MuskokaSummit
ON THE ENVIRONMENT

Solutions for a Warming World

May 27-28, 2016

Final Communiqué

Climate has been changing for many decades, because humans have been pumping CO_2 and other greenhouse gases into the atmosphere, increasing the extent to which heat is impeded from radiating from Earth to space. The many consequences are now becoming obvious, and urgent action is needed to reduce greenhouse gas emissions and mitigate the effects of warming. Transitioning to a low-emissions world is a significant challenge, but it also offers excellent opportunities for investment, innovation, job creation, and enhanced quality of life for Canadians. During this summit, participants explored possible steps to take toward making this important transition.

To curtail climate change, nations of the world must substantially reduce their emissions of CO_2 and other greenhouse gases. For Canada, this can best be done using a three-pronged approach:

1. Put a nation-wide price on carbon,
2. Improve energy efficiency and use of clean energy in our economy, and
3. Protect the vast carbon sinks in our forests and wetlands.

Each prong creates new opportunities to invest in improved technology, provide jobs and build wealth, while driving emissions reduction both in Canada and internationally. All three prongs should be phased in, preferably by 2018, and strengthened thereafter. To do so effectively will take careful planning and implementation, involving all levels of government, various economic sectors, all our communities, and every individual. This nation-wide effort must build upon the many steps already being taken, celebrating those achievements while building them into a coherent national strategy for climate.

Carbon pricing

By pricing carbon emissions we ensure that those who pollute our shared atmosphere pay for the damage they cause. Whether through a tax, a cap-and-trade scheme, or some other mechanism, putting a price on carbon encourages innovation to reduce emissions, while generating revenue that could fund innovative emissions-free infrastructure or other costs of adaptation, mitigation or remediation. To be most effective, the price on carbon emissions should be applied as broadly as possible across the economy. It should capture both the carbon emitted in extracting, refining and transporting fuels to market (upstream emissions), and in the use of fuels to maintain our buildings, provide transportation and drive other components of our economy (downstream emissions).

A tariff on all oil, gas and coal levied on producers at point of sale or export, coupled with a cost added to fuel or electricity purchases by consumers would capture most upstream and downstream emissions. Whatever the administrative details, the price on carbon should be set nationally (even if administered regionally), and be mandated to increment annually until it is at, or above, prices for carbon in other leading countries. This program should be transparent, and some or all revenue could be used to reduce other taxes for middle- and low-income individuals least able to cover the costs of transitioning to a low emissions way of life.

Energy efficiency and clean energy sources

A national carbon price will also encourage energy efficiency. However, Canada has the capacity to very rapidly increase energy efficiency in building management and in transportation, and doing so will quickly lower emissions. There will be good investment opportunities in developing novel technology for improved efficiency, but targeted incentive programs could help ensure this transition takes place as rapidly as feasible. Incentives to individuals to reduce electricity consumption, to use renewable energy where available, and to drive electric or other energy-efficient vehicles have proved effective when well designed.

Increased efficiency will also follow if governments make the clean infrastructure investments needed to facilitate active transport and public transit, and to create an east-west nationally integrated smart electricity grid. This smart grid will be needed to handle the new technology that will optimize conservation and delivery of power to our homes and other buildings. Funds to support such incentives can be drawn from the carbon-pricing mechanism, and by phasing out existing fossil fuel subsidies (for example, tax deductions for exploration and production expenses, offshore as well as in Canada, and the accelerated depreciation rate for mining-related property). These subsidies currently cost the Federal government about $1.6 billion per year. A further $1.1 billion is incurred by Provinces which provide various levels of royalty relief to the energy sector.

Well-designed feed-in tariff programs are incentives that encourage individuals or businesses to install small-scale emissions-free electricity generation units and feed production into the grid. While their main purpose is to shift usage towards green sources, feed-in tariff programs also help build energy efficiency and conservation by making consumers aware of the electricity they use. Canada's electricity supply, dominated by hydroelectric and nuclear generation, is already largely emissions-free, and a combination of feed-in tariff programs and targeted clean infrastructure investments in power generation could eliminate use of fossil fuel in electricity generation in Canada by 2025. Shifting to emissions-free electricity and increasing energy efficiency complement each other. They both reduce emissions in the operation of Canadian homes and in transportation.

Forestry and land management

The changing climate is already causing landscape changes that risk destroying substantial natural carbon sinks in Canada. Rising temperatures and reduced precipitation are increasing the risk of wildfire across Canada, and past land management has left forests more vulnerable to fire. An increase in the annual forest area burned risks turning our vast boreal forest into a major carbon emissions source instead of a carbon sink. As well, warming in the Arctic risks turning our peatlands into another potent source of carbon emissions as methane is liberated.

