

SUSTAINABLE DEVELOPMENT AND KYOTO IMPLEMENTATION IN CANADA: THE ROAD NOT TAKEN



Douglas Macdonald and Debora VanNijnatten

Since 1992, Canadian governments have been developing and implementing policy intended to meet their international commitments to sustainable development, but with little success. In this article, Douglas Macdonald and Debora VanNijnatten explore the reasons why Canada has been unable to rise to the challenges of sustainable development and climate change, and the obstacles that the Martin government climate plan faces. Is policy failure inevitable? they ask. No, is the short answer. But to meet the formidable challenges involved in inducing change on such a massive scale by firms, institutions and citizens, money will not be sufficient. As with the elimination of deficit financing, there is "a need for policy that will inflict pain." For climate policy to have any chance of being effective, Ottawa must do three things: restart the federal-provincial policy process; change its approach to industry by adding the stick of regulation to the carrot of spending; and put in place a comprehensive set of economic instruments and incentives, both positive and negative, to reduce consumption of fossil fuels.

Depuis 1992, les gouvernements canadiens tentent d'appliquer sans grand succès une politique visant le respect de leurs engagements internationaux en matière de développement durable. Est-ce dire que cette politique est vouée à l'échec, s'interrogent Douglas Macdonald et Debora VanNijnatten ? Non, répondent-ils. Dans cet article, ils examinent les raisons expliquant l'incapacité du Canada de relever le double défi du développement durable et des changements climatiques, de même que les obstacles auxquels le plan du gouvernement Martin fait face. Pour induire les énormes changements qu'exige cet objectif de la part des entreprises, des institutions et des citoyens, disent-ils, il ne suffira pas d'injecter plus d'argent. À l'exemple des mesures d'élimination du déficit, il faudra une politique draconienne. Pour que sa politique climatique soit efficace, Ottawa doit ainsi faire trois choses : relancer le processus fédéral-provincial, modifier son approche à l'endroit de la grande industrie en ajoutant le bâton de la réglementation à la carotte des crédits, et concevoir une gamme complète d'incitations et d'instruments économiques à la fois positifs et négatifs pour réduire la consommation des combustibles fossiles.

Sustainable development has been adopted by most countries, including Canada, as a necessary guiding principle for our collective journey into the future. The concept is usually taken to combine three elements: environment, economy and social equity. Sustainable development aims to increase the economic and social well-being of the current generation (especially its poorest members) without simultaneously imposing environmental costs on future generations, particularly in terms of pollution and the depletion of exhaustible and nonrenewable

resources. With greater understanding of the pace of large-scale environmental change and the role of human beings in initiating this change, there has emerged a sharper focus on the maintenance of ecosystem functions that are essential to human well-being. An important concept here is that of "carrying capacity," whereby the resource extraction, manufacturing outputs and waste byproducts of economic activity do not overwhelm the global natural system. Carrying capacity is a physical reality underlying the social and economic requirements of sustainable

development, confining and shaping societal and governmental action.

Climate change is perhaps the most significant sustainable development challenge facing Canada and the international community. The build-up of greenhouse gases (GHGs) and associated increase in the Earth's mean temperature, stemming mainly from the production and combustion of fossil fuels, is threatening the global carrying capacity. Current and predicted impacts include altered precipitation patterns, rising sea levels and more frequent extreme weather events, with uneven consequences across populations and countries.

Citizens of Vancouver or Montreal are not yet directly affected, but inhabitants of the Canadian north today live in a very different world from that of a generation ago. At the heart of the climate change problem and the failure to achieve sustainable development more generally are two significant challenges: first, the current energy system, based overwhelmingly on the production and use of fossil fuels, especially the higher carbon-content forms of coal and oil, for transportation, manufacturing and electricity generation; and, second, the unsuitability of the decision-making frameworks and tools we currently have in place to make necessary changes.

