Ontario Consultation on Greenhouse Gas Emissions Reductions Program Design 2013

April 21, 2013

Sustainable Prosperity

SUBMISSION

FROM: Alex Wood, Senior Director (Policy & Markets), Sustainable Prosperity

TO: Sheri Beaton
Project Manager
Ministry of the Environment
Integrated Environmental Policy Division
Air Policy Instruments and Programs Design Branch
77 Wellesley Street West, Floor 10
Ferguson Block
Toronto, Ontario
M7A2T5
Phone: (416) 314-4826

DATE: April 19, 2013

RE: SP submission to Ontario Consultation on Greenhouse Gas Emissions Reductions Program Design 2013

Sustainable Prosperity (SP) is a national research and policy network, based at the University of Ottawa. SP focuses on market-based approaches to build a stronger, greener, more competitive economy in Canada. It brings together business, policy and academic leaders to develop innovative ideas and inform policy development. Our Low-Carbon Economy Policy Research Cluster synthesizes cutting-edge research and policy experiences on carbon pricing and its role in the transition to a low-carbon economy, seeking to better understand how carbon taxes, cap-and-trade and other carbon pricing systems can effectively contribute to innovation and competitiveness for a more sustainable and prosperous society.

Sustainable Prosperity welcomes the opportunity to comment on Ontario's Greenhouse Gas (GHG) Emissions Reductions Program, and commends Ontario for its commitment to public engagement and consultation on an issue of critical importance to its economic and environmental prosperity.

Climate change presents a unique challenge for policy-makers: it is the greatest and widest-ranging market failure ever seen.[1] At the same time, it presents a unique opportunity: the core policy response to this market failure, carbon pricing, also generates a new stream of revenue to government and supports the shift to a low-carbon economy, critical for economic success in an increasingly carbon-constrained future.

[1] Stern, Nicholas. 2006. "The Economics of Climate Change." The Stern Review. Cabinet Office -.HM Treasury. Pages xvi-xvii.

An important step forward for Ontario

Sustainable Prosperity commends Ontario for contemplating a provincial greenhouse gas emissions reduction program based on the principle of flexibility and relying on market mechanisms. The government states in the discussion paper that the key objective of the program is to:

"...provide an incentive for emitters to invest in technologies that improve their environmental performance, energy efficiency, and competitiveness in a flexible and cost-effective way."

Sustainable Prosperity believes that the use of an economic instrument would provide Ontario with the best opportunity to realize its emissions reduction goal at the least cost. Economists widely agree that pricing carbon (i.e. using a market-based mechanism such as a carbon tax or a cap-and-trade system) is the most efficient approach to reducing carbon emissions from an economic perspective. Pricing carbon has three principal advantages over a traditional 'command-and-control' approach to carbon regulation: (i) it provides an incentive to reduce emissions without favouring any one way of doing so; (ii) it can achieve reductions at much lower cost (thereby allowing for greater reductions); and (iii) it creates a continuous incentive for clean innovation, since there is an economic reward for each additional unit of emission reduction.[2] Regulatory approaches designed carefully to draw on market mechanisms may also be able to realise these benefits.

The introduction of a market-based instrument to reduce emissions would build on Ontario's existing leadership in the continued development of a strong, competitive and sustainable economy. Ontario has already taken great strides towards reducing its carbon emissions. Its phase-out of coal-fired electricity is one of the most significant policies for reducing GHG emissions in all of North America. Its support of renewable energy in Ontario with the *Green Energy and Economy Act* also makes it one of the leading jurisdictions in North America for clean technology. Yet additional policies are required to achieve Ontario's own targets. Ontario should build on its progress so far and define its own climate policy before pending federal regulations are imposed upon it.

Flexible, market-based instruments are essential for cost-effective policy

Different policy instruments could fulfill Ontario's requirements to "provide an incentive for emitters to invest in technologies that improve their environmental performance, energy efficiency,

[2] Ibid, and Stavins, Robert. November 2001. "Experience with Market Based Environmental Policy Instruments." Resources for the Future. Page 2.

and competitiveness in a flexible and cost-effective way." A cap-and-trade system to price carbon or a flexible regulatory approach could each achieve these objectives.[3]

A cap-and-trade system, whereby a carbon price is established by setting an upper limit on the right to emit carbon dioxide (CO_2), has proven to be a successful instrument for reducing emissions in a cost-effective way. Different types of cap-and-trade systems have been already implemented in several U.S. States (e.g. the Regional Greenhouse Gas Initiative [RGGI] and WCI) and Europe. Ontario has been considering a cap-and-trade system for some time, and it is also a member of the Western Climate Initiative (WCI), a linked emissions trading system between American States and Canadian Provinces.

