

BACKGROUND NOTES

A National Plan

On October 1, 2007, the *Canadian Council of Chief Executives* (CCCE) issued a Policy Declaration titled *Clean Growth: Building a Canadian Environmental Superpower*. Signed by 33 chief executives who sit on the CCCE's Task Force on Environmental Leadership, the paper outlines five key propositions that would enable Canada to reduce its greenhouse gas (GHG) emissions and make the greatest possible contribution to a sustainable global economy.

The first of these propositions is that Canada needs a coherent national plan of action on climate change, one that sees governments, industry and consumers all working together toward shared goals. It should be noted that the CCCE is calling for a *national* plan, not a *federal* plan, meaning a plan that engages all levels of government in a coordinated and collective effort.

Unfortunately, the two most recent meetings of the Council of the Federation failed to achieve a consensus among provincial and territorial leaders on the best approach to climate-change policy. Some provinces are developing their own strategies, with the result that different obligations are likely to be imposed on industries in different jurisdictions. This overall lack of coordination suggests that as a country we are not effectively pursuing the best opportunities.

- *Alberta* already is implementing its own regulatory plan for large industry, with intensity targets that differ from the federal scheme. Alberta has proposed a provincial technology fund and an offsets system, both of which would be limited to Alberta projects. The province's overall goal is a 50 percent reduction in greenhouse gas intensity from 1990 levels by 2020.
- *British Columbia* introduced legislation on November 20, 2007, that would legally commit the province to a goal of reducing GHG emissions by 33 percent from today's levels by 2020. (The federal goal is a 20

percent reduction by that year.) By the end of 2008, interim targets will also be set for 2012 and 2016. The bill also commits the provincial government and public institutions to becoming “carbon neutral” by 2010. The government appears to favour absolute rather than intensity targets for industry, although no firm details have been released. British Columbia also is seeking to link up with emissions trading systems being developed in California and several other western U.S. states.

- *Quebec* supports the Kyoto goal, and recently implemented a carbon tax to be paid by fuel suppliers. Revenue from this tax will be used to build a “Green Fund” of \$200 million annually. It is unclear whether Quebec will accept federal targets for its industries but the province has announced that it will require large industries to report separately on their emissions, in addition to the federal reporting scheme.
- *Ontario* announced its targets for GHGs in June 2007. These call for a six percent reduction below 1990 levels by 2014 (the time by which it intends to shut all coal-fired electricity plants), 15 percent below 1990 by 2020, and an 80 percent reduction by 2050. In the past, Ontario has indicated that it favours absolute rather than intensity targets, although as yet the provincial government has not said whether it intends to establish its own GHG regulations for Ontario-based industries.
- In its Speech from the Throne on November 20, 2007, the *Manitoba* government said that its goal is to reduce GHG emissions to below 2000 levels by 2010, after which it would “tackle the major growth in emissions that took place during the 1990s.” It has indicated previously that it would consider absolute emissions targets for its industries. Details are expected to be released when the government tables its climate change legislation later in the new session. Separately, the province has signed on to the Western Climate Initiative, which has established a “regional goal” of cutting emissions to 15 percent below 2005 levels by 2020. British Columbia and six U.S. states are also part of this initiative.
- *New Brunswick* says that its goal is to reduce GHG emissions to 1990 levels by 2012, and to achieve a further 10 percent reduction by 2020.
- In legislation introduced earlier this year, *Nova Scotia* committed to reducing emissions 10 percent below 1990 levels by 2010.

- The previous government in *Saskatchewan* adopted a target of reducing GHG emissions by 32 percent by 2020 and 80 percent by 2050, in both cases relative to today's levels. The newly elected government promised during the campaign to respect those goals.
- At the most recent Premiers' meeting, Ontario, Quebec, Manitoba and British Columbia argued in favour of a national cap-and-trade program for carbon emissions. Alberta, Nova Scotia and Newfoundland were opposed.
- At that same meeting, most provinces supported the adoption of California's ambitious vehicle fuel efficiency standards for 2010. Ontario, the centre of the Canadian automotive industry, was opposed. Ontario's position is that standards for vehicles should be set on a North American-wide basis because of the highly integrated nature of the industry.

