



HOUSE OF COMMONS
CANADA

FINDING THE ENERGY TO ACT: REDUCING CANADA'S GREENHOUSE GAS EMISSIONS

**Report of the Standing Committee on
Environment and Sustainable Development**

**Alan Tonks, M.P.
Chair**

July 2005

The Speaker of the House hereby grants permission to reproduce this document, in whole or in part for use in schools and for other purposes such as private study, research, criticism, review or newspaper summary. Any commercial or other use or reproduction of this publication requires the express prior written authorization of the Speaker of the House of Commons.

If this document contains excerpts or the full text of briefs presented to the Committee, permission to reproduce these briefs, in whole or in part, must be obtained from their authors.

Also available on the Parliamentary Internet Parlementaire: <http://www.parl.gc.ca>

Available from Communication Canada — Publishing, Ottawa, Canada K1A 0S9

**FINDING THE ENERGY TO ACT: REDUCING CANADA'S
GREENHOUSE GAS EMISSIONS**

**Report of the Standing Committee on
Environment and Sustainable Development**

**Alan Tonks, M.P.
Chair**

July 2005

STANDING COMMITTEE ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

CHAIR

Alan Tonks

VICE-CHAIRS

Bernard Bigras

Lee Richardson

MEMBERS

Nathan Cullen

Yasmin Ratansi

Brian Jean

Christian Simard

David McGuinty

Jeff Watson

Bob Mills

Hon. Bryon Wilfert

Hon. Denis Paradis

OTHER MEMBERS OF PARLIAMENT PARTICIPATING IN THIS STUDY

Dean Allison

Marc Godbout

Russ Powers

David L. Anderson

Peter Goldring

Anthony Rota

Hon. Larry Bagnell

Susan Kadis

Francis Scarpaleggia

Gord Brown

Wajid Khan

Andrew Sheer

Serge Cardin

Ed Komarnicki

Mario Silva

Colin Carrie

Mario Laframboise

David Smith

Roy Cullen

Hon. Jack Layton

Hon. Paddy Torsney

Rodger Cuzner

Hon. Judi Longfield

Bradley R. Trost

John Duncan

Beth Phinney

Mark Warawa

Marcel Gagnon

Pierre Poilievre

CLERK OF THE COMMITTEE

Eugene Morawski

PARLIAMENTARY INFORMATION AND RESEARCH SERVICE LIBRARY OF PARLIAMENT

Tim Williams

THE STANDING COMMITTEE ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

has the honour to present its

SEVENTH REPORT

In accordance with its permanent mandate under Standing Order 108(2) and the motion adopted by the Committee on November 23, 2004, your committee undertook, beginning in December 2004, a study on the subject matter of Canada's Implementation of the Kyoto Protocol.

TABLE OF CONTENTS

INTRODUCTION.....	1
CANADA’S KYOTO CHALLENGE	4
Canada’s Target	4
Canada’s Emissions Trends	6
The Cost of Delay (Part I).....	6
REDUCING GHG EMISSIONS: THE FUNDAMENTALS	8
The Kaya Identity	8
The Costs of Delay (Part II)	10
MANAGING THE FEDERAL CLIMATE CHANGE PORTFOLIO.....	11
Assessing Performance	12
General Departmental Coordination and Accountability	14
<i>Strategic Environmental Assessment and Sustainable Development Strategies: Key Requirements Being Ignored</i>	15
<i>Signals from the Centre</i>	17
<i>The Role of Bureaucrats</i>	18
TOWARDS A FAIR AND EFFECTIVE PLAN TO REDUCE GREENHOUSE GAS EMISSIONS.....	19
Links with Energy Security.....	19
<i>Hydroelectricity</i>	22
<i>Nuclear</i>	22
<i>Biomass</i>	23
<i>Wind</i>	23
<i>Solar</i>	24
<i>Geothermal</i>	25
Energy Security in Canada	25
Ecological Fiscal Reform	28
<i>The Current Fiscal Situation Regarding Energy</i>	29
<i>Calls for Ecological Fiscal Reform</i>	31
Biofuels and Sinks	32
Carbon Sequestration	33
Policy Options: Mandatory and Voluntary	35

Cap and Trade Systems	36
Moving Toward Greater Efficiency	38
International Activities	40
Continental Discussions.....	43
COMMENTARY ON PROJECT GREEN.....	43
The Climate Fund	43
The Large Final Emitters Target	44
The LFE Cap and Trade Regulations	45
Ecological Fiscal Reform	45
The Automobile Sector	46
Government Accountability	46
Engaging the Public	46
Adaptation.....	47
CONCLUSION	47
LIST OF RECOMMENDATIONS.....	53
APPENDIX A — LIST OF WITNESSES.....	57
APPENDIX B — LIST OF BRIEFS.....	63
REQUEST FOR GOVERNMENT RESPONSE	67
DISSENTING OPINION — Conservative Party of Canada	69
SUPPLEMENTARY OPINION — Bloc Québécois	73
MINUTES OF PROCEEDINGS.....	75

FINDING THE ENERGY TO ACT: REDUCING CANADA'S GREENHOUSE GAS EMISSIONS

INTRODUCTION

In 1992 the world recognized that changes in the atmosphere caused by human activity will alter the climate in a manner which could adversely affect natural ecosystems and humankind. The United Nations Framework Convention on Climate Change (UNFCCC) was the response to this problem and has now been ratified by 189 countries.

The main goal of the UNFCCC is the:

stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

The Convention did not quantify what such a level should be though it did state that:

Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

Evidence is already coming to light that suggests ecosystems may not be able to adapt quickly enough to anthropogenic climate change.¹

To stabilize greenhouse gas (GHG) concentrations requires that emissions of GHGs be reduced. In the UNFCCC the developed countries of the world committed to adopting national policies that had the aim of returning emissions to 1990 levels and informally it was agreed upon to achieve this by the year 2000.

It was clear by the mid-1990s that most developed countries, under the voluntary terms of the Convention, would not be able to reduce their emissions to this level. It was agreed upon to negotiate toward a binding agreement with

¹ Note that in general this report will refer to climate change in the manner of the Intergovernmental Panel on Climate Change in that "climate change" refers to all forms of change, natural and anthropogenic. Climate change the result of human activity is referred to as anthropogenic climate change. "Climate change" when used as a modifier to words such as "plan", however, refers mostly to mitigating against anthropogenic climate change.

emission reduction targets and timelines. The Kyoto Protocol is the result of these negotiations.

Canada committed to reducing its greenhouse gas emissions, on average, to 6% below 1990 levels during the five-year period between 1 January 2008 and 31 December 2012.

It is becoming clear again, however, that, even with binding targets, countries are having difficulties reducing their GHG emissions. No where is this more clear than in Canada where GHG emissions soared to over 20% higher than 1990 levels in 2003.

Emissions have risen despite various plans that the government has had in place since the mid-1990s. The first National Action Program on Climate Change (NAPCC) was approved in 1995. Action Plan 2000 elaborated on the federal commitments to help meet the objectives of the National Implementation Strategy.² The Climate Change Plan for Canada was released in 2002 in the lead up to the parliamentary ratification votes and has now been updated with the 2005 Project Green — Moving Forward on Climate Change — A Plan for Honouring our Kyoto Commitment.

The Committee believes that Canada's emissions record speaks to the need to rethink aspects of Canada's approach to reducing greenhouse gas emissions and that the time is ripe for significant parliamentary input into the process.

What actions there have been were ad hoc, lacked an overall strategy and have not been accompanied by an accountability framework. They have therefore been ineffective and the delay in taking action has increased the costs associated with reducing emissions.