Some of the benefits of cap-and-trade are that it provides:

- Certainty in emissions reductions, which allows the government to achieve emissions reduction targets.
- Companies with the flexibility to determine how emissions reductions targets will be achieved, which increases the cost-effectiveness of the policy. It encourages the most efficient reduction projects which lowers the overall cost.
- Compliance flexibility for companies (i.e. reduce emissions or buy allowances or offsets).
- Profit incentive for companies to reduce emissions.
- Opportunities to link with other cap-and-trade systems in other jurisdictions.

A **flexible regulatory approach** — such as the Specified Gas Emitters Regulation (SGER) in Alberta — could also drive cost-effective emissions reductions. The Alberta regulation requires improvements in the emissions intensity of regulated emitters. Emitters can comply with this obligation under multiple compliance options: improving their emissions performance, purchasing compliance permits from other emitters, purchasing offsets from unregulated emitters, or contributing to a Technology Fund.

Benefits of a flexible regulatory approach include:

- Establishing a price on carbon to incent emissions reductions.
- Compliance flexibility for firms.
- Protection against competiveness impacts (firms have an incentive to improve emissions intensity, not to reduce production).

Either policy instrument could achieve Ontario's objectives. In both cases, however, the likely success of policy will depend most on the specific details of the design of the instrument.

While Ontario and other provinces that have or are considering climate change policy have largely favoured flexible market-based approaches, the federal government is proceeding with a sector-by-sector regulatory approach.[4]

[3]The discussion paper however does clearly state that Ontario is not considering a carbon tax, the other prominent market-based mechanism for reducing emissions.

Devil in the details: Policy design matters

The questions laid out in the discussion paper pertain to critical issues for policy design. While flexible, market-based policies can drive cost-effective emissions reductions, the details of how the policy works have strong implications for provincial GHG emissions and for the welfare of Ontarians.

Sustainable Prosperity, based on an expert dialogue between leaders from business, non-profits and academia, has developed eight principles to guide Canada's approach to carbon pricing, whether this be implemented through a carbon tax, through a cap-and-trade system (as is being discussed in Ontario), or through a combination of both. The following section reflects a carefully negotiated expert consensus text intended for a national context; in respect for the consensus, the text cannot be amended, but we underline that some interpretation for a provincial (rather than national) context is necessary.

No matter the instrument, a carbon pricing policy should be:

- √ **Comprehensive, with no exemptions:** A price signal should apply across the economy, providing an incentive to all businesses and households to cut emissions. In a cap-and-trade system, emission permits should be fully auctioned or priced (some transitional accommodation may be needed, such as for energy-intensive, trade-exposed sectors).
- √ **Nation-wide:** The federal government should take the lead in pricing carbon, or establish a common framework for a minimum carbon price. A balance is needed between allowing regional innovation while avoiding costly policy fragmentation.
- √ **Simple and readily implemented:** Policies should avoid complex rules and exceptions. Ones with shorter lead-times to take effect are preferable, since fast implementation will make long-term deep emission reductions less expensive.
- √ **Transparent and accountable:** There should be transparency with respect to policy objectives (e.g. price and/or quantity targets) and implementation, and use of revenues.
- √ **Complemented where a price signal alone is insufficient:** Non-price policies (e.g. regulations or incentives) should also be used in certain situations, such as for activities that are price inelastic, or to stimulate accelerated technology research and development.

The carbon price itself should be:

- √ **Environmentally effective:** The price should be set at a level that will achieve the jurisdiction's interim and long term emissions reduction targets.
- √ **Comparable to that in other countries:** To minimize competitiveness impacts and avoid trade sanctions, Canada's carbon price should be in line with other countries'. This does not nullify the need for initial leadership in adopting carbon pricing.
- √ **Predictable but adaptable:** A strong carbon price should be initiated swiftly. It should rise steadily to enable adjustment and planning. It should be recalibrated if required by

[4] Government of Canada. *Regulating Canada's Greenhouse Gas Emissions*, http://www.climatechange.gc.ca/default.asp?lang=En&n=4FE85A4C-1#X-201206200903271.

changing science, international goals, or emissions reduction response. An independent advisory panel would promote transparency and objectivity

We frame our comments on specific design issues for an Ontario GHG reduction program in the context of these Principles. No matter the instrument applied — cap and trade system or flexible regulation — the Principles can inform design of cost-effective policy.

