

Ontario Climate Change Discussion Paper Sustainable Prosperity Submission

March 26, 2015

For information or questions, please contact:
Alexander Wood

<u>awood@sustainableprosperity.ca</u>

613.562.5800 x.1189

613.878.7189



Sustainable Prosperity (SP) welcomes the opportunity to provide comment and analysis in support of the province of Ontario's climate change strategy discussion paper, based on the considerable expertise and capacity it has built up on the theme of a low-carbon economy.

Sustainable Prosperity is Canada's leading green economy research and policy institute. We harness leading-edge thinking to advance innovation in policy and markets, in the pursuit of a greener, more competitive Canadian economy. At the same time, SP actively helps broker real-world solutions by bringing public and private sector decision-makers to the table with expert researchers to both design and apply innovative policies and programs.

SP's submission is structured in two distinct, but complementary, sections. The first deals with the broad question of how best to address climate change, given Ontario's particular circumstances and what has been learned about the most effective and efficient policies. It corresponds generally to the discussion paper's section on "Actions in Key Sectors". Its general commentary and recommendations are reflective of the fact that most of SP's specific expertise relates more specifically to the choice of the carbon pricing instrument. That issue will be the focus of the second section of this submission.

• The broad strategy

The defining characteristic of climate change, as a policy issue, is the complexity and pervasiveness of its causes. As many others have said, climate change is not just an environmental issue...it is a technology issue, an energy issue, a social issue, and an economic issue, all rolled into one.

The multiple drivers of climate change can also be thought of as multiple solution sets. Good climate outcomes can also be good economic and social outcomes – and vice versa – if the policies created to address them are designed and implemented properly.

One way to think about the broad elements of a climate change mitigation strategy is to look at a "merit order" of policy interventions. In basic terms, this merit order reflects a descending order of priorities governments should consider as they build a climate change policy framework. The merit order for climate change mitigation would have the following elements:

- 1. Remove regulatory barriers
- 2. Remove perverse incentives and subsidies
- 3. Price carbon
- 4. Create complementary policies
- 5. R&D and innovation

SP's research priorities have tended to focus on the last three of these elements, with a strong focus on carbon pricing in particular. So our response to the Discussion Paper will focus on them, but will take an



approach that goes from specific targeted policies to the more general issues around the integration and interaction of policies within the overall framework.

Targeted policies for direct emissions

Looking at the province's emissions profile gives some indication of where Ontario needs to direct policy attention. With the decision to shutter the province's coal-fired electricity generation assets, the emissions profile has shifted to being one where electricity production dominated to one where industry, buildings (both commercial and residential) and especially transportation now make up the bulk of Ontario's emissions. At the same time, as the discussion paper acknowledges in figure 4 (showing change in absolute emissions by sector from 1990 to 2012), the industrial sector has already made substantial reductions.

With that in mind, Ontario's policy priorities with respect to direct emissions will need to focus on the major drivers of emissions in the province, namely transportation and buildings. The paragraphs below provide a basic review of the opportunities available to the province in those areas.

- On transportation, major reductions are expected from new automobile and light-duty vehicle fuel efficiency standards. Those are reflected in the emissions base case presented by the province. The federal government has already announced its intent to regulate emissions from heavy-duty vehicles. Further emissions reductions from the transportation sector will have to come from: (1) greater efforts at encouraging modal shift (to public transit) in urban areas, (2) a greater focus on the electrification of transportation, both for personal electric vehicles and for public transportation infrastructure. To help Ontarians consider both modal shifts and moving to electric transportation options, the government should carefully consider fiscal tools that incentivize such transitions. Careful design can and must be taken to avoid "free rider" effects which raise the cost and decrease the effectiveness of these instruments.
- On buildings, efforts to increase the energy efficiency of buildings must focus both on new building and construction through renewal of building codes and standards. For existing building stock, both commercial and residential, the government should consider models for the provision of financial assistance to owners for energy efficiency improvements. These models can build on existing institutions like the Toronto Atmospheric Fund (www.taf.ca) and existing regulations like the amendments to the *City of Toronto Act* and the *Municipalities Act* which allow for Local Improvement Charges (LICs) to fund energy conservation. One idea would be a provincial revolving fund from which communities in the province could fund improvements made by individual homeowners.