In addition to federal-provincial coordination, there also is a need to work effectively with local governments. Canada's large urban centres are significant sources of GHGs and air pollution, and policies related to building standards, urban design, public transit and municipal infrastructure all have a bearing on the future direction of Canada's emissions. Municipal leaders say that the so-called "cities agenda" is intended to ensure that local governments have the funding to improve the livability and environmental sustainability of our largest urban communities.

Role of the Consumer

As part of a national plan on climate change, Canada must address, in a coordinated and cost-effective manner, the emissions associated with consumers and Canadian households. This includes emissions produced to generate the electricity used to power air conditioners, appliances, electronics and other equipment, as well as the burning of fossil fuels for home heating and personal transportation, all of which have grown in recent years.

Even with more efficient appliances and better insulation in new homes, overall emissions of GHGs by Canadian households continue to rise. Population increases and other demographic changes are partly responsible for this increase, along with the fact that the average size of a new home has grown over time. Similarly, automobiles are becoming more fuel-efficient but these gains are offset by increases in the overall number of miles traveled. Despite efforts to encourage wider use of public transit, many Canadians seem content to sit in traffic gridlock. And as is the case in many other countries, air travel has risen considerably in the past decade, contributing to the overall growth in GHGs.

Very little has been done to explain to Canadians their contribution and their responsibilities, and the impact that aggressive action to reduce emissions will have in terms of the cost of energy, and higher prices for consumer goods and services. Most government programs to deal with consumer emissions of greenhouse gases are focused on spending and incentives (e.g. tax credits for transit passes, grants for energy retrofits, and incentives for fuel-efficient vehicles). No government seems willing to suggest that real progress requires sacrifices, yet it is hard to imagine making a significant dent in consumer emissions without serious attention to lifestyle, energy use and transportation choices.

Canada's business community can be part of the solution when it comes to some of these consumer issues. In addition to product innovation, companies have a responsibility to educate consumers on better use of energy and energy-consuming products, and to work with suppliers to reduce GHG emissions in the production and delivery chain.

The Federal Plan

The federal government's plan to address climate change focuses on first stopping the growth in GHG emissions, which it says can be done in three to five years, and then reducing emissions by 20 percent from today's levels by 2020, and by 60 to 70 percent by 2050.

Ambitious GHG intensity targets have been set for Canada's most emissions-intensive industries -- oil and gas, electricity, forest products, aluminum, base metals, chemicals, fertilizers, cement and lime. These targets include a six percent improvement in emissions intensity for each year from 2007 to 2010, plus two percent per year thereafter, resulting in a cumulative reduction of 18 percent by 2010 and 26 percent by 2015. New facilities (built in 2004 or later) will qualify for a three-year reprieve, but then will have to achieve the two percent yearly improvement. A one-time credit for early action will be available for those firms that can demonstrate reductions between 1992 and 2006. However this will be limited to a total of 15 megatonnes worth of credit and will be pro-rated among qualifying companies.

In order to meet their GHG intensity targets, firms will have a number of options. They can:

- Undertake process changes or fuel-switching to reduce emissions in their own operations;
- Purchase credits in a domestic emissions trading system, or obtain offsets from Canadian facilities outside the regulated system;
- Obtain international credits through the Kyoto Protocol's Clean Development Mechanism; and/or
- Invest in a technology fund that will promote the development and deployment of innovative technologies that can reduce emissions across industry.

Contributions to the technology fund will be set at \$15 per tonne initially, rising to \$20 per tonne in 2013, and increasing at the rate of nominal GDP thereafter. Access to the fund will be capped, initially at 70 percent of the regulated target in 2010 and declining by five percent or more each year, until it winds down in 2018. The primary purpose of the fund will be to achieve near-term reductions through technology deployment and infrastructure investments. One example could be a CO₂ pipeline to support carbon capture and storage. Only a small portion of the fund will be set aside to support research and development related to longer-term transformative technologies.

The Role of Market Instruments

Canada's business leaders recognize that price signals can be effective in helping to convince companies and consumers to alter their behaviour and find ways to reduce emissions of greenhouse gases and other air pollutants.