Delaying action has put Canada behind other nations. The only countries that are close to their Kyoto Protocol targets (such as Sweden and the United Kingdom) are those that, for whatever reason, took early action. Even some developing nations are ahead of us in many aspects of renewable energy.

A carbon constrained world is almost certainly coming and our economy is at risk of being ill-prepared for the change. We are also at risk of international embarrassment as being laggards if our inaction leads us to miss our Kyoto target by a wide margin. This is particularly true this year, when Canada is hosting the 11th meeting of the Conference of the Parties to the Convention (COP II) which will act as the 1st Meeting of the Parties to the Protocol (since it just came into force this year).

² To which all provinces except Ontario agreed in October of 2000.

This embarrassment would not be without consequences. If the developed world does not show that it is serious about reducing GHG emissions there is no chance that the developing world, which will surpass the developed world's emissions in the near future, will place any importance on reducing theirs. The risks to climate associated with the ensuing unrestrained CO₂ emissions must be avoided.

I don't think we're going to get very far bringing in the rest of the world if we don't do anything. ...I think that a precondition to getting the rest of the world involved in the next phase is going to have to be performance by the rich countries. Otherwise, they will simply regard this as a scam.³

Throughout the Committee's study it was clear that there is no shortage of imaginative ideas within Canada about how to reduce greenhouse gas emissions. But these ideas will remain as such without incentives to shift away from "business as usual." This shift will not happen overnight but, if it is to happen, the government must set clear rules in which industry can make the necessary long-term plans.

In the shorter term, government must also change the tax system so that currently low priority capital investments in efficiency become a priority.

Even if the Parties to the Kytoto Protocol meet their targets, GHGs will continue to build up in the atmosphere and their effects will be felt for at least a century. In addition, climate will continue to change naturally as it always has. Increasing Canada's capacity to adapt to climate changes will therefore also be paramount, particularly in the north where climate change is already being felt.⁴

As well as being linked to economic and social issues, GHG emissions are often accompanied by releases of other pollutants, particularly those related to smog and mercury. Reducing GHG emissions could therefore have ancillary environmental and health benefits.

The Commissioner of the Environment and Sustainable Development stated in 1998:

3.39 Climate change is not just an environmental issue. It also has aspects related to the economy, including trade and competitiveness considerations, as well as social aspects. In addition, it raises concerns about equity between generations, and among Canadian jurisdictions and sectors as well as nations and regions of the world. These considerations and competing interests have to be taken into account in deciding how to

³ Mr. David Runnalls (President, International Institute for Sustainable Development), *Evidence*, House Standing Committee on Environment and Sustainable Development, 17 February 2005, Meeting 20.

⁴ Mr. John Streicker (Manager, Canadian Climate Impacts and Adaptation Research Network, North Region), *Evidence*, 7 April 2005, Meeting 31; Chief Phil Fontaine (National Chief, Assembly of First Nations), *Evidence*, 12 April 2005, Meeting 32.

respond. Climate change thus epitomizes the challenge of sustainable development.

The Kyoto Protocol target should therefore be used as motivation to move toward integrating economic, social and environmental goals. The world is moving into a carbon-constrained future that offers just as many opportunities as it poses challenges. Decreasing GHG emissions does pose a significant challenge to Canada, but it is a challenge that, if met, will place Canada in a position of leadership in the world's evolving economy.

CANADA'S KYOTO CHALLENGE

Canada's Target

The Kyoto Protocol requires that Canada reduce its emissions of GHGs to 6% below its emissions in 1990. The Protocol stipulates that the allowable emissions must be five times this level over the five year commitment period between 1 January 2008 and 31 December 2012. This means that over this time period Canada's emissions must average 560 Mt per year.

The target itself is somewhere in the middle of the targets of other nations, with the EU as a whole having a target of 8% below 1990 levels, the U.S. (though not a Party to the Protocol) 7% below, Japan 6% below and Australia 8% above. Within the EU, the target was distributed through a burden sharing agreement which allows some countries to increase emissions (Spain at 15% above 1990 levels) and others well below (Denmark at 21% below 1990 levels).

One aspect that impacts on the level of difficulty of a target is the national circumstances of a country. Entering negotiations countries had some idea of what they might be capable of but did not know for certain.

In looking to future commitments post-2012 Mr. Elliot Diring of the Pew Center on Global Climate Change stated:

I think one thing that has changed since 1997 is that governments have really taken a much closer look at this issue, and have a much finer appreciation for the challenges and their specific national circumstances. They would probably be in a much better position to negotiate, with a view toward their specific national circumstances. So I think we want a framework that allows each government to find a way to align its national interests with the global interest.⁵

⁵ Mr. Elliot Diring (Director, International Strategies, Pew Center on Global Climate Change), *Evidence*, 31 May 2005, Meeting 41.

The EU as a whole clearly has an advantage over Canada in that it includes economies in transition such as Poland, whose economies collapsed after the fall of communism. With the economic collapse of countries such as Poland, their GHG emissions dropped to 30 or 40% below 1990 levels. The total is also skewed by the United Kingdom and Germany because of the size of their economies. The U.K. made a move in the early-1990's away from coal to natural gas and Germany absorbed East Germany, another country whose GHG emissions dropped along with the collapse of its economy. It must be noted, however, that Germany and the U.K. are likely to meet their targets in large part because of significant government investment in GHG reduction strategies. For example, Germany now gets over 16,000 MW of energy from wind and other renewable sources.

Individual countries such as Denmark (21% below 1990 levels) and Austria (13% below 1990 levels) have very difficult targets within the EU burden sharing agreement, and they are currently predicted to fail to meet their targets by a wide margin.

Canada is a northern, cold country with little infrastructure for its population size with a large energy-intensive resource-based economy. Under these circumstances, we have become heavily reliant on fossil fuels to sustain our quality of life thus making change difficult.

Other countries, such as Sweden, share some of the national circumstances of Canada but have been more successful than Canada at reducing emissions. Sweden took early action to reduce emissions and is one of the few countries that may meet its Kyoto target through domestic action (see table for some examples of how Parties are doing with respect to their targets). While Sweden does not have the same jurisdictional issues as Canada, this suggests that the national circumstances of Canada cannot fully explain why Canada's emissions have risen. The lack of early action has also been a significant factor.

GHG Emissions in Mt per Year in Selected Parties to the Kyoto Protocol

	Target Relative to 1990	Target	1990	1996	2000	2002
Canada	0.94	572	609	675	725	731
United Kingdom	0.875	650	743	708	648	635
Denmark	0.79	55	69	90	68	68
Japan	0.94	1116	1187	1352	1337	1331
Sweden	1.04	75	72	77	68	70

Canada's Emissions Trends

Since 1990 Canada's GHG emissions have increased from 596 megatonnes (Mt) per year to 740 Mt per year in 2003.⁶ This represents an increase of 21% over 1990 levels and is 28% over the target (approximately 560 Mt per year). New calculations apparently estimate that Canada will have a gap of 270 Mt between the business as usual scenario in 2010, and the Kyoto target. Canada has one of the most difficult target of any Kyoto Party with binding commitments, and it is all the more difficult because of delays in addressing Canada's GHG emissions.

The Kyoto Protocol commitment period begins in just over 2.5 years and ends in 7.5 years while the United Nations Framework Convention on Climate Change was signed 13 years ago and the Kyoto Protocol 7 years ago. As we approach the Kyoto period and GHG emissions continue to rise, it becomes more and more difficult to reduce emissions to the levels required by the Protocol.