Policy integration for indirect emission drivers

In addition to policy measures that are directly, and intentionally, directed toward emission reduction outcomes, Ontario's climate change strategy will have to address a challenge common to such horizontal



policy areas: the integration of climate change considerations into policy processes and outcomes that may not be thought of as directly related to the issue.

The most obvious of these is energy policy in the province. It is, and will continue to be, critical that policy choices made around the future of the province's energy system properly integrate climate change considerations.

Some other examples of policy issues that will have a bearing on Ontario's climate change strategy, but which sit outside of the traditional focus of climate policy, would be agriculture or forestry. Management practices in those two sectors will have a direct bearing on the province's emission profile and performance, and so the policy levers that Ontario uses to influence those practices will have to be carefully designed with climate outcomes in mind.

Another important policy tool which has a powerful impact on the province's emissions profile are the growth plans that are in place – and currently under review – to plan and manage the growth of communities throughout the province.

Structural policies for long-term decarbonisation

Policy and investment choices made by the province around infrastructure and innovation create powerful signals around the economic development pathways the province takes, and for the carbon intensity of those pathways.

Infrastructure planning and investment, particularly as they relate to issues of energy and transportation, must take into account – and fully integrate – climate change outcomes. The importance of this integration comes not only from the long-term structural shift towards lower carbon intensity of economic development that they can deliver, but also in the resilience an integrated approach to infrastructure builds into critical (and costly) investment.

Interaction effects

One important insight from both the theory of climate change policy and its practice is that various policy instruments will interact – sometime positively, sometimes negatively – with each other. Understanding and anticipating those interaction effects in the design and implementation of the overall climate change strategy will be critical to its success.

One specific example of where such interaction effects will need to be considered is that which will exist between the so-called complementary policies (i.e. whose broad categories are summarized above) and the carbon pricing instrument. If a carbon tax is chosen as the instrument, theory suggests that there is little interaction between it and complementary policies because covered firms pay the tax only on what they emit. In a cap-and-trade system, however, the job of setting the cap is complicated by the role that complementary policies play in reducing the overall level of emissions. Complementary policies may reduce the cost to individual firms or sectors (depending on what those policies are), but they can decrease the



overall effectiveness of the cap if reductions achieved through complementary measures are not taken into account.

An important real-world example of this is California's overall climate strategy, which features a number of complementary policies (such as a Renewable Portfolio Standard) and a cap-and-trade system. California sets its cap based on an overall assessment of emission reductions achieved through other policy measures, with cap acting as the backstop to capture those emissions left over. If California's overall reduction target is 100MT (for example), it does not set the cap at 100MT. Rather, it assesses the reductions achieved through complementary measures (say 75MT), and then sets the cap to achieve the remaining 25MT reduction.

<u>International outreach and engagement</u>

Ontario's economy is highly dependent on trade inside and outside of Canada. This great strength of the Ontario economy also creates a specific challenge around the competitiveness impacts of climate policy on Ontario-based firms and sectors. Although concerns over "carbon leakage" (i.e. the relocation of business to jurisdictions with weaker or no carbon policy) have been shown in multiple studies to be largely overstated, there remain questions regarding the impact of carbon policy on new investment. SP believes that, while such concerns may be relevant, any negative impact of carbon policy on new investment would likely be balanced out by new investment that is actually drawn to Ontario by the opportunities and economic advantages that carbon policy offer up.