What is needed is nothing less than an energy revolution — at both the national and global levels — one that shifts to new forms of energy, while at the same time, through new technologies, significantly decreases overall energy demand, even while economic and population growth continue. The problem with this de-carbonization scenario, of course, is that fossil fuels have propelled economic and social development during the past century and are still seen today as essential. For instance, simply replacing the infrastructure used to put gasoline into motor vehicles with one that can as easily and cheaply service hydrogen or solar-powered vehicles will entail enor-

mous cost. In Canada, the production and use of fossil fuels support citizens' high standards of living and contemporary, mobile lifestyles, provide export revenues, ensure competitiveness of the economy and, in provinces such as Alberta, form an integral part of the region's economy and its identity.

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ronmental, economic and social issues by means of separate, hierarchically organized departments, implementing regulatory and other policy within distinct administrative spheres. Only the most limited ventures in inter-departmental and inter-governmental co-ordination have been undertaken. Nor has progress been made in the use of newer instruments analysts see as necessary for the transformation to sustainable development, such as ecological tax reform (shifting the government revenue base away from income and toward pollution, energy and resource use). Governments have to date taken only minimal steps to enlist

their most important instrument of power — the annual budget — to shift society toward sustainability.

Accordingly, climate change is the biggest test of Canada's long-stated commitment to sustainable development. Initially, Canada staked out a position as one of the international leaders in the fight to stabilize global greenhouse gas emissions, by convening the first international conference on the issue in 1988. Canada was also a supporter of the United Nations Framework Convention on Climate Change (UNFCCC), agreed to at the

Rio conference of 1992, which called for global stabilization of greenhouse gas emissions at 1990 levels, and was then one of the first countries to ratify the convention, in December of that year. Further international commitments were then made in 1997, when Canada signed the Kyoto Protocol, thus committing to a GHG reduction target of 6 percent below 1990 levels, to be achieved no later than 2012 (the end of the first international "commitment period"), and in 2002 when the Chrétien government formally ratified the protocol, thus contributing toward the entry into force of the protocol in February, 2005.

Since 1992, the Canadian and provincial governments have been developing and implementing domestic policy intended to meet these international commitments. To date, however, Canadian climate policy, like that of other signatories to the 1992 Convention, has been predominantly marked by failure. Why is this? Why have Canadian policy makers been unable to rise to the challenges of sustainable development and climate change during the past decade-and-a-half? Is the goal simply impossible, a pious hope of environmentalists to which governments can only pay lip service? Is the political and economic context too thorny? Or are there effective policy measures that the government of

Canada could be putting in place, if only it had the will to do so?

Our purpose here is to briefly explore these questions, by providing a critical evaluation of the Martin government climate policy as set out in the February, 2005, budget and the related climate plan released two months later. To do that, we first lay out the policy and political challenges involved in inducing behaviour change on such a

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massive scale by the firms, institutions and citizens that emit greenhouse gases. A significant part of the challenge facing any federal government is the fact that the provinces — owners of resources, generators of electricity and environmental regulators — must play a major role for national climate policy to be effective. The current government also is constrained by its minority status and by long-running inter-departmental conflict, which it has been unable to resolve. We will analyze the effectiveness of the policy instruments presented in the 2005 government of Canada plan and make suggestions for others that might prove more effective, given the current policy and political context.

Over the past few years, the Canadian climate-change policy discourse has been framed as the need to close the “Kyoto gap” — policy measures that will bring total annual greenhouse gas emissions (primarily carbon dioxide but also other gases, all collectively measured as “carbon dioxide equivalents”) from what economic modellers now predict will be the “business-as-usual” level (i.e., govern-

ments take no further policy action) to the target level of 6 percent below 1990 emissions, which is 560 million tonnes (Mt). In 2002, the government of Canada estimated the gap between that target and the predicted business-as-usual level in the year 2012 to be 240 Mt. The 2005 plan states that because of economic growth over the past three years the gap is now estimated to be something like 270 Mt.