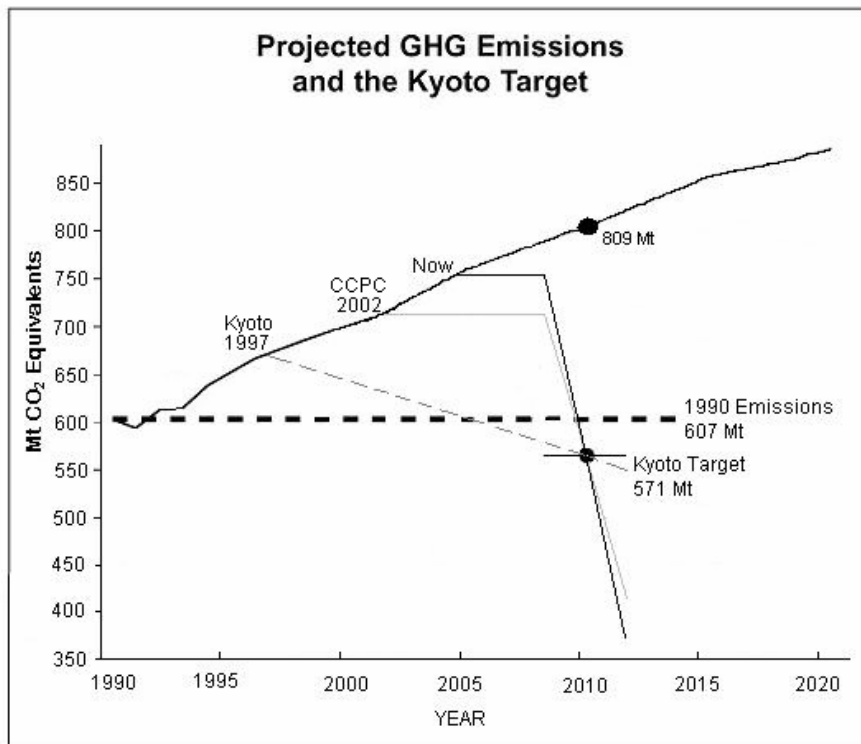
The Cost of Delay (Part I)

The target has been made more difficult to attain because of the continued increases in GHG emissions since 1997. This is because the target is the average over the period from 2008 to 2012. The higher Canada's GHG emissions are entering the commitment period, the further it has to overshoot the level of 6% below 1990 in order to bring the average down.

⁶ Note that the 2003 GHG inventory uses different methodologies than previous years. The effect of this is to bring the overall emissions down, though the relative changes over the years are similar. For instance the 2002 inventory listed 731 Mt per year as the GHG emissions total for 2002. This has now been recalculated to be 719 Mt per year. As well the target, which was 572 Mt per year based on the 2002 inventory, is now 560 Mt per year.

Figure 1 is a graphic representation of the effects of the delay in reducing emissions. In 1997, the year of signing the Protocol, the path was a fairly shallow one, with a final target of a little more than 6% lower than 1990 emissions levels.

**Figure 1⁷: The Cost of Delay —
Emission Paths⁸ Necessary to Meet the Kyoto Target in 1997, 2002 and 2005**



The other two scenarios assume that Canada is able to level off its emissions at 2002 and 2005 levels before entering the commitments period. These scenarios clearly have their challenges. In 2002, the year of the Climate Change Plan for Canada and the year of Canadian ratification, the path had already become much more difficult.

⁷ As modified from Canada's National Climate Change Business Plan, May 2002, p. 105. Note that the line representing predicted emissions is no longer valid, but it is the only one currently available (see recommendation 6). Emissions have increased over the predictions in the 2002 Plan. In addition, the UNFCCC has changed the methodologies by which Parties calculate their emissions. The effect of this is to change the target from 571Mt per year to 560 Mt per year. The 1990 emissions have now been recalculated to be 596 Mt per year, not 607 Mt as listed in this diagram.

⁸ The path for 1997 is based on a steady linear decline. The paths for 2002 and 2005 are based on entering the commitment period with emission levels at 2002 or 2005 levels respectively. CCPC is the Climate Change Plan for Canada, 2002.

Entering the commitment period with emissions at 2005 levels would mean having to drop emissions precipitously to a final target of approximately 380 Mt per year, a drop of over 50%, in order to meet the Kyoto target. This would mean that the “gap” is not 270 Mt but closer to 500 Mt per year.

REDUCING GHG EMISSIONS: THE FUNDAMENTALS

The Kyoto Protocol is designed to address a number of different GHGs, including CO₂, methane, nitrous oxide and hydrofluorocarbons. Canada’s GHG emissions are composed of almost 80% CO₂, with approximately 13% methane, 7% nitrous oxide and about 1% other GHGs.

Addressing methane and nitrous oxide emissions should be a priority as they are powerful GHGs and in many ways their emissions are a waste, the reduction of which could be economically beneficial.

To fully address GHG emissions, however, CO₂ emissions must be reduced. This is more difficult than reducing emissions of other GHGs, as CO₂ emissions are the result of burning fossil fuels which in turn is linked strongly to Canada’s economy. To reduce CO₂ emissions will require unhooking the links that tie CO₂ emissions to economic growth.

The Kaya Identity

The major factors leading to greenhouse gas emissions can be described in a simple equation involving population size, economic activity, the amount of energy use per unit economic activity and the amount of carbon in the energy supply.

This equation is sometimes referred to as the Kaya Identity.⁹

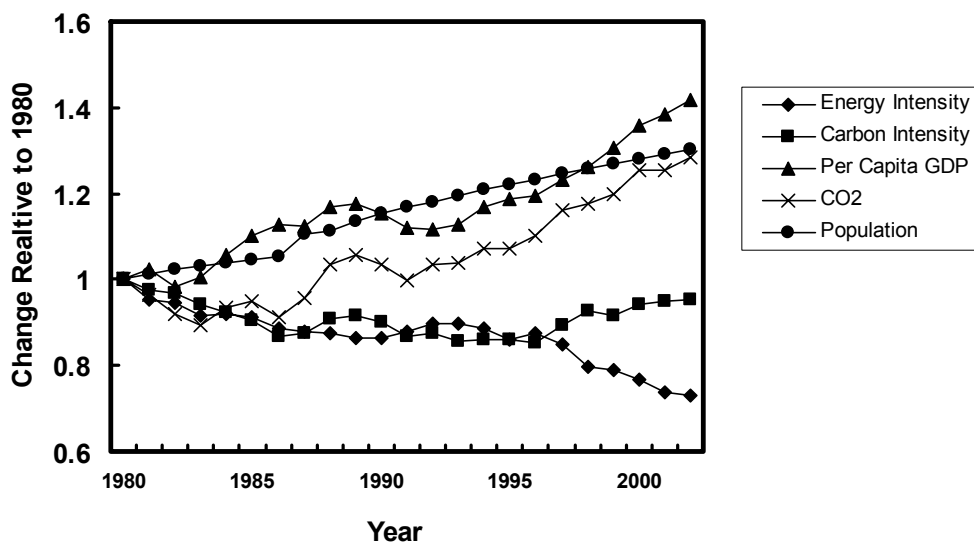
Mc	=	N	*	GDP/N	*	E/GDP	*	C/E
CO ₂ Emissions		Population		Per capita gross national product		Energy intensity of the economy		Carbon intensity of primary energy

As can be seen in Figure 2, Canada’s population has grown by 30% since 1980 and per capita GDP has increased by 42%. The primary energy intensity of the economy, however, fell by 27%. The carbon intensity of primary energy fell by

⁹ Hoffert MI et al. “Energy Implications of Future Stabilization of Atmospheric CO₂ Content,” *Nature*, vol. 395, 881-884, 1998.

almost 15% between 1980 and 1996, after which it has climbed and is now 5% below what it was in 1980.

