

BEHIND the HEADLINES

VOLUME 65 NUMBER 1



Climate Change and Canadian Energy Policy:
Policy Contradiction and Policy Failure

MARK S. WINFIELD

Canada and the Bali Roadmap

MATTHEW BRAMLEY

Canadian International Council

Behind the Headlines, published by the Canadian Institute of International Affairs since 1940, is now a publication of the Canadian International Council. Articles in the series deal with important international issues and their implications for Canada. They are intended for a general readership. The views expressed are those of the authors.

Articles should not exceed 7,000 words with a minimum number of footnotes. Communications about submissions should be addressed to either:

Robert Johnstone, *Editor*
E-mail: bjohnstone@ciia.org
Telephone: 416-977-9000, ext. 24

or

Patricia Goff, *Associate Editor*
E-mail: pgoff@wlu.ca
Telephone: 519-884-0710, ext. 2588

© 2008 Canadian International Council

\$5.00 per single issue

\$20.00 per year

Canadian addresses add 6% GST

GST Registration No. 10686 1610 RT

Date of issue – January 2008

ISSN 0005-7983

CLIMATE CHANGE AND CANADIAN ENERGY POLICY: POLICY CONTRADICTION AND POLICY FAILURE

MARK S. WINFIELD

This article examines the relationship between energy policy and climate change policy in Canada. The article finds that Canadian climate change and energy policy have operated in parallel but contradictory directions. The resulting dichotomy helps to explain Canada's failures to achieve significant reductions in GHG emissions to accord with its international commitments. The article also highlights the importance of the emergence of sub-national climate change policies in Canada and in the United States, particularly in the context of the lack of effective action at the federal level in both countries.

Cet article examine la relation existant entre la politique énergétique et celle qui se rapporte au changement climatique au Canada. L'article constate que les politiques canadiennes en matière de changement climatique et d'énergie évoluent dans des directions parallèles mais opposées. La dichotomie résultante contribue à expliquer les échecs canadiens à opérer les réductions considérables d'émissions de GES exigées par ses engagements internationaux. L'article fait aussi ressortir l'importance des politiques climatiques infranationales qui se font jour au Canada et aux États-Unis, particulièrement dans le contexte de l'absence de mesures efficaces au palier fédéral dans les deux pays.

Mark Winfield is Assistant Professor of Environmental Studies at York University. Prior to joining York University, Dr. Winfield was Program and Policy Director with the Pembina Institute, and prior to that, Director of Research with the Canadian Institute for Environmental Law and Policy

INTRODUCTION - CANADA'S DE FACTO ENERGY POLICY

Energy and climate change policy are intimately connected. The achievement of the levels of reductions in greenhouse gas (GHG) emissions that the Intergovernmental Panel on Climate Change (IPCC) has identified as being necessary to avoid "dangerous" climate change will require substantial changes to existing energy policies. In particular the IPCC has identified increases in the energy efficiency of economic activities and a major expansion of the role of renewable energy sources as the foundations of cost-effective strategies for reducing GHG emissions.¹

Canada has gone through numerous articulations of its policies related to climate change over the past two decades. These have included negotiating positions established for the purposes of the development of the 1992 Framework Convention on Climate Change and the subsequent 1997 Kyoto Protocol to the convention, a Federal-Provincial National Action Plan (1995), a National Implementation Strategy and Business Plan (2000), bilateral federal-provincial agreements,² and most recently an Action Plan to Reduce Greenhouse Gases and Air Pollution (2007).³ In contrast, Canada has had no formally articulated national or federal energy policy since the demise of the 1980 National Energy Policy (NEP) following the election of the Mulroney Conservatives in 1984.

However, a considerable de facto federal energy policy framework exists, and has been significantly strengthened since the termination of the NEP. This effective energy policy structure is strongly oriented towards the development and export of conventional, non-renewable energy resources, such as coal, oil, natural gas, and uranium. As such, it presents serious challenges to the implementation of effective climate change policy. Despite the succession of climate change policy commitments and plans Canada has seen no progress in reducing its GHG emissions since the signing of the 1992

Framework Convention. Indeed, in her 2006 report, the Commissioner for the Environment and Sustainable Development noted that as of 2004 Canada's GHG emissions were 27 per cent above their 1990 levels. Canada's Kyoto Protocol target is a 6 per cent reduction relative to 1990 levels by 2008-2012. Part of the explanation for this result is that the impact of the few initiatives that have actually been implemented under Canada's various climate change strategies has been completely overwhelmed by the effects of the existing non-renewable energy development and export policy framework.

This dominant energy policy framework consists of a number of specific elements. Long-standing policies, flowing from Canada's historical role as a natural resources exporter, provide extensive fiscal incentives for non-renewable energy exploration and development activities from the federal government. Although direct subsidies or equity investments in energy projects by Canadian governments have become less common, extensive support is provided through the federal tax system, principally through the Canadian Development Expense and Canadian Exploration Expense, both of which have existed in their current forms since the 1970s and, more recently, an Accelerated Capital Cost Allowance for oil sands development. The most recent available estimates of this support to the oil and gas sector conservatively estimate its value in the range of \$1.4 billion per year.⁴ These supports have been instrumental in the acceleration of oil sands development in Alberta over the past decade, making the sector the single largest source of growth in Canada's GHG emissions.⁵ Other research has demonstrated the low taxation levels for the oil and gas sector relative to other sectors,⁶ and the extent of the availability of tax concessions for oil sands development.⁷ Additional backing is provided to other non-renewable energy sources, including an operating subsidy of between \$100 and \$200 million per year to Atomic Energy of Canada Ltd (AECL).