The policy challenge, therefore, is to cut greenhouse gas emissions by about one-third (from 830 to 560 Mt) in seven years. Although deep-green ecologists would be happy to see this done by reducing annual production and wealth generation, not surprisingly, the federal government states this must be accomplished in ways that increase, not decrease, GDP growth.

How can federal and provincial policy makers close a gap of such magnitude by the year 2012? They must assemble a mix of policy measures from the four basic options available: (1) shift the behaviour of energy generators away from fossil-fuel energy, including that used to generate electricity, to energy sources that do not emit greenhouse gases (hydro-electricity, renewable energies, new sources such as hydrogen and, debatably, increased use of nuclear power); (2) reduce energy demand through increased efficiency and behaviour change, such as shifting from the private automobile to public transit; (3) put in place measures to capture and store carbon dioxide, in plants or soil (referred to as “sinks”) or by mechanical means (carbon sequestration); and (4) pay people in other coun-

tries to reduce *their* emissions, by purchasing emissions credits on the international trading market that is being established as part of the international Kyoto regime. (Governments can directly purchase those credits themselves, or induce private actors to do so as one way of fulfilling their regulatory obligations.)

The 2005 climate plan gives this picture of how the Martin government feels this total 270 Mt reduction should be divided among Canadians. Three industrial sectors — oil and gas, electricity generation and manufacturing — are being asked to reduce by 39 Mt (down from 55 in the 2002 plan); the auto industry has been asked to reduce by 5.3 Mt through vehicle design changes to increase fuel efficiency; individual Canadians are to collectively respond to Rick Mercer’s appeals to take the One-Tonne Challenge, for a total 5 Mt reduction; increased renewable energy use will contribute 15 Mt; and agricultural and forestry sinks might account for 20 Mt. The remaining 185-odd Mt will be achieved through a variety of other policy measures and purchase of international credits.

Both the composition of the 2005 plan and its implementation are being shaped by potent political forces, not the least of which, this being Canada, comes from recalcitrant provinces. The basic problem is that GHG emissions and revenues from fossil-fuel extraction are regionally concentrated, meaning that the cost of closing the Kyoto gap is also unevenly distributed. Not surprisingly, Alberta has been the most vocal opponent of the Kyoto target, responding with its own climate action plan, based on an “emissions intensity” approach (reducing the ratio of emissions to production) while explicitly eschewing any cap on total emissions, as in the Kyoto Treaty. Manitoba and Quebec have been pro-Kyoto, largely due to their large supplies of “clean” hydro-electric power,

Ontario remains rather agnostic, although the recently elected McGuinty government is more favourably disposed, and other provinces have been considerably less enthusiastic.

Federal-provincial relations with respect to climate change were acrimonious from the beginning and, in a formal, multilateral sense, came to an end with Kyoto ratification in 2002. After years of consultations with the provinces, the results of which contained nothing more stringent than pleas for action institutionalized in the Voluntary Challenge and Registry program, Jean Chrétien overrode determined provincial and business resistance and added ratification to his suite of legacy policy measures. As a

result, federal-provincial collaboration on actions to achieve emission reductions, using the once-active vehicles of the Canadian Council of Ministers of Environment and Canadian Council of Energy Ministers, is now non-existent. Instead, the federal government is now negotiating quietly with individual provinces to sign bilateral agreements (to date, Nunavut, PEI, Manitoba, Ontario and Newfoundland have signed agreements) that contain no specific commitments, either for reductions to be made in the signing province or for federal financial assistance. Cost-sharing may be included in these agreements at a future date, and presumably as an inducement offered by the federal government to bring provinces to the table.