Nonetheless, for Ontario policy-makers an important objective in developing a new climate change strategy should be to seek to establish a "level playing field", particularly with those jurisdictions with which the province is most integrated in economic terms. That objective is obviously informing Ontario's ongoing engagement with the province of Quebec, and to a lesser degree with California. Given the importance of neighbouring U.S. states to the integrated supply-chain dynamics of so much of Ontario's manufacturing base, such engagement should be extended to states like New York, Michigan, Ohio, and Illinois.

• The carbon pricing instrument

The reason carbon pricing gets pride of place in climate policy is that it explicitly and directly addresses the most basic economic failure behind climate change, which is that carbon pollution does not cost anything. Putting a price on that pollution changes that, and changes all of the economic calculations that flow from it.

Sustainable Prosperity has generated a considerable body of knowledge around carbon pricing. The following discussion and recommendations are based on that research, and specific instances of that research are cited where relevant.



Potential benefits of carbon pricing

Aside from the basic economic rationale for using a pricing (or market-based) instrument to address climate change summarized above, and the environmental benefits that clearly derive from a carbon pricing policy, there are a number of economic co-benefits from using such an instrument that SP has reviewed and assessed.

The most significant of these is the <u>innovation-inducing effect</u> of pricing carbon emissions. The basic logic of this is easy to understand: make an activity more expensive, and individuals and firms will search for ways to minimize that new cost.

Another co-benefit of carbon pricing comes in how it alters the business case, and particularly return on <u>investment</u>, around activities and technologies that deliver low carbon outcomes. Shifting relative costs in the economy in favour of those activities, in other words, make them more attractive to investors.

Related to this is the potential that carbon pricing policy opens up to governments in the <u>recycling of the revenues</u> generated by the policy. Depending on the stringency of policy, and choices around the auctioning of allowances (under a cap-and-trade system), these revenues can be substantial. Governments can choose to either use those revenues to further enhance the innovation and investment benefits of carbon pricing through direct support, or can open up opportunities for business or private investment in low carbon technologies or activities through offsetting reductions in other taxes.

Considerable research on "directed technological change" (the economists' term for this effect) shows that a number of conditions need to exist for the effect to be realized. First, the carbon price needs to be sufficiently high to actually create the incentive for change. Second, the price level needs to be predictable over a defined period of time. In practical terms, jurisdictions that have brought in carbon pricing – with British Columbia and its carbon tax being the best example - have chosen to start with low prices with a clear commitment to a predictable rate of increase (in the BC case, \$5/t until 2012).

Policy design considerations

Realizing the potential benefits summarized above is largely a function of policy design choices. Some of those choices sit outside the strict design of the carbon pricing instrument, such as decisions about how and where to use the revenues produced by the carbon price. The following section summarizes the key design considerations for carbon pricing systems:

Stringency

The stringency of a carbon pricing policy is the level of change it requires for covered sources. In a cap & trade (or intensity-based) system, stringency is the size and pace of the emission reduction commitment. In a tax system, stringency is the level of the tax and its rate of increase over time. More stringency produces a higher carbon price and greater reductions, all else equal. For firms, stringency is the impact of the policy on the marginal costs of production.



Coverage

Coverage refers to who (or what) is subject to the carbon price. In other words, which greenhouse gases, sectors and entities are part of the system. Together with stringency, it defines the policy's emission reduction ambition. Wider coverage across all of these dimensions enables a more ambitious reduction goal. Broader coverage also typically delivers a more cost-effective policy (by sharing the burden more broadly).

Revenue generation and recycling

Carbon pricing approaches can create a public revenue stream, through the tax mechanism or the auctioning of emission allowances. In a cap-and-trade system, a government has many options: (1) Full coverage and ramp-up of auctioning: start by covering all major emissions sources ("economy-wide"), but allocate all or most of the allowances for free, and gradually auction a greater percentage over time; (2) Full auctioning and ramp-up of coverage: start with 100% auctioning but slowly expand the coverage of sectors under the system; or (3) Mixed: begin with only certain sectors with free allowances to some or all of these, then ramp up both coverage and percentage of allowances auctioned. Quebec's cap-and-trade system takes this approach. It initially covered the industrial and power sectors, starting with mostly free allowances and moving to 100% auctioned over time; but since January 1, 2015 it now also covers fuel distributors (i.e. all retail fuel use), which must buy 100% of their allowances.