Substantial export development assistance for foreign sales of nuclear reactors has been provided to AECL as well.⁸ Natural Resources Canada, reflecting its long-standing role in the promotion of natural resources development and export, provides extensive scientific, technical and institutional support and representation within the federal government to non-renewable energy sectors.

Federal environmental assessment or other environmental approval processes have been applied as weakly as possible to major energy projects, with a few exceptions where aboriginal interests are involved. 'Screening-level assessments,' the lowest possible level of federal scrutiny, or very narrowly 'scoped' assessments have been required for very large projects, such as oil sands developments in northern Alberta. In some recent cases, the federal government has declined to participate at all in the environmental review of major energy undertakings. A Major Projects Management Office was established within Natural Resources Canada in October 2007, with a specific mandate to facilitate federal project approvals.

The overall conventional resource export orientation of Canadian energy policy was strongly embedded in the 1994 North American Free Trade Agreement (NAFTA). The agreement, for example, includes explicit provisions allowing the continuation of incentives for oil and gas exploration and development. The provisions of the NAFTA and other trade agreements present additional challenges to the development of more sustainable energy policies. Many US states have adopted renewable portfolio standards, requiring that a certain amount of the electricity sold into their markets come from renewable sources, as a way of promoting renewable energy. However these types of requirements, if applied to imported electricity supplies as well as domestic ones, may run afoul of the prohibitions on process or production method (PPM) standards for imported goods under international trade law agreements.⁹ Attempts to apply carbon costs to important

goods and services where these costs are applied to domestic products may be vulnerable to similar challenges. In the context of trade liberalization, the policy role of Canada's National Energy Board has been significantly reduced. The board no longer plays a significant role in the approval of energy exports from Canada. Rather the Board's focus is now on the facilitation of energy exports and non-interference with energy markets.¹⁰

In its May 2007 report, Working Group 3 of the IPCC, dealing with strategies for reducing GHG emissions, made it clear that energy efficiency and renewable energy will have to provide the foundations for effective strategies to reduce global GHG emissions. The Working Group found that other technologies, such as the capture and storage (CCS) of GHG emissions from the combustion of fossil fuels, may make contributions, but their role is limited by various factors—the availability of appropriate geology in the case of CCS. In a Canadian context, the CCS option is most likely to be viable in the western Canada sedimentary basin. The possibilities in other regions are limited. Nuclear power's high cost structure means that even in the context of aggressive carbon pricing scenarios (i.e. >\$50/tonne) it might, at best, marginally expand existing shares of electricity markets. And that would only be if what the IPCC politely terms the "constraints" of safety, waste management and weapons proliferation are ignored.

Yet, when compared to the extensive policy infrastructure in place to support the development and export of conventional, non-renewable energy resources, Canada's policy frameworks related to energy efficiency and low-impact renewable energy sources, such as wind and solar energy, remain weak and largely symbolic. Natural Resources Canada's Office of Energy Efficiency, itself a survivor of the original 1980 National Energy Policy, provides some public information programs, such as the EnerGuide labelling program, and funding for the EcoENERGY retrofit program (a revised version of the EnerGuide for Homes program).

Although the office has authority over the establishment of energy efficiency standards under the federal Energy Efficiency Act, it is largely focused on the provision of leadership in intergovernmental forums that deal with energy efficiency issues, particularly the Canadian Council of Energy Ministers. In this context, the office relies strongly on provincial and territorial governments to actually implement energy efficiency standards and other initiatives.¹¹ Reliance on these sorts of intergovernmental processes for policy development and implementation carries with it significant risks of deadlock or lowest common denominator outcomes, as decision-making occurs on a consensus basis. The track record of provincial and territorial implementation of national policies developed through intergovernmental processes is inconsistent at best.¹²

The Wind Power Production Incentive (WPPI) was introduced by the federal government in 2002, providing an incentive payment of one cent per kilowatt-hour (kWh) for the first 10 years of operation of eligible wind-power projects. Total expenditures under the program were to be \$250 million over five years. In April 2007 the program was renamed ecoENERGY for Renewable Power, and expanded to cover other renewable energy sources, with a commitment of up to \$1.48 billion over the period 2005-2011. The program is the federal government's principal initiative to promote renewable energy. However, even in its expanded form, the program provides only a fraction of the level of support that continues to be provided to the conventional oil and gas sectors. The situation reflects the fact that conventional non-renewable energy development remains the primary focus of Canada's energy policies. These outcomes are functions of many factors, including Natural Resources Canada's historical role and orientation with respect to conventional energy development and the well-established representation of interests in the non-renewable energy sectors relative to their newly emergent

renewable energy counterparts.

With respect to climate change policy per se, an explicit withdrawal from the Kyoto Protocol has been ruled out by the federal minister of the environment, John Baird. Yet it is increasingly apparent that the government will make no attempt to reach the Kyoto Protocol's 2008-2012 target, and that it will not pursue the purchase of Clean Development Mechanism credits under the protocol as a means of meeting Canada's Kyoto Protocol commitments. Rather, the federal government's climate change policy, as outlined in the October Speech from the Throne, is clearly to back away from Canada's commitment under the Kyoto Protocol or any short-term targets for reductions in greenhouse gas (GHG) emissions. The federal government's April 2007 Regulatory Framework for Air Emissions with its focus on GHG reduction targets for industry based on the rate of emissions relative to economic output (i.e. intensity-based) as opposed to absolute reductions in total emissions, has been widely criticized as being unlikely to result in significant near-term reductions in GHG emissions. At the December 2007 Conference of the Parties to the Framework Convention on Climate Change in Bali, Indonesia, the Canadian delegation strongly resisted the establishment of specific long-term GHG emission reduction targets for a successor agreement to the Kyoto Protocol.

