transportation infrastructure.

I would also like to point out the sensitivity of Canadian oil and gas production to global prices. These prices are beyond our control, but are a significant determinant of the amount of oil and gas production in Canada, economic growth, and our corresponding emissions. This means the Canadian government should be flexible in our emissions targets, as Canadian emissions are dependent on some things that are beyond our control.

To conclude, I offer my three main points. First, there is nothing special about oil and gas emissions: a tonne is a tonne is a tonne, and prices should apply uniformly to all sectors. Second, some sectors (like oil and gas) may face adverse competitiveness implications from pricing emission. Other complementary policy, like Alberta's output subsidies, can address this *without* exempting the sector from pricing. Third, Canada is a small, open economy. Therefore we should approach our emissions targets flexibly.

Thank you for your time, and I look forward to answering your questions.