The current Martin government also faces significant political challenges at the federal level. In a bid to control a majority of seats in Parliament, the minority Liberal government has had to pay close attention to the program and policy demands of the opposition parties. The New Democratic Party and Bloc Québécois are both pro-Kyoto, and have stated publicly that they would support new legislation mandating CO₂ emission reductions from large industrial emitters and vehicles. The much-enlarged Conservative caucus, however, does not support the Kyoto target or framework. Interestingly, the opposition parties are united in their resistance to a plan that resorts to



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On April 5, 2005, Minister of Natural Resources R. John Efford (center) signed an agreement on climate change action with car industry representatives Marcus Breitschwerdt (left), chair of the Association of International Automobile Manufacturers of Canada, and Joe Hinrichs (right), Chair of the Canadian Vehicle Manufacturers' Association. With this memorandum of understanding, car manufacturers voluntarily agreed to reduce GHG emissions of new vehicles in Canada. To assess progress toward meeting the 5.3-Mt target by 2010, a joint industry-government monitoring committee will be established. For now there is no "stick" of regulation.

purchasing large amounts of emission credits internationally (our option number four above) to make up for the lack of reductions domestically. It would seem, then, that the votes are there in the House (if the Liberals were to cooperate with the NDP and Bloc) for a comprehensive Kyoto implementation plan that included a mix of policy instruments, including regulation. Yet the Liberals have chosen not to govern collaboratively, as might be expected from a minority government, and have instead managed to diminish potential opposition support for ambitious Kyoto measures by acting unilaterally for the most part, as in the failed attempt to bring GHG emissions such as CO₂ under the *Canadian Environmental Protection Act* as a last-minute budget item.

In addition, inter-departmental conflict has been a complicating factor in terms of ambitious action on climate change. Responsibility for the climate change file is vested in two departments with conflicting mandates: Environment Canada, focused on pollution reduction and ecosystem protection, is in charge of developing domestic climate policy; and Natural Resources Canada (NRCan), the departmental advocate of the energy industry, possesses the actual programs and analytical expertise for reconciling energy development and greenhouse gas reduction. These departments have consistently disagreed on the best instruments to use in achieving emissions reductions, with Environment Canada generally pushing for new legislative mandates imposing binding reduction targets on industries, and NRCan preferring non-regulatory measures. A complex network of trans-governmental mechanisms was established after 2000 in an effort to bring about greater cooperation between the departments, at the program, sectoral and political lev-

els. Tensions remain, however, and have in fact been compounded by a lack of direction from the Prime Minister's Office in terms of resolving the anomaly of policy decisions being made by one department while the instruments for implementation are developed by another.

The current federal plan can best be understood by comparison with its predecessor, the November 2002 *Climate Change Plan for Canada*. This plan signalled a move from voluntarism to law as the instrument for inducing reductions from industry. A new section in NRCan started negotiating directly with firms in the manufacturing, electricity and oil and gas sectors, based on a guarantee, given shortly after ratification, that the federal government would pay (presumably by buying international trading credits) reduction costs for any given firm above \$15 per tonne of greenhouse gases and with a targeted reduction of

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15 percent. These negotiations were intended to culminate in legally binding contracts (termed "covenants"), and any firms choosing not to sign such covenants would be mandated to act by a proposed new federal "backstop" law.

In comparison, the April 2005 climate change plan, *Moving Forward on Climate Change: A Plan for Honouring Our Kyoto Commitment*, takes several steps backward. Not a single covenant has been signed to this point, although non-binding agreements

have been concluded with the steel and forestry sector trade associations. Indeed, the proposed system of covenants has been abandoned because, in the words of the 2005 plan, they would add "considerable complexity to the system." The government has chosen instead to regulate under the existing *Canadian Environmental Protection Act (CEPA)*. This change in legal instruments may have resulted in part from the departmental turf war between NRCan and Environment Canada, but another factor might have been a desire on the part of industry for more talk, rather than action. The 2002 plan made it clear that the covenant instrument was originally suggested by industry, while the 2005 plan is equally candid in its statement that covenants were abandoned because industry now prefers regulations to contracts. The one thing we know for sure is that after two years of consultation on the design of the covenant system, the

2005 plan now promises another year or more of consultation on regulation under CEPA. Three years after stating it would move from voluntarism to law, the federal government is still considering exactly how it might take such a crucial step.