Figure 2: Relative Changes in Factors of the Kaya Identity Since 1980¹⁰



The increase in population since 1980 was slightly greater than the decrease in primary energy intensity, effectively cancelling each other out. Since the carbon intensity of primary energy has, on the whole, only decreased by 5% since 1980, the trend in GHG emissions has followed the per capita GDP fairly closely.

The population of Canada will presumably increase over time as it has in the past. The per capita GDP, it is hoped, will also increase over time. It was this factor that dropped in the former communist countries as communism collapsed, leading to emissions reductions. No one would desire a similar fate for Canada.

This leaves the final two factors; energy intensity of the economy and the carbon intensity of primary energy.¹¹ To reduce carbon dioxide emissions either more economic output per unit of energy must be achieved, or the amount of carbon produced per unit energy must go down.

¹⁰ Data Sources: Energy Information Administration, United States Department of Energy, <http://www.eia.doe.gov/emeu/international/total.html#Consumption>. Carbon intensity was calculated as CO₂ emissions divided by primary energy consumption.

¹¹ Note that the last two factors when multiplied together yield CO₂ emissions per unit of economic output, this is sometimes referred to as carbon intensity of the economy. When all GHGs are considered, it is referred to as the greenhouse gas intensity of the economy.

The Costs of Delay (Part II)

The first cost of delay, as described previously (see Figure 1), is caused by the fact that Canada's emissions have risen significantly since 1990. This means that we may have to overshoot 6% below 1990 levels to meet the averaging requirements of the Protocol, making our target much more difficult and costly to achieve.

The second cost, which is probably more significant than the first, results from the fact that changing the amount of energy used per unit of economic output or the amount of carbon given off per unit energy used takes time that is tied, in part, to the rates of industrial capital turnover.

Decreasing energy intensity involves increasing efficiency and/or changing the structure of the economy. Decreasing carbon intensity involves using fuels that emit less carbon and/or trapping the carbon produced and placing it in long-term storage away from the atmosphere.

None of these are easily achieved. Had the government taken its UNFCCC commitments in 1992 seriously and put in place policies to gradually reduce emissions, it is possible that we could have achieved our Kyoto targets domestically. Had it immediately put in place policies following the signing of Kyoto it would have made meeting the commitment less costly, and the target might have been met. The further the delay, the greater the cost.

As the Committee learned in its study, one drastic model of achieving the Kyoto target through domestic action alone predicted price increases of 10 to 100% for electricity, 60% for natural gas, and 50% for gasoline. Of course, this model is a method of artificially inflating prices in an attempt to reduce usage and is not recommended by the Committee.

While the short-term cost increases predicted in this study might not translate into a devastated economy, the political costs would be very high.¹² The costs now, however, would be much greater.

Those were simulations I had done with our energy economy model, in which we assumed that Canada would 100% achieve its Kyoto commitment. In other words, all the reductions would be domestic. In fact, if we were to start now with the 100% target, those cost estimates I gave you are low. They could be double what they are now. That was assuming we started in the year 2000...

¹² Mr. Mark Jaccard, "Costing Greenhouse Gas Abatement — Canada's Technological and Behavioural Potential," *ISUMA*, Winter 2001.

Those numbers of mine are specific to a 100% Canadian reduction. I stand by them, and I say they're way higher now.¹³

It is now impossible to achieve reductions within Canada sufficient to meet Canada's target, a fact that the government has tacitly acknowledged in its new plan. This will necessitate the purchase of international credits.

The Committee, however, is convinced that a large portion of Canada's GHG emissions target can be achieved through improved domestic policies like large scale investment in energy efficiency and development of renewable power beyond the targets currently set by the federal government that will lead to longer term reductions and that can maximize reductions in the shorter term of the Kyoto Protocol.

As mentioned, one of the reasons that Canada is having difficulty meeting its targets is our national circumstances. Addressing anthropogenic climate change requires the coordinated action of all governments and stakeholders to ensure a sustainable and competitive economy. An overall coordinated strategy coupled with a robust management framework is required to meet the defined objectives.

MANAGING THE FEDERAL CLIMATE CHANGE PORTFOLIO

The management of the climate change portfolio is partly why Canada is in the position that it is in today. The Committee is discouraged to learn that this has been the main problem for the duration of efforts to reduce greenhouse gas emissions.

The 1998 audit of the Commissioner of the Environment and Sustainable Development (CESD) came to the following conclusion:

3.16 ... many of the key elements necessary to manage the implementation of Canada's response to climate change are missing or incomplete. For example, the roles of the federal, provincial and territorial governments and other players in responding to climate change are poorly defined or not defined at all. A key component, a national public awareness program, has not been delivered. There is no implementation plan, limited provision for regular, results-based monitoring of progress and no consolidated summary-level reporting to Parliament.

¹³ Mr. Mark Jaccard (Professor, School of Resource and Environmental Management, Simon Fraser University), *Evidence*, 7 April 2005, Meeting 31.

3.17 Although we recognize the challenges involved, we believe that the failure to meet Canada's climate change commitments has been primarily the result of poor planning and ineffective management. At this time, there is no clear indication that continuing to follow Canada's current approach will produce any better results in meeting its present and any future climate change commitments. In our opinion, the steps taken by Canada to implement the strategic direction of the NAPCC need to be substantially rethought.

The current Commissioner is initiating an audit on climate change activities within the government to be tabled in the fall of 2006. Despite there now being a plan, the Committee is, unfortunately, of the opinion that she will likely find that not much has changed.

Assessing Performance

As the Committee learned it is not possible at this time to get a comprehensive view of spending on climate change activities in the federal government, let alone an idea of how well programs are meeting their objectives. Tracing budgetary announcements to departmental program expenditures is next to impossible. Assessing their performance, particularly within the context of overall government objectives is equally difficult. Treasury Board Secretariat is working on a project that would help in this process, but it was not obvious how much effort is going into it and it is clearly just in its initial stages. The Committee finds this totally unacceptable and requests the Auditor General do a thorough review of all money spent or allocated on Kyoto-related programs and projects since 1997.

In the latest plan, Project Green — Moving Forward on Climate Change — A Plan for Honouring our Kyoto Commitment, the government acknowledged that, previous to the 2005 Budget, \$3.7 billion had been announced to address climate change since 1997. However only \$ 1.7 of this had been spent and only \$900 million of this has gone to activities that might reduce GHG emissions. Testimony before the Committee suggested that out of the \$900 million, \$250 million was allocated for projects such as the Green Municipal Funds.¹⁴ Because the money has been difficult to follow and accountability has been lacking the Committee recommends the Auditor General do a full accounting of all money spent on Kyoto-related programs since 1997.

The Committee acknowledges that programs take time to put in place and that the effects of programs may not be seen until further in the future. However, some efforts have been in place to reduce emissions since 1990 so that

¹⁴ Treasury Board Secretariat, Brief, 17 May 2005.

investments after 1997 were in addition to ongoing programs. Meanwhile GHG emissions have risen over 20% since 1990 and 7% since 1997.

As described above, fundamental changes are required to the economy in order to achieve meaningful GHG emission reductions. It would seem clear that efforts so far have not succeeded in attaining these changes and therefore any measurable reductions in GHG emissions.

As the Commissioner noted in 1998, “there is no clear indication that continuing to follow Canada's current approach will produce any better results in meeting its present and any future climate change commitments.” Something must change. In order to change, an accountability framework that includes regular evaluation and parliamentary reporting must be established.