Carbon pricing systems can generate substantial revenues (e.g. BC's carbon tax generated C\$1.1 billion in 2012/13). Governments have many choices for how to allocate those revenues, including: using them to offset other taxes (as BC does), rebating the revenues directly to the covered entities, or by investing in carbon-reducing infrastructure, technologies or projects (as Alberta and Quebec do). Ontario's existing law (Bill 185, 2009) describes to which purposes the revenues raised by a carbon price can be put. In broad terms, those purposes are: (i) research, development and deployment of GHG reducing technologies, (ii) mitigating the costs of the policy to covered sectors, (iii) investing in low carbon infrastructure or equipment in covered sectors, or (iv) mitigating the costs to electricity consumers. That legislation, of course, could be modified.

The use of carbon revenues plays a large role in determining the ultimate cost-effectiveness of the policy. Research generally suggests that reducing other distortionary taxes can provide the most cost-effective outcome (this "revenue neutral" approach is used by B.C.). Combining tax cuts with targeted support for clean technology or infrastructure, if well designed, can also be very effective.

<u>Distributional impacts (households)</u>

Some studies suggest that a carbon price may disproportionately affect low-income households, since they spend a larger part of their income on energy (although this may not be the case in Ontario, since its electricity system is largely decarbonized). More in-depth studies indicate this is not necessarily the case; it depends on factors like carbon intensity of the electricity system and income sources. BC's carbon tax, for



example, may benefit low income households even without the tax shift. (Beck et al., 2014) To mitigate any such impacts, governments can use carbon revenues to compensate those disproportionately affected. In B.C., for example, the government has created tax credits for low-income households and rural communities as compensation (using about 23% of total carbon revenues).

Competitiveness impacts

Similarly, certain sectors of the economy can be disproportionately affected by a carbon price. The best known test for such competitiveness concerns is the "energy-intensive and trade-exposed" (EITE) test that has featured in U.S. policy development. Trade exposure is a bigger issue if competitors are not subject to carbon pricing or emission limits. Ontario sectors that may meet the EITE test include streel, chemicals and possibly cement. Even for EITE sectors, studies and experience indicate that competitiveness impacts are typically small, for current carbon prices (under \$30/tonne) – although there can be exceptions. Sustainable Prosperity's Policy Brief "Carbon Exposed or Carbon Advantaged?" examines this issue in more detail, considering impacts on all sectors.

Governments can use compensating policy measures to address competitiveness concerns. A commonly-used approach, in a cap-and-trade system, is to provide some (or all) free allowances to EITE sectors initially – as Quebec's system does. Alberta's intensity-based system similarly charges firms only for emissions over their limit; and it provides an upper limit on costs by allowing the option of contributing to a technology fund at a rate of \$15/t. A tax system can also address competitiveness concerns, for example, by recycling revenues to assist EITE firms (e.g. through targeted tax cuts or clean technology incentives).

If governments choose to buffer EITE firms from high carbon costs in the short-term (when they have little ability to adjust), they may want to combine that with a longer-term transition strategy to help EITE firms adjust, innovate and compete in increasingly carbon-constrained global markets. This can be done several ways, for example: by reducing the percentage of free allowances over time (as the EU and Quebec do), to provide growing incentive to change; or by using some carbon revenues to support the development and use of cleaner technologies, as Alberta does.

<u>Jurisdictional linkages</u>

It is possible to link carbon pricing systems between jurisdictions. Such linkage is simplest between cap-and-trade jurisdictions, through trading of emission allowances. An <u>example</u> of such linkage is the Quebec-California system. Linking is also theoretically possible between other carbon pricing systems, although the complexity is greatly increased by the need to convert from one type of carbon unit (e.g. tax) to another. The great advantage of linking systems comes from the gains from trade that are generated, with a greater pool and supply of allowances creating lower prices. Since any reduction in emissions, regardless of its location, contributes to mitigating climate change, the ability to link delivers economic benefits (lower overall reduction costs) without sacrificing environmental effectiveness.