While the initial burden of any emissions trading regime is likely to be felt by industry, its ultimate impact is also to send price signals through to the end user of the product. In that respect, the effect can be similar to that of a carbon tax. In fact, most experts would argue that the price signal must reach the consumer if the environmental objective is to be realized. The only federal political party in Canada to support a carbon tax, the Green Party, has suggested that consumers should not be shielded from its impact.

As noted in *Clean Growth*, we are not proposing a carbon tax. But if governments choose to implement environmental taxation, we strongly believe that the revenue generated from such taxes must be offset with other tax reductions. This would be necessary both to ensure political support and to avoid unwanted effects, such as a loss of competitiveness or the imposition of an undue burden on low-income families.

A Positive Investment Climate that Stimulates Cleaner Technologies

Canada's business leaders believe that real progress in reducing emissions, both within Canada and globally, will be driven not by targets but by policies that stimulate investment in the full range of energy options and advanced technologies. Only if they are healthy and profitable will Canadian firms have the means to harness innovation and develop products and processes that enable Canada and other countries to achieve stronger economic performance with reduced environmental damage.

Canada has the talent and the resource base to be a leader in a wide range of innovative technologies, products and business models. From our traditional strengths in minerals, oil and gas, forest and other resource-based products to renewables such as hydro, wind and biofuels, we can punch above our weight in the race to develop the energy systems of the

future. And we also need to continue to be on the forefront of specific technologies that are showing great promise, such as clean coal, carbon capture and storage and fuel cells. These and other technologies have the potential to make a significant contribution to reducing GHG emissions in Canada. Equally, they are critical to ensuring that the growing worldwide demand for energy does not pose unnecessary environmental risks.

This means aligning economic and environmental policies to foster investment in innovation across Canadian industry. Governments have recognized the need to reduce corporate taxes as a means of ensuring future economic prosperity and fostering the growth of Canadian-based global champions. Canada needs a clear and consistent set of policies that stimulates industry and consumers to improve energy efficiency in the short term, while also building the foundation for the longer-term transformation to cleaner energy, advanced technologies and more sustainable energy use.

Canada - United States

Along with China, the United States is a significant source of GHGs, representing more than 20 percent of global emissions. The United States signed the UN Convention on Climate Change but declined to ratify the Kyoto Protocol. The current Administration is focused on developing more realistic global targets over the longer term, ones that it insists must include commitments from China, India and other emerging economies.

To date, the United States has achieved slower growth in GHG emissions than has Canada. This is due in part to the declining share of its economy represented by energy-intensive industries. The United States is on track to meet President George W. Bush's goal of reducing the GHG intensity of the economy by 18 percent by 2012.

The politics in Washington on this issue are fluid. Presidential contenders from both parties are embracing the language of green politics, and several bills are before Congress that propose various targets and/or emissions trading schemes. There also is considerable activity at the state level,

notably in California and in the northwest and northeast regions. Many of these state initiatives are focused on electric utilities, since 40 percent of the country's GHG emissions come from the generation of electricity, largely from coal-fired plants.

Recently, a number of leading U.S. corporations and environmental organizations formed the "Climate Action Partnership" (USCAP). Corporate members include General Electric, DuPont, Alcoa, BP, Duke, and PG&E, Dow, Conoco Philips, Ford, General Motors, Rio Tinto Alcan, Siemens and Shell.

This group argues for a global solution, but suggests that the United States must lead and that the right approach will enable that country to compete and prosper in a carbon-constrained world. USCAP calls for absolute emissions targets for the United States, but ones based on today's emission levels and that recognize the need to allow for some further growth in the short term before reductions kick in. The group's plan calls for an economy-wide cap-and-trade program. It does not set out allocations for sectors and companies, but suggests that the process for allocation will have to be flexible enough to address industry-specific impacts and competitive implications.

A New International Approach

Despite the high level of concern around the world about climate change, overall energy use and GHG emissions continue to rise. Many countries within the Kyoto Protocol, including some strong supporters, are falling short of their targets. At the same time, other countries outside the Kyoto Protocol are proceeding with meaningful action through other means, including international agreements between governments. But the economic growth of countries such as China and India is swamping whatever reductions are being achieved in the industrialized world. This in turn is focusing greater attention on the measures needed to help people adapt to the unavoidable consequences of climate change.