The one policy success contained in the 2005 plan has come from negotiations with the auto industry, which has agreed to change vehicle design to generate something like a 25 percent reduction in emissions. This agreement is, however, nonregulatory, although

the government has indicated it will regulate if the target is not met by 2008. With all other sectors, the federal government lost ground during negotiations. It has been forced to accept a weaker target for industry cuts, from 55 Mt to 39 Mt (using the 2002 baseline measurement), while at the same time, as noted above, the total reductions goal has increased from 240 to 270 Mt. With respect to industry, then, the most significant change resulting from the NRCan-business negotiations since 2003 has been to offload a significant portion of industry responsibility to other Canadians.

While the federal government may have been slow to bring law into play, it has made ever greater use of the spending instrument. The 1998 budget provided \$150 million for the Climate Action Fund, followed in 2000 by \$100 million for the Sustainable Development Technology Fund, which includes climate technology research and development. The taps were really turned on, however, by the 2003 budget, which dedicated another \$2 billion to help implement the government's Climate Change Plan — including \$250 million for the Sustainable Development Technology Fund to encourage the development of greenhouse-gas-reducing technologies and another \$1.7 billion over a five-year period “to support partnership, innovation and targeted measures to promote energy efficiency, renewable energy, sustainable transportation and alternative energy sources.” Not all of these monies have been spent: the 2005 plan notes that “about \$1.7 billion has been spent on climate change through the seven budgets since Kyoto was agreed upon in December 1997.” The total figure has been upped to \$5 billion in the 2005 budget (including some re-announced commitments from 2003), to be allocated over a five-year period. The 2005 budget provides a minimum

of \$1 billion per year for the Climate Fund, \$250 million over five years for the Partnership Fund and \$600 million over five years for renewable energy programs and incentives. The government's One-Tonne Challenge for Canadians also receives an additional \$120 million. The 2005 plan predicts that total federal spending by 2012 will be something like \$10 billion.

It is evident from budgetary and climate plan allocations that the lion's share of emissions reduction funding has been and continues to be put into

To date, Canada has failed to meet the challenges of horizontality, technological innovation and adoption of economic instruments implicit in either the larger issue of the transition to sustainability or the more specific one of meeting our international climate change commitments. There are no signs this will change. The most recent federal climate plan hopes to meet a larger policy challenge than did its predecessor — in just seven years rather than ten, with virtually no progress in federal-provincial relations, but a retreat in the face of industry resistance, no change in government organization and no change in policy instruments beyond increased spending.

research and technology envelopes, with an ever greater focus on subsidizing and leveraging instruments and efforts to achieve the wider application of alternative energy and energy efficiency. This is very much in line with the Liberals' continued emphasis on innovation and environmental technology development as the primary route to a greener economy and its desire to achieve emission reductions in a relatively painless manner (both politically and practically). While these technology funds have become ever more generous, enabling

more ambitious projects, they have not been integrated with a set of targeted programs or emission reduction mandates for particular economic actors. This is, then, a decidedly indirect way of achieving greenhouse gas emission reductions, one that is unlikely to deliver the projected annual emission reductions by the 2008-12 period. This appears borne out by the uncertain results of technological investments to date, which may, in turn, account for the emphasis in the 2005 climate plan on annual review of programs and possible reallocation of investments.

To date, Canada has failed to meet the challenges of horizontality, technological innovation and adoption of economic instruments implicit in either the larger issue of the transition to sustainability or the more specific one of meeting our international climate change commitments. There are no signs this will change. The 2002 plan was only intended to achieve 180 Mt annual reductions. The 2005 plan, by contrast, says it will achieve 270 Mt. Thus, the most recent federal climate plan hopes to meet a larger policy challenge than did its predecessor, in just seven years rather than ten, with virtually no progress in federal-provincial relations, but a retreat in the face of industry resistance, no change in government organization and no change in policy instruments beyond increased spending. As written, this plan is unlikely to succeed. Is policy failure then inevitable? Is transformation on this scale simply beyond our collective political and societal will?