Canada requires a substantial national research effort, by scientists in government, academia and industry, to evaluate present forest management practices. The goal should be to identify changes in forestry practice that sequester additional carbon, and reduce fire risk directly, so our forests continue to be a net sink for carbon. Allied but separate is the need for a major research effort into the dynamics of permafrost and peatlands, and their important role in sequestering methane. Novel methods are needed to protect this substantial carbon sink as climate warms, especially in circumstances where development is planned. Present road construction methods will enhance emissions. By building understanding of these vast regions -- substantial carbon sinks which risk becoming major emissions sources – and how to develop them safely, Canada should achieve breakthroughs that will be vital for its own emissions reduction goals. The novel technologies developed could build a new export industry for Canada in helping other boreal nations mitigate their own emissions problems.

How to get there from here

This three-prong approach can best be implemented by embarking initially on developing something we might call a National Clean Energy Action Plan. Government could lead in this, but this is a plan for all Canadian citizens. There should be active engagement by individuals, economic sectors including the fuel producers, all our communities, nongovernmental organizations, and governments at all levels from municipal to national. This plan will need to take into account the many instances of important progress that have already been made by many parties, and provide for an effective integration of existing steps into a more seamless, though still regionally varying, national whole. The plan must also be sufficiently powerful to achieve the extent and rate of reductions required (at least an 80% reduction in emissions from 1990 levels by 2050). In that respect, it may be appropriate, as part of this plan, to strengthen our commitments under the Paris Accord even before they come up for review in 2030. We Canadians are apt to perform best if we continue to push ourselves to do better, although it will also be important to set goals that are achievable. Canada needs some political wins on the climate front.

How do we move from where we are now to become a nation aggressively, yet optimistically, tackling the problem of carbon emissions reduction? This will not happen by half measures, and it will fail dismally unless the great majority of our people and all our communities are on board.

Climate has now changed sufficiently that most people are aware that it is happening and that it may bring problems. Energy represents a major part of household budgets, and energy costs have been growing. Canadians now are ready to learn that there are many ways to reduce both environmental and household energy costs without reducing quality of life. Rapid advances in automotive efficiency and the growing presence of smart appliances and other devices in our lives make possible a revolution in how individuals manage their use of energy. (Smart devices in the home, plug-in electric vehicles, and a smart energy grid permit an internet of things that will seamlessly manage the supply, demand, storage, and use of electrical energy far more efficiently than less integrated systems ever could.) If individuals find they can save money while still living comfortably simply by becoming more energy-efficient, they are also likely to respond positively to messages about the benefits of emissions-free energy. Those messages must be conveyed effectively. Let's have:

- A National Clean Energy Action Plan developed transparently, with adequate engagement from all sectors, with real opportunity for individuals to engage and profit by doing so, and with annual reporting on our progress.
- School curricula including age-appropriate content centered on measuring and then reducing individual carbon footprints, and a nation-wide program to encourage all Canadians to reduce their footprints by 30% by 2030.
- Governmental infrastructure programs (at all levels) that facilitate the transition by individuals, organizations, and industry towards a less energy-intensive and much less carbon-intensive lifestyle – improvements ranging from building the national smart electricity grid, to major expansion (and subsidization) of public transit, to ensuring that public charging stations for electric vehicles are as common as gas stations, to providing for bicycle lanes and parking as a matter of course, and to making our cities and towns pedestrian friendly.

Canada is a large and diverse country with enormous differences in climate, environment, resources, population density, and economic activity from place to place. Establishing an effective emissions-reduction plan is a shared task for all Canadians. It will not be simple, and will certainly not be one-size-fits-all. But curtailing climate change is the most pressing problem of our time, and Canada has risen to overcome great challenges before. We have wealth, education, ingenuity and experience on our side, and should be able to capture the economic opportunities that emissions reduction will drive, positioning Canada as a world leader in at least some of the clean technologies that will mark the future. We must move forward in a way that does not leave sectors of our community behind, in rural regions, in First Nations, Métis or Inuit communities, or in economically challenged downtown districts. But we must move forward. The best way to do that is simply by taking that very first step.

Steps that you can take to lower your own carbon footprint

1. Write your federal and provincial representatives to encourage them to work cooperatively to establish a nation-wide price on carbon,
2. Encourage your municipality to publicize its carbon footprint, to develop a program for footprint reduction, and to encourage individuals and businesses to reduce their own carbon footprints,
3. Make your next car electric,
4. Reduce the use of your car: walk, ride, bike, or take public transportation where possible,
5. To the extent possible, retrofit your home to increase energy efficiency by stopping leaks, improving insulation, upgrading windows, replacing energy-inefficient appliances, shifting to an energy-efficient heating system, or by moving to whole-house smart energy monitoring,
6. Support carbon-neutral energy projects,
7. Turn televisions, computers and other devices OFF when not being used,
8. Regulate your comfort in your home by using sweaters as well as central heat and air conditioning,
9. Buy reputable carbon offsets for your long-distance travel, and
10. Plant a tree, and support organizations that plant trees and conserve natural areas.