The current federal government's approach to climate change policy has been driven by a number of considerations, including the Conservative's strong electoral base in western Canada, particularly Alberta, an ideological disinclination to intervene in markets and, until very recently, apparent doubts about the validity of climate change science. Action on climate change remains a major focus of all of the major opposition parties. At times, it has been hard to avoid the conclusion that the government seems to believe that the appearance of action will be sufficient to attenuate any electoral risk associated with the climate change issue. Whether the damage done to

Canada's international reputation by its isolation and near intransigence at Bali will be sufficient to force the government to reconsider its strategy is an open question at this point. At the same time, it is important to remember that notwithstanding their stronger rhetorical commitments to action on climate change, the records of the previous Chrétien and Martin governments were hardly any better in terms of actual action to reduce GHG emissions.

SUB-NATIONAL GOVERNMENTS AND ENERGY POLICY

In this context of the continuation of the orientation of federal energy policy towards conventional non-renewable resource development and export, perhaps the most interesting activities on energy and climate change policy in Canada are occurring at the provincial level. The emerging situation in Canada parallels developments in the United States where, in the absence of significant federal action on climate change issues, states and local governments have become the key sources of energy policy innovation.¹³ California, in particular, has emerged as a major leader on state-level climate change initiatives. These developments at the state and provincial levels are strong reminders of what students of federalism tell us about the role of sub-national governments as alternative forums for policy development and innovation.

In the Canadian case, Quebec, Manitoba, and more recently British Columbia have been particularly active on climate change issues. Provincial action on climate change has been driven by a number of factors. These include the apparent opportunities for electoral reward for action on climate change in the context of very high levels of public concern for the issue, and political risks arising from inaction. Concerns over the negative environmental and economic impacts of climate change have also played a role. In addition, provinces that envision a potential role for themselves as low-carbon energy exporters, like Quebec, Manitoba and British Columbia, with

their large hydro-electric generating capacities and potential for new developments, may see economic development opportunities in a carbon constrained world.

In the Canadian context, the potential scope for provincial action on energy policy and climate change is very broad. Canadian provinces have the potential to exercise substantial influence in a number of areas that have been identified as major sources of GHG emissions. The provinces, for example, have effective direct control over energy policy, particularly electricity and non-renewable resource development, by virtue of a combination of constitutional jurisdiction and accepted practice. Electricity production and oil and gas production and distribution accounted for more than 36 per cent of Canada's GHG emissions in 2005.¹⁴ Initiatives to improve energy efficiency and to increase the role of renewable energy sources could have significant impacts on emission levels from the electricity sector. Similarly, adjustments in environmental requirements, land and resource access systems and resource royalty regimes could affect the pace and location of non-renewable energy development. Finally, in the electricity and non-renewable resource sectors, as well as other industrial sectors, provincial governments could impose direct regulatory requirements for reductions in GHG emissions in the absence of, or in addition to, any federal requirements. Federal and provincial regulatory controls already exist concurrently in relation to a wide range of pollutants and sectors.

Passenger cars and trucks are the third largest source of Canada's GHGs after the energy and industrial sectors, accounting for 10 per cent of Canada's 2005 emissions.¹⁵ Provincial jurisdiction over land use and responsibility for transportation policy at the local and regional levels provides extensive opportunities to influence urban form and, by implication, transportation patterns. Increased spending on public transit, and the reorientation of land-use planning

policies towards the redevelopment of existing urban areas and the mixing of land uses may result in reductions in automobile use, with the implication of reductions in transportation-related GHG emissions.

Agricultural activities are the source of 7.6 per cent of Canada's emissions GHG emission.¹⁶ The provinces again have considerable potential to influence behaviour in the sector through fiscal tools, outreach and education initiatives, and land-use policies. Finally, the provinces have primary responsibility for waste management policy and the regulation of the operation of waste disposal facilities. Emissions from landfills, principally methane produced by decaying wastes, contributed 3.7 per cent of Canada's 2005 emissions.¹⁷ Strategies to reduce the landfilling of organic wastes, and to capture and use the methane gas produced by landfills as fuel, could reduce GHG emissions from the sector significantly.

PROVINCIAL CLIMATE CHANGE INITIATIVES

In August 2007 the Pembina Institute published a survey of key provincial initiatives on climate change—Highlights of Provincial Greenhouse Reduction Plans. The survey found that most of the provinces studied have articulated some sort of GHG reduction targets. However, with the exception of Quebec, there is no clear indication of how those targets will be achieved. A range of policy initiatives have been announced, but very few detailed explanations have been provided as to how these initiatives will attain the targeted reductions in GHG emissions. Indeed, given the relatively minor nature of many of the initiatives that have been implemented so far, it seems unlikely that they will result in major reductions in GHG emissions. A key question is whether the recent announcements are precursors to more substantive policy action in the future, or merely symbolic responses to the current high public salience of the climate change issue.

A recent detailed assessment of British Columbia's targets

and strategy, for example, concluded that the measures announced by the province to date will only result in reductions of five million tonnes of GHGs per year. Meeting the province's stated target of a 33 per cent reduction in emissions by 2020 will require a reduction of 36 million tonnes per year.¹⁸ Ontario's strategy, for its part, attributes nearly twenty per cent of its required reductions to future, undefined "research and innovation" activities.

Perhaps the most significant of the provincial initiatives to date has been the introduction of a modest carbon tax in Quebec.¹⁹ A similar proposal is under consideration in British Columbia. In addition, some provinces, particularly Ontario, Manitoba and British Columbia, have initiated discussions with U.S. states that have launched regional GHG emission cap and trade systems. British Columbia and Manitoba have joined the Western Climate Initiative, while Ontario has been engaged in discussions with north-eastern US states over their Regional Greenhouse Gas Initiative (RGGI). Ontario has also committed to a 2014 regulatory deadline for the phase-out of coal-fired electricity generation. Although largely driven by air quality concerns, a coal phase-out would account for nearly half of the province's GHG reduction target of a 6 per cent reduction in emissions relative to 1990 levels by 2014. Alberta has adopted legislation for the regulation of GHG emissions intensity from large final emitters (LFEs) (i.e. industrial facilities). The Alberta initiative has been widely criticized, however, as being likely to result in continuing growth in absolute GHG emissions.