The Committee was pleased to learn in Budget 2005 that:

A profile of program funding that could be used to extend the existing climate change programs has been established. However, prior to releasing these funds for 2006-07, Ministers will review all existing measures to determine the relative success of each in achieving cost-effective emission reductions over the short and long term.

However, such an exercise should have been ongoing and in place from the beginning of the Plan. According to individual departments, there is some form of program evaluation that occurs on an ongoing basis:

We have a compatibility agreement with Treasury Board, and we also have a series of evaluations within that. This morning, I met with my colleagues from the department to review our program evaluation for the coming year. It won't include all programs, but every time we receive Treasury Board approval to implement a program, a certain amount of money is allocated to the evaluation of that program and a date is set for that evaluation. We follow those rules.¹⁵

Perhaps the Treasury Board approval process works for individual programs. For horizontal programs, however, which are supposed to work in a cohesive manner toward a common goal (in this case GHG emission reductions), such an assessment is clearly not sufficient. There needs to be in place a mechanism for assessing the plan as it is implemented, not simply assessing each piece of the plan in isolation.

¹⁵ Mr. George Anderson (Deputy Minister, Department of Natural Resources), *Evidence*, 5 April 2005, Meeting 29.

The assessments must also include reporting progress in achieving program goals to Parliament on a regular basis. Such reporting should be done using a format which is standard for all departments and should:

Inform Parliament about the federal government's roles and responsibilities, including its national leadership role, its accountability for implementing [climate change policies], the results being achieved and, to the extent possible, the human and financial resources allocated to addressing climate change.¹⁶

Such a coordinated approach to government policies addressing climate change will require the establishment of a separate agency. This could be done under the auspices of the PCO or separate from it but it must report to it or directly to the Prime Minister.

Some witnesses thought that the establishment of such an agency might add more complexity to the current system and that it might delay action. Delay is certainly something that Canada can ill afford, but so is the establishment of policies with no accountability framework. The Committee believes that such an agency can be established without undue interference with the timely implementation of policy.

RECOMMENDATION 1:

That the government establish an agency to oversee the implementation of climate change policies on a government-wide basis. The agency should establish standard protocols for departmental reporting requirements and should table a consolidated progress report annually.

General Departmental Coordination and Accountability

Accountability is a relationship based on obligations to demonstrate, review, and take responsibility for performance, both the results achieved in light of agreed expectations and the means used.¹⁷

Departmental coordination is paramount in achieving results from horizontal programs such as sustainable development and climate change. Traditionally, departments essentially compete at the cabinet level for program approval. But, as was pointed out by Gene Nyburg of the National Round Table on the Environment

¹⁶ Commissioner of the Environment and Sustainable Development, 1998 report, chapter 3.

¹⁷ Auditor General Report, December 2002.

and the Economy, “when you look at something like sustainable development, if we're to take it seriously, it clearly requires integration.”¹⁸

***Strategic Environmental Assessment and Sustainable Development
Strategies: Key Requirements Being Ignored***

To integrate sustainable development, including achieving climate change goals, into government as a whole requires strong signals from the centre, ultimately from the Prime Minister’s office. Unfortunately such signals have been relatively weak and those that are given are often ignored.

Two key requirements of departments that would help coordinate the movement of the government in the direction of reducing greenhouse gas emissions are the requirement under the *Auditor General Act* for departments to table sustainable development strategies (SDS) and the cabinet directive on strategic environmental assessment (SEA).

The level of implementation of SDSs is a significant marker of how seriously departments take sustainable development issues including anthropogenic climate change. The CESD compiled a list of climate change goals that departments have listed in their SDSs and the list is substantial. Unfortunately, as the CESD has pointed out, SDSs are, with some exceptions, not taken seriously by the departments. Achieving SDS goals is not seen as an important part of a department’s overall performance and there are few, if any, consequences for missing or ignoring targets.

Strategic environmental assessment is about assessing policies for potential environmental impacts. The Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals was first issued 15 years ago. The 2004 audit by the CESD of the implementation of the Directive was clear in its conclusion:

The results of our audit, taken together, suggest that most departments have not made serious efforts to apply the directive. In fact strategic environmental assessment is far from meeting its promise in guiding policy, plan, and program development.

Guiding policy to achieve environmental goals is exactly what is needed to achieve greenhouse gas reductions. This is an agreed upon means by which to achieve common expectations (see the definition of accountability above).

¹⁸ Mr. Gene Nyberg (Acting Executive Director and CEO, National Round Table on the Environment and the Economy), *Evidence*, 9 December 2004, Meeting 13.

But, as the Committee learned, the Department of Finance, a department which must be “on board” if environmental goals are to be achieved, did not even have adequate mechanisms in place to perform SEAs until May 2003. This allowed bills such as C-48 (a proposal for a reduction in the corporate tax rate for the resources sector, similar to that provided previously to other industry sectors, to support growth in resources development) to evade an SEA. This is not to prejudge the conclusions of an SEA of Bill C-48, but to emphasize that a decade old cabinet directive was essentially being ignored.

In June 2003, the Committee recommended in its report, Sustainable Development and Environmental Assessment — Beyond Bill C-9, that the Directive be given a legislative basis. At the time the government responded that it was modifying the Cabinet directive to include a requirement for the public reporting of environmental effects. This was to assure stakeholders and the public that environmental factors have been appropriately considered when decisions are made. It also committed to consider the remaining Committee comments and recommendations, in conjunction with the findings of the Commissioner on strategic environmental assessment (reported in 2004) and the recommendations received by the Minister of the Environment from his regulatory advisory committee.

The Commissioner recommended in her 2004 report that PCO ensure the assignment of responsibilities and authorities for:

- central monitoring of compliance with the Cabinet directive on an ongoing basis,
- adequate quality control of the assessments undertaken, and
- continuous improvement of the assessment process.

The Government, in response, stated that departments would remain responsible for self-assessment but that the PCO had an important challenge role.

The Committee believes that self-monitoring is inadequate, as evidence from the past 15 years suggests. The Committee therefore reiterates its request that the Directive be given a legislative basis and that it include a requirement for PCO to report on the government-wide application of SEA.

RECOMMENDATION 2:

The Committee recommends that the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals be given a legislative basis and that the Privy Council Office be directed in the legislation to report annually to Parliament on the application of SEA across government.

In addition, SEAs must adequately take into account the government's climate change goals. The Directive does not specifically mention climate change as a factor to be taken into account in environmental assessments. However, as the Committee heard in testimony, though "the directive doesn't specifically mention climate change as a factor to be taken into account in environmental assessments, climate change is certainly an environmental issue that, if relevant in the context of the initiative being put forward, should be considered."¹⁹

SEAs of federal government policy must take into account climate change goals and this must be made clear to departments. The Canadian Environmental Assessment Agency, in co-operation with stakeholders and provinces, has produced a guide²⁰ to help incorporate climate change into environmental assessments. The Agency should also be tasked with creating regulations under SEA legislation outlining how to incorporate climate change goals into SEAs.

RECOMMENDATION 3:

That the Canadian Environmental Assessment Agency be given the task of producing regulations under the SEA legislation outlining how federal climate change goals are to be accounted for in assessments of policy, plan and program proposals.

Signals from the Centre

Because of the lack of accountability for centrally mandated requirements, it has been suggested that a central agency, perhaps the Privy Council Office, should be given a greater coordinating and enforcement role. The CESD also stated something similar in her 2004 report regarding sustainable development:

By taking a larger role in ensuring accountability for performance and results, central agencies such as the PCO and the Treasury Board Secretariat can stimulate departmental progress on environmental and sustainable development responsibilities.