We suggest it is not. The 2005 plan makes rhetorical reference to three previous policy challenges that have been overcome — acid rain, the stratospheric ozone layer and government deficits. The first two are not truly comparable to climate change, since in each case action was required by only a limited number of industrial sectors, at

relatively small cost. The elimination of provincial and federal deficit financing, however, symbolized by the Martin budget of 1995, was perhaps the largest policy shift since the establishment of the welfare state in the post-war years. It does provide an example of governments' ability to bring about significant change. Granted, in that case industry was cheering from the bleachers while today, in the case of climate, it is on the

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field, running pass interference and blocking. There is a similarity, however, in the need for policy that will inflict pain and is thus thought beforehand to run the risk of electoral defeat.

What kind of pain is called for? The Martin government must do three things for climate policy to have any chance of being effective. First, it must restart the federal-provincial policy process by abandoning the search for bilateral agreements and moving beyond the previous reliance on ministerial meetings. Using the vehicle of First Minister's Meetings, it must start to actually develop the "equitable, national plan" to which it repeatedly refers. If equity requires compensation to oil-rich Alberta, which because of the nature of the issue is being asked to bear by far the greatest portion of the national pain, so be it. Geography meant that Newfoundland disproportionately suffered from the other major sustainability policy failure to date, the cod fishery collapse of 1992, and national compensation was the solution. The provinces must be brought back to the table, by whatever

means necessary, since the federal government does not have the jurisdictional mandate to solve the problem alone.

Secondly, it must change its approach to industry, adding the stick of regulation to the carrot of spending. Industry defines the climate issue as a need for technological development, and sees government subsidy as the means to achieve that end. Certainly, federal government funding for technological innovation is needed (and is

forthcoming), but it must be accompanied by legally binding emissions-reduction targets. Industry accounts for something like half the problem, and in proportion with that share of total emissions, industry should be required, by law, to make reductions totalling closer to 100 Mt than 39 Mt. This is politically possible. During 2002, Canadian business tried to prevent Kyoto ratification by mounting the largest policy intervention, in terms of paid advertising intended to rally public support, since the 1988 free trade election. Polling data showed, however, that Canadians, even those living in Alberta, were not swayed and Jean Chrétien, supported by the Bloc, NDP and Liberal backbench ratified the protocol. Law-based regulation of industry would find comparable public support today, and would also be in tune with actions being taken by a growing number of US states.

Finally, analysts agree that by far the most effective and efficient approach to reducing the consumption of fossil fuels on the part of both industry and individual Canadians would be to put in place a comprehensive set of economic instruments and incentives, both posi-

tive and negative. Energy efficiency and renewable energy incentives need to be married to clear regulatory targets and penalties, when these are not achieved by industry actors. Higher prices for gasoline and home energy consumption would encourage consumers to take another look at the One-Tonne Challenge and residential retrofits program, and would induce real behavioural change. Governments also need to move quickly to establish an emissions

trading regime, much as the Europeans have done, to encourage further market-driven reductions. Again, we believe infliction of such pain is politically viable. Radical Ken Livingstone defied predictions by imposing road taxes in London and gained political favour. Paul Martin's 1995 budget did not hinder his political career, on the contrary, it provided a level of credibility that helped carry him to his current leadership position. Citizens will pay individual prices for policies they believe to be necessary, and polling data, letters to the editor and donations to environmental organizations consistently show this to be the case for climate policy.

The transformation to sustainable development is not easy. The physical reality of global carrying capacity, however, means it must happen someday, whether planned or not. Supplementing federal spending with law and economic instruments would be a step toward the managed, policy-based transformation, which is far preferable to the chaos and inequity which would be caused by a collision with nature's limits. And who knows, it might just help Paul Martin get the majority government that eluded him in 2004.

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