On the whole, beyond these major initiatives, the actual measures adopted to date at the provincial level have largely been fiscal incentives and investments in research. In some cases these efforts have been supplemented by public awareness and education initiatives. The fiscal initiatives are typically relatively small scale, and often consist of short-term or one-time-only expenditures. These are likely far too small to

have any significant effect on patterns of energy production and consumption. Rather, their short-term nature may reinforce perceptions that governments are not really interested in pursuing the kinds of long-term structural changes needed to significantly reduce GHG emissions.

Some provinces have put in place increasingly substantial financial incentives around the development of renewable energy, although in many cases this has been more a function of overall energy policy than specific GHG reduction strategies. Ontario's Standard Offer Contract programs for renewable energy and cogeneration are particularly noteworthy in this regard. These programs provide a guaranteed market and fixed price for electricity generated from renewable sources or through combined heat and power projects. However, it is unclear if the initiatives are of a sufficiently ambitious scale to fundamentally change the province's existing dependence on large scale, centralized non-renewable energy sources.

A number of provinces, including British Columbia, Quebec, Ontario, and New Brunswick, have announced regulatory initiatives to strengthen the energy efficiency provisions of their building codes and energy efficiency performance standards for goods and appliances. However, reflecting directions that have emerged from the Canadian Council of Energy Ministers, programs have been presented as one-time initiatives. Provincial governments have not committed to the regular and ongoing upgrading of energy efficiency standards and codes. This is despite the fact that many U.S. states identify the regular upgrading of codes and standards, usually on a three-year cycle, as being the crucial factor in their successes to date in reducing energy consumption. California, for example, attributes nearly half of the 12,000 MW reduction in peak electricity demand that it has achieved in the past thirty years to the upgrading of standards and codes. This is approximately the equivalent of the output of three nuclear plants the size of the Darlington facility in

Ontario, the largest in Canada. The US state approach has the effect of creating an environment of expectations of continuous energy efficiency performance improvement among builders and manufacturers. The Canadian model of sporadic, one time only upgrades, often on timescales of decades, in contrast, has the opposite effect. The approaches taken by the leading US states generally reflect long-standing commitments to energy efficiency. In many cases, like California's, these commitments flow from decisions in the 1970s to halt the development of additional nuclear plants due to safety, cost and waste disposal concerns.

Over the past four years, Ontario has undertaken an extensive redrafting of land-use planning legislation and significantly increased its expenditures on public transit. The intention behind these changes is to reduce urban sprawl and automobile dependency, particularly within the Greater Golden Horseshoe Region. Although these initiatives have been largely undertaken for growth management purposes, rather than GHG emission reductions, if successful they may result in significant reductions in transportation-related GHG emissions. A number of provinces, including British Columbia, Quebec, New Brunswick, and Nova Scotia, have indicated support for California's proposed vehicle emission standards for GHGs. Ontario, the centre of the automobile industry in Canada, has pointedly declined to support the California initiative. Finally, a number of provinces have adopted regulatory requirements regarding the capture and combustion of the methane gas produced by decaying waste in landfills.

It is important to recognize that notwithstanding the range of climate change, energy efficiency and renewable energy initiatives launched by Canadian provinces over the past few years, energy policy in most provinces remains fundamentally oriented towards reliance on, or the development of, conventional non-renewable energy sources.

In the western provinces, particularly British Columbia, Alberta and Saskatchewan, the development and export of coal, oil and gas resources remains a focal point of their economic development strategies. Ontario's recent electricity policies, for their part, continue to place a strong emphasis on the role of nuclear power, a technology whose poor reliability record will make realizing the phase-out of coal-fired electricity difficult if not impossible.²⁰ It remains to be seen whether the climate change and energy strategies that have been announced so far represent the beginnings of more fundamental changes in direction, or whether they are short-term responses to the current high public salience of the climate change issue.

Substantial provincial participation in the US state sponsored regional GHG emission cap and trade systems, like the RGGI and WCI, would be an important signal of the seriousness with which GHG emission reduction policies are being pursued. Similarly, the introduction of carbon taxes beyond Quebec, commitments to the regular updating of energy efficiency codes and standards as per the practices of the leading US states, the widespread introduction of substantial incentives, like standard offer contract arrangements, for the development of low-impact renewable energy, and the reorientation of land-use planning and transportation policies to promote less carbon intense urban development and transportation patterns, would all signal an intent to embed a long-term reorientation of existing policies at the provincial level.

CONCLUSION

Although the emergence of provincial GHG reduction strategies is an important development, it is far from clear that provincial initiatives can replace an effective federal strategy for GHG reductions. Most, but not all provinces have articulated GHG reduction targets. In fact, in some cases, like Quebec and Manitoba, these provincial targets come close to

being consistent with Canada's Kyoto Protocol target of a 6 per cent reduction in GHG emissions relative to 1990 by 2008-2012. Unfortunately, none of the provinces have articulated, to date, any real plans for meeting the targets they have established, although Quebec's efforts come closest to a comprehensive plan in this regard.