1. What sectors should be covered under a greenhouse gas emissions reduction program?

As outlined in the discussion paper, all sectors with facilities emitting over a certain level should be covered by the program. In the transition phase the program may include assistance for emissions-intensive, trade-exposed (EITE) sectors, but no sector with facilities above the threshold should be excluded.

Broad coverage is essential for cost-effective policy. Including more emitters under the policy ensures that fewer low-cost emissions reductions opportunities are "left on the table." Broader policy thus can achieve the required level of reductions in GHG emissions at lower cost. Broad coverage can also de-politicize policy design decisions by eliminating potential exemptions.

2. What emissions threshold should be used for covering facilities in the program?

Ontario's reporting threshold of 25,000 tonnes of greenhouse gases per year should be used as the threshold. The federal threshold would exclude a lot of facilities, and 25,000 is a benchmark that has been used in other jurisdictions (e.g. the United States by the Environmental Protection Agency).

In the long-run, Ontario should also consider policy options to incent emissions reductions for small emitters. Complementary regulations could target emissions from smaller facilities and from households. Offset markets could broaden the coverage of the GHG reduction program. Ontario could also apply a carbon pricing policy upstream on fuel-distributers, who would then pass on costs to consumers, incenting reduced energy use and reduced GHG emissions.

3. What are the barriers to achieving significant reductions?

Design choices can affect the program's ability to meet its emission reduction goals in a variety of ways. We highlight a few key issues, based on our research and on the lessons learned from the policy leadership and experimentation in other jurisdictions:

- **Over-allocation of free permits can dampen carbon markets.**
  A key choice in a cap-and-trade system is how permits are allocated to emitters. They can be auctioned (generating revenue for government), or they can be allocated to free based on a performance benchmark. In theory, either option will not affect the marginal price of carbon or the incentive to reduce emissions. However, experience in the EU Emissions Trading System (ETS) highlights potential pitfalls. In the early phases of the ETS, too many permits were allocated for free, resulting in a small market price for carbon. In later phases, the economic downturn meant that firms required fewer permits than expected (having

reduced production and thus emissions due to the recession). Again, the price of carbon and the incentive to reduce emissions was adversely affected.

- **Offset regimes depend on strong measurement and verification regimes to ensure real reductions.**
  Offset regimes can complement market-based regulations or trading systems by expanding coverage of policy to incent emission reductions from unregulated emitters. Yet care must be taken in the institutional design of offset programs. Without assurances that emissions reductions incented by offset purchases are permanent and would not have happened in the absence of the policy, offsets programs can dilute the effectiveness of policies.

- **Excessive reliance on flexibility mechanisms can dilute the effectiveness of policy**. Alberta emitters, for example, can comply with the Specified Gas Emitters Regulations through a payment of $15 per tonne CO_2e with no limit. This flexibility mechanism effectively sets a maximum price of carbon at a fairly low level. As a result, the policy incents only emission-reducing actions with a cost of less than $15 per tonne, limiting total reductions.

- **Market liquidity must be considered.**
  Ontario is a relatively small economy on its own, so should consider how an Ontario based-cap and trade system would have sufficient liquidity to ensure a smooth functioning market. Linking with other emissions trading systems or other approaches to controlling price volatility in a cap-and-trade system could address these issues. However, certain design features that Ontario may be considering, such as flexible compliance options, would affect Ontario's ability to link to other emissions trading systems. For example, WCI does not allow payment into a technology funds as a compliance option.

Institutional options exist to address some of these concerns. The EU ETS experience points to the dangers inherent in leaving allocation decisions to political processes. These processes, in the EU experience, have created a lag between the necessary adjustments to allocation levels and the political decision to do so. Moreover, political decision-making invariably leads the mixing and conflation of policy objectives, with the result being that emission reductions are often subjugated to more immediate economic or social concerns.

Ontario should carefully consider that experience, and look to models such as the one suggested in the "Waxman-Markey" cap-and-trade legislation that the U.S. Congress considered and ultimately rejected in 2009. The Waxman-Markey bill provided for the creation of a "federal reserve" type institution that would be mandated to tailor the supply of emission allowances to meet the emission objectives sought, but also to manage the volatility of allowance prices to minimize economic impacts and provide stability to investors and market participants.