A significant implication of linking carbon systems is that – because the marginal cost of emission reductions will equalize across jurisdictions – the participants are effectively agreeing to a common level of stringency.

Offsets

Offsets are measurable emission reduction activities that occur outside of the sectors directly covered by a carbon pricing policy, but which can be "brought into" the system for compliance purposes. Offsets typically involve displacing an emitting activity (e.g. renewable power projects by uncovered firms) or capture of carbon emissions (e.g. forest planting or conservation). Both Alberta and Quebec's systems allow for offsets. BC's system does not (though they can be used with carbon taxes). Offsets can (i) reduce the costs of GHG reduction by providing greater flexibility, and (ii) bring in activities not normally covered by carbon pricing (like forestry and agriculture) in a voluntary way. However, offsets also present certain challenges – such as ensuring reductions are permanent, real and additional - but these are not insurmountable.

Targeting price or quantity?

A carbon tax fixes the price of emitting GHGs, while a cap-and-trade system fixes the quantity of emissions allowed. Each has certain advantages. In particular, a cap ensures that an overall emission target will be met, while a tax does not. But a tax does provide a predictable carbon price (especially when rates are set on a multi-year basis, as BC did); this helps firms and households to make carbon-lowering investments (in cars, technologies, etc.) with greater certainty. Prices can fluctuate, sometimes widely, in a cap-and-trade system (as has been the case in Europe), creating uncertainty for low carbon investments.

In addition, a tax may provide a more predictable stream of revenue, particularly in the early years, which can help in planning for revenue recycling (tax cuts, incentives, investments).

It is possible to manage some of those trade-offs by bringing in elements of each policy in a hybrid system, or through smart design like price floors and ceilings in a cap & trade system (as Quebec does).

Administrative issues

Generally speaking, a carbon tax system is easier to develop (and administer) because it builds on existing tax administration and management systems. This means that carbon pricing, and revenues, can begin sooner. The BC carbon tax, for example, was announced in February, 2008 and implemented on July 1 that same year.

Cap-and-trade systems typically require longer to establish (e.g. to negotiate emission targets with sectors and firms, and create new systems for administration and monitoring). In Ontario, this may be less of an issue, since trading, monitoring and reporting systems have already been initiated, and the province and firms have some prior experience with emissions trading.



In any event, there are ways to address this problem, such as starting with a fixed price system for the first years, while cap & trade details are developed (this can also address issues of price volatility and revenue generation in early years).

Choosing the instrument

The basic rationale for pricing carbon is to correct an important market failure. Market prices do not reflect the real and significant costs that Greenhouse Gas (GHG) pollution imposes on society (an 'externality' in economic terms). Therefore there is little private incentive to reduce GHGs or to create substitute products or technologies that might result in lower GHG emissions. The result is that we emit far too much of it, imposing large and growing costs on society.

Simply put, because we do not pay the real costs of GHG pollution, we are behaving in a way that is not in our environmental or economic self-interest. The most effective way to correct this market failure is by putting a price on GHG emissions.

A GHG (or "carbon") pricing policy aims to do that: by aligning the price of an activity to the social cost it generates, particularly climate damages. This policy "internalizes" the external cost of the activity, which leads to the optimal social outcome in which the marginal social cost of the product equals its marginal benefit to the consumer. The leading forms of such carbon pricing instruments are described further below.