Perhaps the most significant gap at the provincial level is the issue of the reduction of emissions from the large final emitters (LFEs). These major industrial sources, ranging from coal fired power plants to pulp and paper mills, account for just under 50 per cent of Canada's GHG emissions.²¹ The Regional Greenhouse Gas Initiative (RGGI), being considered by Ontario, is focused exclusively on the electricity sector, although the Western Climate Initiative—in which British Columbia and Manitoba participate—may be broader in scope. Alberta has adopted legislation for the regulation of GHG emissions intensity from LFEs, but it has been widely criticized as being likely to result in continued growth in total GHG emissions. In addition, the emergence of distinct provincial, state and regional level cap and trade systems may make their integration with each other and the emerging international systems more difficult in the longer-term.

In addition to the major gap around the reduction of emissions from LFEs, consideration also has to be given to the inertial effects of the existing *de facto* energy policy framework at the federal level. As long as the federal government maintains an extensive policy infrastructure that supports and promotes the development of conventional non-renewable energy sources, it will be difficult, if not impossible, to move Canada's energy production and consumption patterns in the directions needed to comply with our international GHG emission reduction commitments.

The achievement of significant reductions in Canada's GHG emissions will require significant changes in the direction of long-standing policies by the federal government.

In particular, the federal government needs to establish an effective regulatory framework for reducing GHG emissions from LFEs. Perhaps even more importantly, the federal government must develop an overall strategy to re-orient Canada's energy path away from conventional non-renewable energy development and export and towards greater energy efficiency and reliance on low-impact renewable energy sources. The phasing out of the existing fiscal incentives for non-renewable energy development followed by the reinvestment of those resources in sustainable energy strategies would be a crucial starting point on that path. More broadly the introduction of a carbon tax, as Quebec has already done on a modest scale, in combination with a broader strategy of ecological fiscal reform, is likely to be necessary to facilitate the structural changes in Canada's economy needed to achieve major long-term reductions in GHG emissions.

Ultimately, given the scale of the changes needed in Canada's current patterns of energy production and consumption to address the climate change challenge, an effective overall GHG reduction strategy will require the full engagement of the federal government and all the provinces and territories. Both levels of government will need to reorient their policies related to energy, transportation, land-use, natural resources development and management, and waste management in fundamental ways. The initiatives we have seen so far have barely begun that process.

ENDNOTES

1. IPCC Working Group III, *Mitigation of Climate Change: Summary for Policy Makers* (Geneva: IPCC May 2007) accessed at <http://www.ipcc.ch/ipccreports/ar4-wg3.htm> November 22, 2007.
2. For an overview of Canadian Climate Change Policy see M.Winfield and D.Macdonald, "The Harmonization Accord and Climate Change Policy" in H.Bakvis and G.Skogstad, eds., *Canadian Federalism: Performance, Effectiveness and Legitimacy* (Toronto: Oxford University Press, 2007) pp.274-280.
3. Minister of the Environment, *Regulatory Framework for Air Emissions* (Ottawa: Government of Canada 2007) accessed at http://www.ec.gc.ca/doc/media/m_124/report_eng.pdf November 22, 2007.
4. A. Taylor, M. Winfield and M. Bramley, *Government Spending on Canada's Oil and Gas Industry: Undermining Canada's Kyoto Commitment* (Drayton Valley: The Pembina Institute, 2005).
5. M.Raynolds, M.McCulloch, R.Wong, *Carbon Neutral by 2020: A Leadership Opportunity for Canada's Oil Sands* (Calgary: Pembina Institute, 2006) accessed at <http://www.oilsandswatch.org/pub/1316> December 6, 2007.
6. Technical Committee on Business Taxation, *Report* (Ottawa: Department of Finance, 1997)
7. Commissioner for Environment and Sustainable Development *2000 Report* (Ottawa: Minister of Supply and Services, 2001) Chapter 3 "Government support for energy investments" accessed at <http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c003ce.html> November 22, 2007.
8. On the subsidization of ACEL, see D. Martin, *Canadian Nuclear Subsidies: Fifty Years of Futility* (Sierra Club of Canada, 2002), online: <http://www.cnp.ca/resources/nuclear-subsidies-at-50.pdf>.

9. G.Horlick and C.Schuchhardt and H.Mann, *NAFTA Provisions and the Electricity Sector* (Montreal: North American Commission for Environmental Cooperation, 2002), accessed at <http://www.cec.org/files/PDF//nfta5-final-e2.pdf> November 22, 2007.
10. B. Doern and M.Gattinger, *Power Switch: Energy Regulatory Governance in the Twenty-First Century* (Toronto: University of Toronto Press, 2003) (see, in particular, chapter 4 'The National Energy Board').
11. See, for example, Council of Energy Ministers, *Moving Forward on Energy Efficiency for Canada: A Foundation for Action* (September 2007), online, <http://www.nrcan-rncan.gc.ca/com/resoress/publications/cemcme/cemcme-eng.pdf>.
12. See generally, Winfield and Macdonald, "The Harmonization Accord and Climate Change Policy" pp.274-280.
13. M. Bramley, *Comparison of Current Government Action on Climate Change in the U.S. and Canada* (Ottawa: Pembina Institute 2002).
14. Environment Canada, *National Inventory Report: Greenhouse Gas Sources and Sinks in Canada, 1995-2005* (Ottawa: Environment Canada, 2007).
15. Natural Resources Canada, *Energy Use Data Handbook Tables* (Canada), online, http://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/handbook_tables.cfm.
16. Environment Canada, *National Inventory Report*.
17. Environment Canada, *National Inventory Report*.. Methane is a GHG twenty-one times more potent that carbon dioxide.

18. Alison Bailie, Karen Campbell, Matt Horne, Alison Jamison, Ian Picketts, Josha MacNab, and Rich Wong *Mind the Gap: A Blueprint for Climate Action in British Columbia* (Vancouver: The Pembina Institute, 2007) accessed at <http://www.pembina.org/pub/1550> November 22, 2007.