Another weakness in the development and implementation of sustainable development throughout departments is the lack of a coherent overarching federal strategy within which they could have defined roles. Once again the CESD has identified this weakness for years:

¹⁹ Mr. Steve Burgess (Executive Director, Special Projects and Regional Liaison and Guidance, Canadian Environmental Assessment Agency), *Evidence*, 24 February 2005, Meeting 22.

²⁰ Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners (November 2003).

And so, at the risk of déjà vu among readers of previous years' reports, I strongly encourage the federal government to prepare both a compelling, explicit vision of a sustainable Canada and a government-wide strategy to realize the vision. Ministers, parliamentarians, public servants at all levels, and Canadians at large must be engaged in this work.

RECOMMENDATION 4:

That the Privy Council Office create a secretariat for sustainable development and that this secretariat be given the tasks of:

- **producing a federal sustainable development strategy with key priorities identified, and;**
- **reporting annually on progress toward the goals of departmental sustainable development strategies**

The Role of Bureaucrats

The responsibility for interdepartmental coordination of sustainable development policy lies with a deputy minister level committee.

A committee of deputy ministers — the Environment and Sustainable Development Coordinating Committee (ESDCC) — has overall responsibility for leadership and co-ordination of the government's efforts to promote sustainable development. This is a unique and powerful mandate, coming directly from the Clerk of the Privy Council.²¹

In 2004, the CESD concluded that the ESDCC (now disbanded and reconstituted as the Deputy Minister's Committee on Environment and Sustainability) was "falling short of its potential."

It is hoped that the newly formed DM committee will be more effective. However, without direction from the centre it is doubtful that it will be. The PCO must ensure that coordination of climate change policies is the number one priority of that committee.

Responsibility for missed horizontal targets is easily shrugged off when roles are not clearly defined. If the roles are not well defined they are easily ignored particularly if there are no consequences.

Accountability is not sufficiently anchored in consequences for responsible officials. I am especially troubled when we find a lack of consequences for

²¹ Commissioner of the Environment and Sustainable Development, 2004 Report, Commissioner's Perspective.

failing to implement direction that comes from the very centre of the federal government.²²

RECOMMENDATION 5:

That a significant portion of their performance bonus be used as an accountability mechanism for holding deputy and assistant deputy ministers responsible for sustainable development targets.

The absolute necessity for proper management of the climate change file can not be overstated. Without it, the new plan is bound to fail. This has been pointed out for years by the CESD.

There is, however, a pressing need for a climate change plan that industry can count on for long-term planning. There is sufficient information now to establish a fair and effective plan and this must be put in place expeditiously.

TOWARDS A FAIR AND EFFECTIVE PLAN TO REDUCE GREENHOUSE GAS EMISSIONS

Links with Energy Security

Anthropogenic climate change is a relatively long-term issue. In addition the term that is often used to describe it, global warming, is unlikely to gain public attention in a country that has severe winters. The abstract nature of the issue makes it difficult to engage most people, Canadians included.

Since the greenhouse gas of most concern is CO₂ which is closely linked to energy use, discussing mitigating anthropogenic climate change could be most effectively done by discussing emissions as they are tied to energy security.

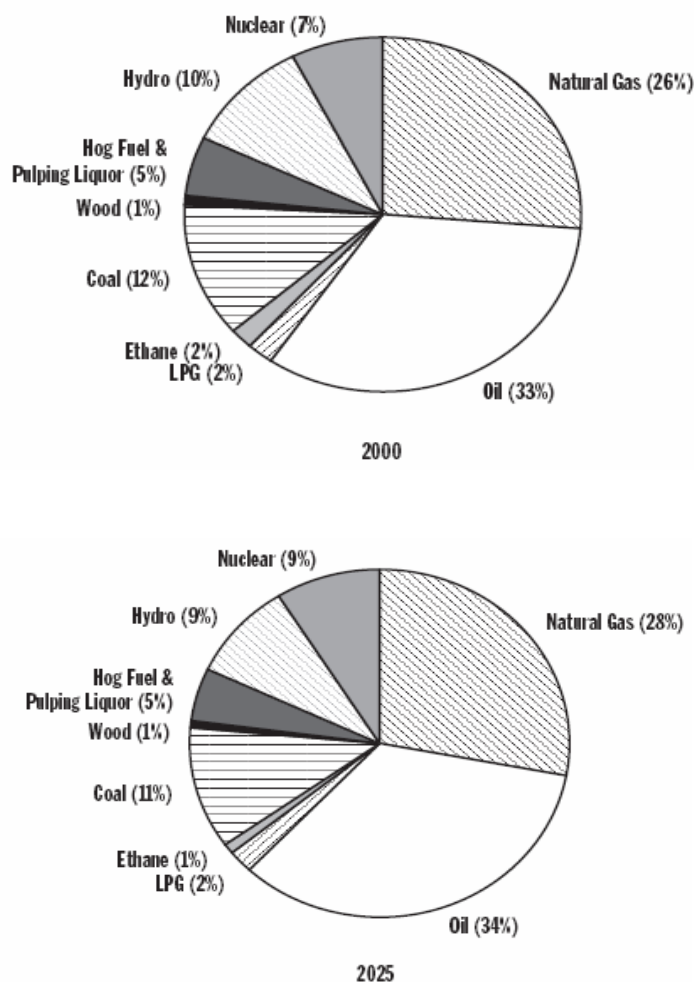
The amount of CO₂ released as a result of energy use is affected by the amount of energy used and the amount of carbon in the energy (see discussion above on fundamentals of reducing emissions). The amount of carbon in energy changes with the energy mix of the country. Future changes in energy mix will affect future CO₂ emissions.

²² Ibid.

Figure 3 represents the National Energy Board analysis of the energy mix in 2000 vs where it sees Canada's mix in 2025.²³ Even in its scenario of rapid technological advances (Techno Vert), it predicted that in 20 years, Canada's energy supply will be dominated by fossil fuels. This is because of what the NEB describes as "structural constraints on how energy is used in Canada."

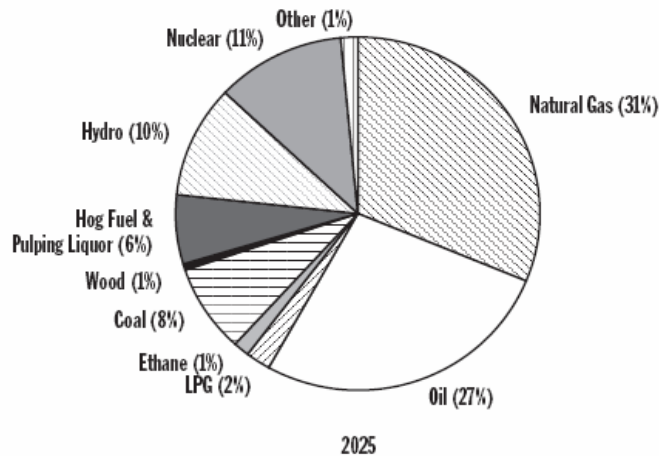
Decreasing the Carbon Intensity of Primary Energy

Figure 3: Primary Energy Share in 2000 Versus 2025 With and Without Accelerated Technological Change (Techno Vert)²⁴



²³ National Energy Board, "Canada's Energy Future, Scenarios for Supply and Demand to 2025," 2003, accessed at http://www.neb-one.gc.ca/energy/SupplyDemand/2003/SupplyDemand2003_e.pdf on 19 May 2005.