4. How could a program be designed to encourage investment in cleaner production?

Sustainable Prosperity has conducted research on this question, summarized in a policy brief released in 2010. Our research shows that the best way to incent investments in cleaner production is to create a level playing field for all forms of energy, based on the full cost of their production and use. This means that the program needs to establish a price on carbon, either through a cap-and-trade system or through a flexible regulatory approach. A flexible — yet stable — market-based system incents both emissions reducing activities as well as innovation (as outlined in other Sustainable Prosperity research) and development of new emission-reducing technologies over the long-term.

Given that, in the initial stages of a carbon pricing regime, prices are generally kept low to both ease the transition and gain political acceptance, carbon prices on their own are insufficient to drive the shift to a low-carbon economy. Complementary policies are also needed, such as potentially assisting companies to make these investments in indirect ways. This is particularly true for the research and development, and deployment of transformative new low-carbon technology. The need for substantial investments in low-carbon infrastructure, technology, and innovation is strongest at the research and commercialization stages. This need subsides at later stages as carbon prices rise, driving higher demand for low-carbon technologies. Alberta's Tech Fund intends to lower the costs of research and development of new technologies by pooling resources and activities. Ontario may consider how to encourage joint efforts within a given sector or amongst companies using similar technologies or production methods.

The collection of government revenue requires the consideration of the institutional needs to manage it. Sustainable Prosperity research on this question shows that, as with any revenue source, carbon revenue can and should be subject to a high level of scrutiny. Governments must also assume a high level of accountability for the use of carbon revenue. As with the question of decision-making on allocation levels then, Ontario should give careful consideration to institutional models for managing potential revenues from carbon policies.

In Canada, there are two different models of carbon revenue collection and management. In British Columbia, the carbon tax is placed into the province' s general revenue, whereas in Alberta and Quebec, carbon levies are collected by government but then funnelled into separate low-carbon technology investment funds. Experts suggest that a best practice of carbon revenue management in Canada would entail annual reporting of the amount of revenue that has been collected in the preceding year, how it has been used, how much revenue is forecast for the coming year, and the plans for how this will be allocated. If managed within government, this revenue can be subject to normal government audit procedures, or if managed externally, to independent audit.

It appears that the objective of the disbursement of funds is the dominant determinant for institutional need, with secondary considerations being protection of the revenue envelope and location of specialized expertise. Investments to support a faster transition to a low-carbon economy are made through instruments ranging from matching grants, to loans and loan guarantees, to equity positions in projects. The institutions need to be tailored to deliver timely,

informed, effective and accountable funding decisions in high-risk, highly specialized fields. In most circumstances, this is best done through arm's length, independent institutions, such as the Carbon Trust in the United Kingdom, or the Climate Change and Emissions Management Corporation in Alberta.

5. How could a program be designed to address competitiveness concerns within and across sectors?

Competitiveness issues refer to the adverse economic impacts that industry in Ontario might experience as a result of facing higher costs than competitors in jurisdictions without comparable policies. These issues must be addressed through careful policy design in order for the program to receive industry support and buy-in. On the other hand, carbon pricing can incent innovation, improve productivity and actually make some sectors more competitive. Sustainable Prosperity recently released a policy brief outlining how Ontario would likely be impacted, economically, by joining WCI.

Other jurisdictions have taken different approaches to addressing competitiveness concerns, including providing exemptions, providing other forms of support (e.g. free emission allowances), financial support and other options, all especially in the early stages of the program. However there is a fine balance between providing support, and undermining the ability of the program to meet its emission targets due to too many loopholes and exemptions.

Within sectors, companies have varying cost structures, carbon intensities, production processes, and assets, so the impact of an emissions reduction program will not be uniform. The principle of cost-effectiveness of market-based policies applies to the provincial economy as a whole, not individual firms. It is not the government's responsibility to ensure that all companies are equally impacted by the program – this is part of the competitive dynamics of the marketplace: companies have made different investment and strategic choices, which will be differently impacted by the government's chosen program. The best the government can do is to transparently engage with the sector and ensure that companies have access to information about the program design, duration, level of certainty and other factors, so that they can best decide how to manage the impacts.