To help guide policy-makers in understanding what GHG emissions "cost" us (in climate change impacts), economists can estimate a "social cost of carbon" using what is known of the global damage created by GHG emissions (in a \$/t CO2 equivalent format). Things like the financial cost of mountain pine beetle outbreaks and changes in the Great Lakes-St. Lawrence water levels are Canadian examples of such damage. Both the American and Canadian governments use SCC numbers in policy and regulatory development. The US's estimated SCC (recently updated) stands at US\$37/t for 2015. The Canadian number (which reflects older U.S. analysis,) is C\$28.50 (in 2009\$)

An estimated SCC is important for cost-benefit analyses, but having a precise estimate it is not essential for moving forward with carbon pricing policies. For example, Ontario has set a GHG reduction target, and a carbon price can be designed to help achieve that target. Given that our current carbon price is zero (or very little); a price that moves closer to the actual SCC is beneficial.

It is important to note that policies other than pricing can also be used to address this market failure; command-based regulation, such as limits on the emissions rate or technology used, is the clearest alternative. However, a considerable body of evidence (both economic research and real-life application) shows that pricing instruments are the most economically efficient pollution control option, since they provide flexibility about *how* to reduce emissions and provide more direct incentives to innovation (which is critical to low carbon growth and competitiveness). Moreover, the substantial revenues that can be generated by pricing policies give governments greater scope to address and offset the distributional and



competitiveness concerns a pricing policy can create. Finally, well-designed pricing policies can help position Ontario firms to prosper in the emerging low-carbon economy.

Carbon pricing approaches

Carbon pricing is a policy mechanism that puts a monetary price on the emissions of carbon dioxide --typically expressed in dollars per tonne of carbon dioxide equivalent (\$/CO2e). There are three basic approaches to pricing carbon, an example of each already being in place in Canadian provinces.

Carbon tax

A carbon tax or fee sets a <u>fixed price</u> per unit of CO2e emitted. It can be levied "upstream" at the point of production of the fossil fuel (based on its emissions intensity), or downstream at the point of sale for the product (based on per unit emissions). The British Columbia carbon tax is a downstream carbon tax, with a level of \$30/t. Tax revenues can be redistributed to reduce the burden on regulated sources or households, or for other purposes, as discussed in note #2.

Cap-and-trade

In a cap-and-trade system, the total amount of emissions is fixed for regulated entities. Most commonly, the system issues a fixed number of allowances, tied to the emissions cap, and requires sources to submit allowances for each tonne emitted. The allowances can be traded among entities, which will establish a market price. The allowance allocation process can be used to reduce the burden on regulated sources or others (as discussed in note #2). Quebec has a cap-and-trade system that is based on the Western Climate Initiative template, which offers the advantage of creating an allowance that is fungible in trading terms with other WCI-based systems (which is right now limited to California), and potentially others.

Baseline and credit, intensity-based, or tradable performance standards (TPS)

In this system, a regulation establishes a target emissions rate per unit of output or input, rather than an absolute limit on emissions. Sources emitting below the target rate earn credits. Those emitting above the target must buy credits equal to the volume by which they exceed the target. Trading between these two groups will establish a price for those credits. Because the emitters' liability is only on the variance from the emissions rate, these types of systems generally reduce the cost burden on the emitters relative to a tax or cap-and-trade system wherein all emissions impose a liability (a tax payment or an allowance requirement). This approach works best in sectors where there is a measureable, common input or output across regulated firms (e.g., megawatt-hours of electricity). One reason for adopting it would be if a jurisdiction expects rapid growth in carbon intensive industries (like Alberta, see below).

An example of such a system is Alberta's Specified Gas Emitters Regulation (SGER): a baseline and credit policy, under which major industrial facilities must reduce their "emissions intensity" (i.e. emissions per unit of production) by up to 12 per cent, relative to their typical performance or "baseline" level. The SGER



introduces the additional compliance option of allowing firms to pay a \$15/t penalty for every tonne it is over its target, with the proceeds transferred to a low carbon technology fund.