²⁴ The National Energy Board, "Canada's Energy Future, Scenarios for Supply and Demand to 2025".



Techno Vert

The NEB scenarios are also based on a variety of assumptions such as US\$22 per barrel of oil. This is not the case now and it is not easy to predict whether long-term oil prices will remain high. Such assumptions would have a very large impact on any scenario given the impact price will have on oil use and on exploration, particularly in the oil sands.

The lack of up-to-date forecasts concerns the Committee, as does access to up-to-date and user-friendly summary data of energy use in Canada. The last Canada's Energy Outlook, for instance was published in 1996 and updated in 1999. This leaves the government in the position of negotiating with industry using old scenarios. The automobile industry MOU is a case in point where the reference case is the 1999 Outlook. Apparently a new Outlook is being prepared for release this year, but this should be done more frequently.

RECOMMENDATION 6:

That Natural Resources Canada produce a comprehensive and fully accessible summary of energy use in Canada on an annual basis and that it update and make accessible its Energy Outlook at least every two years.

Notwithstanding the lack of updated outlooks, the Committee is well aware that moving away from fossil fuels is going to be a difficult task that will take time. The fundamental goal should be to move away from fossil fuels. However, even if decisions are made today to massively increase such low carbon fuels as nuclear, hydroelectricity and wind there is little doubt that in the medium term Canada's energy mix will be dominated by fossil fuels. This of course, must not preclude taking action to increasing the percentage of Canada's energy mix supplied by low carbon fuels beyond the NEB predictions.

The largest reductions to the amount of carbon in energy are likely to be obtained through the generation of electricity. While the NEB scenarios do not foresee any rapid change in this area, the Committee believes that there can be greater change if the right set of incentives to change is put into place.

There are many low carbon electricity sources available in Canada including hydroelectricity, nuclear, biomass and wind. Each one of these has room for growth and, if governments so choose, can be advanced.

Hydroelectricity

According to the Canadian Hydropower Association, Canada has 118,000 MW (one million watts) of new hydroelectric potential that could technically be developed.²⁵ Current capacity (2002) is 69,205 MW producing about 60% of all of Canada's electricity.

As is the case with any source of energy, technical capacity will only be exploited under the right circumstances. Many factors, in particular distance from market, will determine if it is financially possible to exploit the technical potential. In addition hydro development faces environmental and social problems associated with flooding of land.

Nuclear

Currently, nuclear power supplies 16% of Canada's electricity. In theory nuclear power could supply all of Canada's electricity needs. It does, of course, face long-term storage issues, the real and perceived health risk of radiation, nuclear proliferation and a record of unreliability.

Despite these problems, there is no doubt that without nuclear power Canada's GHG emissions would be considerably higher.²⁶ When nuclear power is phased out, an equivalent amount of virtually carbon-free electricity will have to be found.

²⁵ Mr. Pierre Fortin (Executive Director, Canadian Hydropower Association), *Evidence*, 23 March 2005, Meeting 26.

²⁶ Mr. Duncan Hawthorne (President, Canadian Nuclear Association), *Evidence*, 23 March 2005, Meeting 26.

Biomass

Energy stored in biomass can be used to support the economy. This has been done for millennia. It is only carbon neutral, however, if the carbon stocks (forests and waste plant material for instance) are replaced. In addition, if fossil fuel energy is required for the production of the biomass fuel (for ethanol as an example), it is important to take into account the full life cycle of producing the fuel in determining the extent to which the fuel may reduce GHG emissions.

As the Committee learned, Canada has an advantage over other countries when it comes to the capacity to use biomass as an energy source (and as a sink, a subject to be discussed later).

Canada is unique in the world in having the largest biosphere relative to our population. We have 7% of the world's land area, 10% of the world's forests, but 0.5% of the world's population. Every year our biological systems take up and release about 10 to 20 times the amount of CO₂ that we put into the atmosphere through fossil fuel combustion. This vast biosphere, especially your agricultural and forest lands, offers an opportunity for Canada to meet up to one-third of its Kyoto commitment.²⁷

The dead trees caused by the mountain pine beetle alone could apparently provide 900 MW of power for 20 years. There may be issues with getting this energy to market, but it does convey the type of opportunities that Canada may be able to exploit. Sweden also has a distinct biological advantage and biofuels (mostly wood chips) make up around 20% of the country's fuel mix.²⁸

Wind

The potential for wind power in Canada is large and remains mostly untapped. Canada has clearly fallen behind other nations in developing this source of electricity.

At this point in time in Canada, we're still far behind the global leaders with respect to wind energy. We have 444 megawatts of installed capacity. The world leader is Germany, with 16,500 megawatts. We had a record year in Canada last year. We installed 122 megawatts of new wind energy capacity. This year we'll do better than that. We expect to have a minimum of 300 megawatts installed this year. That still leaves us behind other

²⁷ Dr. David Layzell (CEO and Research Director, BIOCAP Canada Foundation), *Evidence*, 24 March 2005, Meeting 27.

²⁸ Mr. Tom Hedlund, Swedish Environmental Protection Agency, submission to the Committee.

countries. Again, I'll use the German example. In Germany, 34 megawatts a week were installed last year in terms of new wind energy development.²⁹

Demand for wind energy is growing in Canada. Provincial governments have now established either renewable portfolio standards or are developing requests for proposals for wind energy that would see over 5,000 megawatts of wind energy in place by 2012. The goal of the Canadian Wind Energy Association is to have 10,000 MW of capacity installed by 2010 providing 5% of Canada's electricity. With 2,000 MW of installations now under construction or under purchasing agreements, this target is not unrealistic.

Wind power, however, is not without its growing pains. Local public resistance to wind farms is increasing and environmental assessments of wind farms are being performed for the first time.

In addition, analyses from other countries with far more experience in wind, such as Germany and the United Kingdom, suggest that the real cost of wind is currently very expensive. According to a German report³⁰ it cost between €41 and €77 (C\$65.6 and C\$123³¹) to reduce CO₂ emissions by one tonne. The National Audit Office of the United Kingdom also came to the conclusion that their Renewables Obligation, was generally the most expensive manner to reduce greenhouse gas emissions at between £70 and £140 (C\$162 and C\$324³²) per tonne of CO₂, though this did not include the benefits of reducing external costs.³³ The high price reflected the high cost of generating renewable electricity, which in the U.K. is dominated by wind energy.

Solar

Solar energy is comprised of both solar thermal energy and solar electricity. Solar electricity, from photovoltaic cells for instance, is still very expensive. Solar thermal energy on the other hand has a great deal of potential to help meet Canada's GHG emissions targets.

²⁹ Dr. Robert Hornung (President, Canadian Wind Energy Association), *Evidence*, 22 March 2005, Meeting 25.

³⁰ Luke Harding et al., "Report doubts future of wind power," *Society Guardian*, 26 February 2005, <http://society.guardian.co.uk/environment/story/0,14124,1425868,00.html>, accessed 19 May 2005

³¹ Based on exchange rate of 1.599, OANDA.com currency site, 19 May 2005
<http://www.oanda.com/convert/classic> .

³² Based on exchange rate of 2.32, OANDA.com currency site, 19 May 2005
<http://www.oanda.com/convert/classic> .

³³ National Audit Office, "Department of Trade and Industry, Renewable Energy," February 2005, http://www.nao.org.uk/publications/nao_reports/04-05/0405210.pdf 19 May 2005.

In 2003 Canada had 280 MW of installed capacity of solar thermal energy, comparable to the installed capacity of wind energy. World wide, according to the Canadian Solar Industries Association, potential capacity is 70 GW (a GW is 1000 MW), over 3.5 times that of wind.