At the sectoral level, the government of Ontario should be concerned with the competitiveness of key economic sectors compared to competitors in other jurisdictions not subject to the same emissions reduction program. Beyond any longer term efforts to harmonize its program with neighbouring jurisdictions, the Ontario government can protect the most highly impacted sectors by first conducting an independent evaluation to identify which sectors will be the most impacted and to what degree they will be impacted. Many sectors will make claims about the expected impacts on their sector but these are inherently biased. Based on its own data and consultation with the affected sectors, the government can design the program such that the sectors are given time to adjust to the program – i.e. to make the necessary investments and changes to lower their carbon intensity – but will still be expected to make emission reductions over time.

6. How can a program be designed to integrate with Ontario's approach to reducing air contaminants?

Ontario already has a robust criteria air contaminant (CAC) program in place. The main components are limits on nitrogen oxide (NO_X) and sulphur dioxide (SO_2) emissions, air quality standards for toxic substances, and requiring Ontario-based facilities that emit certain quantities of specific substances to report their emissions. There will be overlap with the facilities covered by the existing air pollution regulations and any program that targets carbon dioxide emissions. However the two are complementary policies and have co-benefits. Actions to reduce GHG emissions incented by the carbon emissions program will also reduce criteria air contaminants (for example, energy efficiency has benefits for both GHGs and CACs).

7. How can facilities achieve an emissions reduction of five per cent over five years?

Our basic position on this target is that this is a relatively low target that should be easy for most to achieve, with minimal capital investments or support needed (i.e. the "low-hanging fruit"). Looking at historical trends in energy efficiency, a 1% per year improvement should in fact be considered "business as usual".

Sustainable Prosperity acknowledges that part of the problem in establishing a target is the information asymmetry between companies and the government. Companies are aware of their marginal abatement costs, whereas governments are not. While it is important to engage with industry on targets, governments are at an information disadvantage. The fact is that deeper reductions will be required to achieve Ontario's targets over time. The program must have more stringent longer term emissions reduction targets built in. Establishing clear long-term expectations will help Ontario firms cost-effectively begin this transition now.

The greater the reductions, the more expensive they will become, requiring higher carbon prices to incent the emission reductions. This is where the flexibility to link with a larger emissions market such as the Western Climate Initiative will be important for Ontario. Ontario is still a relatively small market, and a lot of the low-cost abatement options have already been achieved (i.e. the switch to cleaner electricity). So, deeper emissions cuts may be more expensive without access to a larger market (i.e. Ontario has a higher marginal abatement cost). However, as previously mentioned, joining WCI would require certain policy design choices that Ontario will have to balance (with regard, for example, with a potential technology fund).

8. What is your perspective on the importance of equivalency and ensuring industry is not subject to duplicate regulation?

Duplication creates additional costs for industry, and results in economic inefficiencies. It is good economic and environmental policy to attempt to avoid duplication of effort wherever possible.

Achieving equivalency through provincial policy — and thus avoiding federal regulations — could have economic benefits for Ontario. Provincial policy could explicitly consider unique aspects of the Ontario economy, like its strong manufacturing sector, in determining policy design details. An

Ontario-specific policy could also ensure that any revenue generated through GHG policy (for example, through a Technology Fund) would be redistributed within Ontario.

On the other hand, from a national perspective, a proliferation of provincial equivalency agreements across Canada could deepen the fragmentation of climate policy across Canada. Differences in policy between provinces could lead to greater complexity and even economic inefficiency as each province takes its own approach.

Questions still remain as to the nature of "equivalency." Does policy that achieves the same level of emissions reductions as proposed federal policy achieve equivalency? Must reductions in specific sectors be considered? Or is equivalency based costs of policy, and the marginal price of carbon imposed by policy on the economy? Does equivalency require using a specific policy instrument? And once equivalency is defined, to what extent can the potential economic benefits of equivalency be realized? Do these benefits outweigh the costs of a policy patchwork across Canada? Further research is required on all these questions.

Conclusions: Implications for the environment and the economy

The next step in the evolution of Ontario's climate change policies towards the implementation of a flexible mechanism to reduce GHGs is encouraging. There is much Canadian, North American and international experience and knowledge that Ontario can draw on in the design of its instrument. Sustainable Prosperity encourages Ontario to frame its approach to reducing GHGs as not just an environmental, but as an economic, policy. Its policy choice in this area can create incentives for increased energy efficiency and innovation in the province's corporate sector. It can also support Ontario's economic development objectives and competitive positioning in an increasingly carbon-constrained global economy.