19. Sidhartha Banerjee, 'Quebec's Carbon Tax Gets Green Light despite Fears about Who Will Have to Pay,' *Canadian Business* (20 September 2007) online, http://www.canadianbusiness.com/markets/headline_news/article.jsp?content=b093008A.

20. For a critique of recent Ontario electricity policies and their environmental and economic risks and impacts see www.renewableisdoable.org.

21. Environment Canada, *National Inventory Report*.

CANADA AND THE BALI ROADMAP

MATTHEW BRAMLEY

The recent UN climate conference in Bali concluded with governments adopting the "Bali Roadmap" - a mandate for negotiating, by the end of 2009, a new global agreement to combat climate change after 2012. But confidence in the environmental effectiveness of the agreement to be negotiated is undermined by the vagueness of the Roadmap text relating to the U.S. and developing countries. The Bali Roadmap does include a call for an aggregate reduction in industrialized countries' emissions to 25-40% below the 1990 level by 2020, in line with climate science. But Canada's domestic targets and policies fall woefully short of this standard and will need to be dramatically strengthened for Canada to play a responsible part in the Bali Roadmap negotiations.

La récente conférence de l'ONU sur le climat a pris fin avec l'adoption par les gouvernements de la "feuille de route de Bali", mandant la négociation, d'ici à la fin de 2009, d'un nouvel accord mondial visant à combattre le changement climatique après 2012. Mais la confiance en l'efficacité environnementale de l'accord à négocier est sapée par l'imprécision du texte de la feuille de route en ce qui a trait aux É-U et aux pays en développement. La feuille de

Matthew Bramley has been Director of the Pembina Institute's Climate Change Program since 2001. The author of numerous reports and articles on climate policy, he is one of Canada's best known advocates for stronger government policies to address climate change. Dr. Bramley attended the Bali meetings.

route de Bali appelle bien à réduire d'ici à 2020 les émissions combinées des pays industrialisés jusqu'à 25 à 40 % sous le niveau de 1990, comme le souhaitent les climatologues, mais les objectifs et politiques nationaux canadiens sont terriblement loin de cette norme et devront être considérablement renforcés si le Canada veut jouer un rôle responsable dans les négociations de la feuille de route de Bali.

The annual UN climate conference held in December 2007 in Bali, Indonesia, was arguably of unprecedented importance for our environmental future. The recent Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) provides an unmistakably clear analysis of the cuts in greenhouse gas (GHG) emissions needed to prevent unacceptable impacts on people, economies and ecosystems. Labelling climate change "the biggest challenge to humanity in the twenty-first century,"¹¹ UN Secretary-General Ban Ki-moon called for an unprecedented response from the world's governments in Bali: "I need a political answer. This is an emergency and for emergency situations we need emergency action."¹²

WHAT BALI NEEDED TO DELIVER

Governments were called upon in Bali to launch negotiations for a new global agreement to combat climate change after 2012, when the first phase of the Kyoto Protocol expires. The challenge was, first, to launch a credible process, capable of delivering the post-2012 agreement by the end of 2009 (a later date would not likely allow enough time for the agreement to receive enough ratifications to enter into legal force before 2013). To provide sufficient confidence regarding environmental effectiveness, it was also essential that the Bali negotiating mandate specify overall emission reduction numbers in line with the science, and key building blocks of the post-2012 agreement. The most important of these are:

- Obligations to reduce absolute emission levels further for all countries that already have Kyoto targets for 2008-12,
- obligations of the same form and comparable level for the U.S., and
- adequate quantified emission-limiting actions by rapidly developing countries such as China and India, supported by new mechanisms and incentives.

The pressure on governments to deliver adequate results in Bali was at an all-time high. First, the scientific case for action is stronger, more urgent and more universally accepted than ever before. It is now widely accepted among governments and scientists that prevention of "dangerous" climate change will require the increase in average global surface temperature to be kept within 2°C of the pre-industrial level. For instance, the Bali Climate Declaration by Scientists³ states that staying within 2°C must be "the prime goal" of the post-2012 global climate agreement. The IPCC has shown that to have a chance of this,

- global emissions of carbon dioxide (the most important long-lived GHG) must peak by no later than 2015, and then be reduced to about 43-83% below the 1990 level by 2050^{4,5} and
- industrialized countries' GHG emissions must fall to 25-40% below the 1990 level by 2020 and to 80-95% below the 1990 level by 2050, if they are to make a fair contribution to the necessary cuts in global emissions.^{6,7}

Public and political pressure on governments in Bali was also at unprecedented levels. The past two years have seen leaps in public concern about climate change and in its political importance. The Nobel Peace Prize for 2007 shared by Al Gore and the IPCC recognizes their major contributions to this development. Citizens are increasingly alarmed by extreme events such as Hurricane Katrina (2005) or the stunning melting of the Arctic in 2007, when the average area of sea-ice shrank to 23% below the previous record low.⁸ Economic objections to deep cuts in GHG emissions were refuted in the authoritative 2006 review by Sir Nicholas Stern, Head of the UK Government's Economic Service, who concluded that the cost of making deep GHG reductions is likely much less than the cost of climate impacts resulting from a failure to make such reductions.⁹

OBSTACLES TO AGREEMENT

It is generally accepted that reductions of GHG emissions need to be negotiated globally, because a few countries taking unilateral action could face significant local costs without achieving significant global benefits. And a negotiation among only the largest emitting countries would be unlikely to reflect the interests of those most vulnerable to climate impacts, such as small island states and least-developed countries. It is also important to note that global climate agreements are constrained by the need to adopt them by consensus, because sovereign states cannot be forced to take action to cut emissions under international law.

A major obstacle, therefore, to agreeing an adequate negotiating mandate in Bali was the continued resistance of the government of the U.S., the world's largest emitter of GHGs, to effective action on climate change. The Bush administration now no longer denies the reality of human-caused climate change, and has accepted that the UN is the appropriate forum for negotiating a global response.¹⁰ But it continues to refuse to quantify necessary GHG emission reductions, even for global emissions, and does not accept that the U.S. needs a target, binding or otherwise, for its national emissions.