What has been missing from the debate about climate change, both here in Canada and internationally, is the recognition of the link between energy and development. It is unlikely that citizens, in either the developed or developing world, will accept a curtailment of their energy use or a decline in their standard of living to solve climate change. Energy demand will continue to grow, and so the key is to greatly increase the efficiency with which we use fossil energy and speed the development of low and non-carbon energy, as well as less GHG-intensive processes. And we will need these new technologies at an affordable price if they are to penetrate worldwide.

Long-term success in reducing the risks of climate change then will require that all major emitting countries take a more active role than is the case today. This was recognized at the most recent G8 Summit as well as at the APEC leaders' meeting in Sydney in September. Developing countries can be expected to embrace the new generation of technologies that can deliver economic growth alongside superior environmental performance. But the question remains as to whether another attempt at devising top-down mandatory national caps can actually attract all the necessary players, or whether a more flexible approach better fitted to national circumstances, and more focused on innovative strategies to stimulate technology development and dissemination, would be more successful.

The World Business Council for Sustainable Development has recently developed some innovative ideas about how to reconcile the debate about energy access, energy security and climate change. While we cannot do justice to their full approach, in essence they suggest a departure from the Kyoto Protocol regime of mandatory national caps in favour of a bottom-up approach. This would involve national commitments and sectorally focused efforts to transform energy systems by deploying technologies and developing standards that fit national circumstances. This approach would have the benefit of focusing less on responsibility for past emissions and more on effective solutions for the future. It would also help to hasten the spread of new energy-efficient technologies across sectors and lessen competitive differences that inevitably arise from the complex process of allocating national targets.

Attention internationally is turning to the next meeting of the Conference of the Parties to the UN Convention. COP 13, as it is known, will take place in Bali in early December, with a focus on the successor regime to the Kyoto Protocol after 2012. The European Union is calling for a 20 percent reduction from 1990 levels by 2020, but a number of developed and developing countries are resisting mandatory caps.

Political leaders in China are becoming acutely aware of the impact of climate change and pollution on their people and their economy. They continue to oppose absolute emissions caps, but lately have shown interest in setting goals related to emissions intensity. India, on the other hand, remains strongly opposed to mandatory caps. India prefers to measure its contribution in emissions per capita.

The reality is that about 20 countries make up 80 percent of global emissions and these are the only ones that really matter to achieving international agreement on a path forward that will have a meaningful global impact. The key will be to find a flexible approach that reconciles environmental, energy and development objectives and enables different countries to participate on different terms, including the ability of developing countries to increase their efforts as their economies grow and prosper. And overall the focus must be on enhanced cooperation and market-based policies to stimulate the massive development of new and cleaner technologies, and their widespread deployment around the world.

Adaptation

Reducing GHG emissions is not the only challenge requiring international cooperation. Perhaps the most important element of the most recent IPCC report was its work on adaptation, a subject that has received far too little public attention. The world appears to be warming and even strict adherence to the Kyoto Protocol will not stop this trend. It is therefore critical to consider how best to deal with the impact of the resulting climate changes.

Even the IPCC has acknowledged that climate change may yield positive effects in some regions. Canada may experience both the positive (longer growing seasons, expanded shipping routes) and the negative (Arctic and coastal impacts). Canadians need to think carefully about the best strategies to cope with the most significant changes, further our research efforts on how to prepare for adverse impacts and improve our understanding of the strategic implications of a changing climate that will produce winners as well as losers.

An Energy and Environmental Superpower

Prime Minister Harper has talked about Canada as “an emerging energy superpower”. Canada is the largest supplier of energy to the United States, and with the inclusion of the oilsands is second only to Saudi Arabia in the size of its oil reserves. Canada derives more of its electricity from hydro power than most other countries. We also have significant reserves of natural gas, coal and uranium, and are key players in newer energy technologies such as wind, biofuels and hydrogen fuel cells.

This vast energy resource, and the skills and technologies that go with it, gives Canada a special responsibility to be a wise steward in the development and use of all forms of energy. With the right mix of public policies and corporate strategies, Canada can be in the forefront of efforts to achieve a cleaner energy mix, and can play an instrumental role in disseminating technologies that enable other countries to power their economies with lower overall environmental impact.