Some critical points of distinction between these three approaches are:

- A carbon tax provides <u>price certainty</u>, while a cap-and-trade provides <u>emission reduction certainty</u>.
- A baseline-credit/TPS system controls the emission intensity of production, but not the absolute level of emissions (which can increase if the rate of growth in the covered sectors outpaces the reduction in emissions intensity).

Hybrid and portfolio approaches

It is possible to create hybrid carbon pricing systems by adding policy measures like price ceilings, price floors or technology funds to a cap and trade or baseline and credit system. Similarly, a portfolio of carbon pricing systems can exist simultaneously. Many European countries, for example, have carbon taxes but are also part of the European Emissions Trading System (ETS). Closer to home, Quebec had until very recently had both a carbon tax on fuel distribution and a cap-and-trade on power producers and large industrial emitters. The cap-and-trade has since January 1st, 2015 been extended to cover fuel distribution, and the carbon tax has been discontinued.

The main advantage to such hybrid approaches is to combine the price (and revenue) certainty of a tax with the emission reduction certainty of a cap. The main disadvantage comes in the greater complexity of the overall policy and the potential (in poorly designed portfolio approaches) of certain sources/activities being subject to two policies at once.

Considerations for Ontario

Given the background and questions provided in the province's "Climate Change Discussion Paper", and the insights provided on both the broad policy and the carbon pricing instrument, SP would offer the following comments.

Achieving emission reduction certainty, which is the first criteria established by the Discussion Paper for the province's carbon pricing instrument, is – as pointed out above – usually achieved through a cap-and-trade system. But theory and practice suggest that the potential benefits of carbon pricing (around innovation, investment, etc.) can be strengthened by certainty and predictability in the carbon price.



Luckily for Ontario, a number of models exist that offer up some degree of both quantity and price certainty. California and Quebec, as part of their linked cap-and-trade system, combine both reduction certainty through theirs caps, and price certainty through the "price collars" (i.e. an upper and a lower bound).

If Ontario chooses to follow a similar model (and to link to the California and Quebec markets), it will need to ensure that the overall strategy meets two basic tests.

The first test – the effectiveness test - lies in ensuring that the system is designed with enough stringency to deliver the emissions outcomes the province has set for itself. What that stringency translates into, in exact terms, is impossible to forecast in the absence of extensive and sophisticated modelling and policy analysis. But as we have pointed out, an important challenge to policy-makers will come in ensuring that the capand-trade system is designed – within the broader policy framework – so as to minimize negative interaction effects.

The second test – the efficiency test – is at its core about creating a policy framework that delivers the emission reductions the province has committed to achieving at the lowest possible cost to the economy. An important factor in the effectiveness of the system is how broadly it covers the economy. The broader the coverage, the more cost effective the policy framework will become. "Lowest possible cost to the economy", of course, is not the same as saying that there will not be some households, businesses, or sectors disproportionately affected by the policy framework. But those distributional concerns – and the closely allied issues around competitiveness – can and should be addressed through targeted policy interventions that do not weaken the efficiency of the system.

Finally, the question of what Ontario should do with the revenues that it raises through a carbon pricing instrument is a critical one. There are four broad categories of use for those revenues: (i) to offset reductions in other taxes or fees, (ii) to invest in emission reduction activities and technologies; (iii) to address distributional and competitiveness concerns; and (iv) for deficit reduction. All four of these uses have some justifications, and have been used by various jurisdictions that have already priced carbon.

SP does not have a specific view or recommendation to offer Ontario on this question. But we would suggest that the government of Ontario use the following criteria in choosing how to allocate the revenues from a carbon pricing instrument.

- That it strengthen the political case for the policy
- That it contributes to the long-term cost effectiveness of the policy
- That it contributes to the long-term efficiency of the policy
- > That it facilitates and promote the long-term development of a low-carbon economy in Ontario



In closing, Sustainable Prosperity congratulates the government of Ontario for its leadership in addressing climate change. We view this leadership as critical at a time of great opportunity for moving forward in Canada on the issue.

We look forward to working with the government in the weeks and months ahead.