Another key obstacle to overcome in Bali—closely linked to the one just discussed—was developing countries' fear of a post-2012 agreement that would make unfair demands on them relative to developed countries. Even a rapidly developing country such as China has per-capita levels of both GHG emissions and GDP roughly five times lower than those of Canada. Also, some industrialized countries including Canada and the U.S. have, to date, utterly failed to show the leadership in reducing GHG emissions for which they accepted responsibility in the UN Framework Convention on Climate Change (UNFCCC), negotiated in 1992. The environmental community, the EU and others therefore believe that countries such as China and India cannot, in the

immediate post-2012 period, be subject to the same absolute emission reduction targets that are appropriate and necessary for industrialized countries. Rapidly developing nations do, however, need to commit to quantified actions that significantly slow their emissions growth, supported by appropriate incentives.¹¹

Unfortunately, in Bali the Government of Canada aligned itself closely with the U.S., Japan and Russia by opposing a quantification of overall levels of emission reductions in line with the IPCC's scientific analysis, outlined above. Canada also arrived in Bali insisting that "all large emitters," a category including major developing countries, must take on "absolute binding emission reduction targets."¹² Canada was alone in adopting this position, which was a very antagonistic way to respond to the unprecedented statements made in Bali by China, Brazil and South Africa signalling an openness to taking on new commitments post-2012. The present federal government's rejection of its existing obligation under the Kyoto Protocol for 2008-12 also did not win Canada any friends in Bali.

Canada's attitude attracted some extraordinary public criticism. Rajendra Pachauri, Chairman of the Nobel Prize-winning IPCC, said of the Harper government: "This particular government has been a government of skeptics. They do not want to do anything on climate change."¹³ Yvo de Boer, Executive Secretary of the UNFCCC, complained that, "Canada is becoming a bargain discount version of Australia of old"¹⁴ (i.e., the Kyoto-rejecting Australia of former Prime Minister John Howard). More diplomatically, the German head of delegation, Karsten Sach, said that, "we Europeans don't see the Canadian position as constructive."¹⁵

THE BALI ROADMAP

The Bali conference exceeded its schedule by a full day. Contrary to the usual UN practice of completing negotiations behind closed doors and then formally endorsing finalized

consensus texts in plenary sessions, incomplete texts were brought to plenary for public and at times dramatic negotiation. By the end of the day, governments had adopted two key texts that jointly comprise the "Bali Roadmap" - a mandate for negotiating the post-2012 global climate agreement, by the end of 2009, on two separate tracks:

- Under the Kyoto Protocol, the work of an existing Ad Hoc Working Group on Further Commitments for Annex I Parties (industrialized countries) has been reinforced and given a clear end date of December 2009 (at the annual UN climate conference to take place in Copenhagen). The text includes a strong political commitment to an aggregate reduction in industrialized countries' emissions to 25-40% below the 1990 level by 2020 in a second phase of Kyoto, in line with the IPCC's analysis of what is needed to have a chance of avoiding 2°C of global warming above the pre-industrial level. However, the U.S. has not signed up to this text because it is not a party to the Kyoto Protocol.
- Under the UNFCCC, countries decided to create a new Ad Hoc Working Group, also to complete its work in time for the Copenhagen conference in December 2009. The decision text recognizes the need for "deep cuts in global emissions" but fails to specify levels or timing (although footnotes do refer to pages of the IPCC's Fourth Assessment Report that discuss such numbers). A paragraph applying to U.S. "commitments or actions" is very vague, but does include absolute emission reduction targets as an option, and refers to "ensuring the comparability" of the efforts of the U.S. and other developed countries. The paragraph relating to developing country "actions" is also very vague, but includes the words "measurable, reportable and verifiable." (The U.S.'s insistence on weak text for itself undoubtedly contributed to the weakness of the text for developing countries.) The decision text also contains

important sections on adaptation to climate change, technology transfer, financing, and reducing GHG emissions from tropical deforestation—all critical elements of an effective global climate agreement.

The Bali conference therefore met its objective of launching negotiations with a 2009 end date, but confidence in the environmental effectiveness of the agreement to be negotiated is undermined by the vagueness of one of the two negotiating tracks. It also remains to be seen how these tracks will be linked before the end of the negotiations. The attitude of the next U.S. administration, whose identity will be known in time for the next annual UN climate conference, to be held in Poznan in December 2008, will be critical. To a large degree, the world is still waiting for the Bush administration to get out of the way in order to tackle climate change with the urgency and ambition called for by the science.

Under the Bali Roadmap, the calendar of UN climate talks will intensify during 2008, with four sessions of intergovernmental negotiations instead of the usual two. The Bush administration continues to push its own initiative of meetings of "Major Economies" on climate change, with the next one scheduled for January 30-31 in Honolulu. And climate change will once again top the agenda of the annual summit of G8 heads of government (July 7-9, Hokkaido, Japan).

WHAT CANADA NEEDS TO DO NOW

In his plenary speech towards the end of the Bali conference, Environment Minister John Baird suggested a more constructive attitude by Canada to the achievement of an ambitious and fair post-2012 global climate agreement. Minister Baird not only accepted the key UNFCCC principle of "common but differentiated responsibilities," signalling a more conciliatory attitude to developing countries, but also stated that the post-2012 agreement must be "driven by the science."

When it found itself virtually isolated, Canada did finally accept the Bali Roadmap text calling for an aggregate reduction in industrialized countries' emissions to 25-40% below the 1990 level by 2020, in line with the science.

But Canada's domestic policy falls woefully short of this standard. The federal government currently proposes to allow Canada's GHG emissions to remain slightly above the 1990 level in 2020.¹⁶ Even taking into account national circumstances, there is no credible way to construe this target as a fair contribution by Canada to the effort needed by industrialized countries as a whole. Worse, several independent evaluations of the government's current policies have found that they are far too weak to meet even this inadequate target. For example, a modelling analysis by Mark Jaccard, a leading Canadian climate policy economist, concluded that current policies will result in Canada's GHG emissions remaining indefinitely above the current level, i.e., more than 25% above the 1990 level.¹⁷

In her 2006 report, the Commissioner of the Environment and Sustainable Development called on the federal government to "clearly state how it intends to reconcile the need to reduce greenhouse gas emissions against expected growth in the oil and gas sector," and to undertake a "a massive scale up of efforts" to cut GHG emissions.¹⁸ That will require a substantial strengthening of our national GHG targets—including the possibility of meeting them in part by financing cost-effective emission reduction projects outside Canada—and a dramatic strengthening of key policies, notably proposed regulations to constrain industrial GHG emissions (which make up half of the national total). Without these changes, it is very difficult to see how Canada can play a responsible part in the Bali Roadmap negotiations over the next two years.

ENDNOTES

1. UN News Centre, "Opening remarks at joint press conference following high-level event on climate change," statement, September 24, 2007. Also available online at http://www.un.org/apps/news/infocus/speeches/statments_full.asp?statID=124.
2. Juan Jose Lagorio, "UN's Ban Says Global Warming Is "An Emergency", *Reuters*, November 11, 2007.
3. Available online at <http://www.climate.unsw.edu.au/bali/>.
4. Intergovernmental Panel on Climate Change, "Summary for Policymakers," in Metz et al., eds, *Climate change 2007: Mitigation. Contribution of Working group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press, 2007), 23. Also available online at <http://www.ipcc.ch>.
5. The IPCC concluded that an emissions reduction of 50-85% below the 2000 level by 2050 is needed to limit equilibrium warming to 2.0-2.4°C, relative to the pre-industrial level. We have recalculated this reduction relative to the 1990 level, based on a 13.3% increase in global CO₂ emissions (including international bunkers but not land-use change and forestry) between 1990 and 2000. This increase was calculated from the Climate Analysis Indicators Tool Version 4.0 (Washington, DC, USA: World Resources Institute, 2007), <http://cait.wri.org>.
6. Gupta et al., "Policies, Instruments and Co-operative Arrangements," in Metz et al., eds, *Climate change 2007: Mitigation. Contribution of Working group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press, 2007), 776. Also available online at http://www.mnp.nl/ipcc/pages_media/AR4-chapters.html.

7. These emission reductions are based on stabilizing the atmospheric GHG concentration at 450 parts per million CO₂e, which corresponds to only about a 50% probability of respecting the 2°C limit.
8. National Snow and Ice Data Center, "Arctic Sea Ice Shatters All Previous Record Lows," news release, October 1, 2007. Available online at http://nsidc.org/news/press/2007_seaiceminimum/20071001_pressrelease.html.
9. Full information on the Stern Review is available online at http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm.
10. See the 2007 G8 summit declaration, signed by the U.S.: Growth and Responsibility in the World Economy, Summit Declaration (7 June 2007), 15-16. Available online at http://www.g-8.de/Content/EN/Artikel/_g8-summit/anlagen/2007-06-07-gipfeldokument-wirtschaft-eng.templateId=raw,property=publicationFile.pdf/2007-06-07-gipfeldokument-wirtschaft-eng.
11. Analysis shows, however, that major developing countries' emissions will need to peak by 2020 to avoid 2°C of global warming above the pre-industrial level. See United Nations Development Programme, *Human Development Report 2007/2008* (Basingstoke, UK and New York, NY: Palgrave Macmillan, 2007), 48. Also available online at <http://hdr.undp.org/en/reports/global/hdr2007-2008/>.
12. John Baird, "Un effort planétaire," *La Presse*, December 6, 2007.
13. "Nobel climate panel chief raps Canada on carbon cuts," *AFP*, December 6, 2007. Also available online at <http://afp.google.com/article/ALeqM5hjJAYTz1867ZFCzP0IQIDnFdDcA>.

14. Toby Heaps, "Blog: the view from Bali," thestar.com, <http://www.thestar.com/article/282004#day4> (accessed January 16, 2008).
15. "Heiße Phase der Weltklimakonferenz beginnt," *dpa*, December 9, 2007. Also available online at http://www.freenet.de/freenet/nachrichten/politik/200712/20071209_e960b9f5f0a5946b42247d55b4ef708c.html.
16. Matthew Bramley, *Analysis of the Government of Canada's April 2007 Greenhouse Gas Policy Announcement* (Drayton Valley, AB: The Pembina Institute, 2007), 3-4. Also available online at <http://climate.pembina.org/pub/1464>.
17. Mark Jaccard and Nic Rivers, *Estimating the Effects of the Canadian Government's 2006-2007 Greenhouse Gas Policies* (Toronto: C.D. Howe Institute, 2007), Figure 2. Also available online at http://www.cdhowe.org/pdf/ebrief_46.pdf.
18. Commissioner of the Environment and Sustainable Development, *2006 Report* (Ottawa, ON: Office of the Auditor General of Canada, 2006), chapter 0. Also available online at <http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20060900ce.html>.

C I C

CANADIAN INTERNATIONAL COUNCIL
CONSEIL INTERNATIONAL DU CANADA

Canadian International Council
205 Queen Street West, Suite 302
Toronto ON M5V 1V3
Canada
<http://www.canadianinternationalcouncil.ca>

Publications Mail Registration No. 40062474
Postage paid at Scarborough