Such solar thermal systems can be used for heating water, heat ventilation and passive heating of buildings. In all cases, according to the Canadian Solar Industries Association, the cost of producing a kWh of heat averages at or less than 5¢, one of the cheapest options available.

Solar heating is also valuable because it also saves high-grade energy such as electricity and natural gas for other uses.

Geothermal

In Canada, and especially in the Province of British Columbia, high- to medium-temperature geothermal resources are abundant and can contribute significantly to our energy security and recreational use. Geothermal energy can take part in the energy market both in the form of [electric power generation](#) or [direct use](#) of heat. Low-temperature resources in a variety of different forms are generally available across the country, but their attractiveness from an economic point of view is dependent upon the scale of the project (e.g., building load requirements for heating and cooling). Similarly, the development of low temperature geothermal energy systems may be limited according to such factors as the depth of seasonal freezing and the suitability of aquifers for groundwater extraction.³⁴

Energy Security in Canada

Canada has abundant energy sources. We have enough coal for 234 years at current consumption rates (about 60 million tonnes per year).³⁵ Untapped technical hydroelectricity is double today's capacity. Saskatchewan's uranium reserves contain the energy equivalent of 19 billion barrels of oil or 4 billion tonnes of coal.³⁶ The oil sands contain 174 billion barrels of oil recoverable with current technology.³⁷ Wind energy could produce up to 50,000 MW of electricity. The Clean

³⁴ "What is Geothermal Energy and How Can It Be Used?" Canadian Geothermal Energy Association, <http://www.geothermal.ca/whatis.html#canresources>, accessed 14 June 2005

³⁵ Mr. Allan Wright (Executive Director, Coal Association of Canada), *Evidence*, 8 March 2005, Meeting 24.

³⁶ Canadian Nuclear Association, "Nuclear Energy, Clean Electricity is Important to All of Us," 2004 http://www.cna.ca/english/Nuclear_Facts/Clean_Electricity_August_8x11.pdf .

³⁷ Government of Alberta, "Alberta's Oil Sands," 2003 <http://www.energy.gov.ab.ca/docs/oilsands/pdfs/osgenbrf.pdf> .

Air Renewable Energy Coalition, “has concluded that there is enough potential between economic renewable sources to equal the thermal and nuclear capacity installed in Canada, electrical energy capacity, today.”³⁸

Energy security, at least from an overall supply picture, should not be an issue for Canada. Energy security is more than just raw supply, however. Many factors will affect whether and how a source becomes exploited. Nuclear energy faces many problems that affect the public will to allow new installed capacity. Climate change itself can affect the supply of water to hydroelectricity generation and wind for wind energy. Fossil fuels are abundant, but as we move into a more carbon-constrained world, exploiting this resource will become more problematic.

In order to secure our energy future, Canada needs to explore all its energy options.

Even with the abundance of energy in Canada, all jurisdictions are struggling with energy questions. Close to the top of these, along with security and prices, are the environmental issues surrounding energy use. From oil leaks at sea to sour-gas to smog related emissions to preserving landscape, all energy sources have some environmental impact. In addition, access to the grid was identified as a significant problem.

The question is what mix of energy would be best to achieve the many goals demanded by society. In particular, what supply of energy would be sufficient to supply Canada’s energy needs while minimizing environmental impact and satisfying the need to move forward into a carbon-constrained economy.

Though energy supply is almost exclusively under the jurisdiction of the provinces, the Committee heard from many witnesses that Canada needs an overall energy strategy, including a strategy for renewable energy.

So we do need a national renewable energy strategy, rather than coming up with bits and pieces as we have been doing, and we need to bring it together as a country rather than leaving it up to each province to join.³⁹

There are two basic points that our group agrees on. One is that we do need an overarching energy framework in order to come up with a realistic greenhouse gas emission strategy. It has to be anchored in our energy realities. We also need to employ all available options. We can't afford to set any option aside.⁴⁰

³⁸ Mr. John Keating (CEO, Canadian Hydro Developers, Inc.), *Evidence*, 22 March 2005, Meeting 25.

³⁹ *Ibid.*

⁴⁰ Mr. Michael Cleland (President and Chief Executive Officer of Canadian Gas Association; Chair, Energy Dialogue Group), *Evidence*, 15 February 2005, Meeting 19.

So there is a need for a broader package, and there is a need for enhanced cooperation. Right now, I'm sure it's true for other renewable energy sectors, but for the wind energy sector, you're fighting the same battles, jurisdiction by jurisdiction. Every single jurisdiction is starting with a blank sheet of paper and trying to reinvent the wheel. We think the federal government could play a very useful role in facilitating dialogue and discussion among governments to help overcome that barrier.⁴¹

Canada must develop a national long-term climate change strategy. Such a strategy must include effective energy conservation and energy efficiency programs. It must also take into account economic, social and environmental aspects, look at energy needs and available potential at national and regional levels, and build on the potential synergies of different renewable energy sources.⁴²

The Committee is aware that the government has made a comprehensive reference to the National Round Table on the Environment and the Economy (NRTEE) “to provide advice and recommendations on the development of a long-term energy and climate change strategy for Canada” including advice on how to advance issues at COP 11.

The NRTEE aims to provide the following advice on energy by the spring of 2006:

- A strategy for integrating climate change into Canada's foreign policy, aid, and trade objectives.
- A strategy will be produced, with recommendations for promoting the export of Canadian environmental technologies, using the credit and emissions trading mechanisms in the Kyoto Protocol.
- A set of recommendations on how to promote consistency between Canadian carbon markets and existing or emerging international markets, with a view to ensuring Canadian access to those markets.
- Advice on a long-term strategy on energy and climate change

The Committee looks forward to reading the advice of the NRTEE. It does, however, have some concerns that, given its budget of \$4.6 million, this organization may not have the capacity to deliver effective advice on such a wide range of topics, topics that are essential to the future of Canada.

⁴¹ Dr. Robert Hornung (President, Canadian Wind Energy Association), *Evidence*, 22 March 2005, Meeting 25.

⁴² Mr. Pierre Fortin (Executive Director, Canadian Hydropower Association), *Evidence*, 23 March 2005, Meeting 26.

For comparison sake, in Budget 2005, the government allotted \$200 million to support the development of a sustainable energy science and technology strategy. This strategy is related to innovation, not to long-term energy outlooks.

The Committee is also concerned that provincial interests are not specifically mentioned in the referral. Energy is almost exclusively under provincial jurisdiction and any strategy must not dictate to the provinces. The strategy should be seen as more of a vision document acknowledging that an explicit federal role is as a facilitator of interprovincial decision making. Undoubtedly better coordination in energy policy would be of benefit to Canada, and the federal government should help to achieve this.

RECOMMENDATION 7:

That the government of Canada's long-term energy strategy acknowledge that a federal role in energy be one of facilitating better coordination of energy policies across Canada in partnership with the provinces and territories. The Committee recommends that the federal government develop a "Green" paper on energy.

While the facilitator role is an important one, the federal government can also implement various policies to help Canada move forward into a carbon-constrained world.

Ecological Fiscal Reform

Energy supply is crucial to Canadians quality of life. This has been recognized by the Canadian government for a long time and this has led to the support of many energy sources in the early stages of development. From the oil sands, to offshore oil development to nuclear energy, the government has supported efforts to expand and diversify Canada's energy supply for decades. To help Canada move into a carbon-constrained economy, Canada must now shift away from support for established energy sources to support low carbon energy sources.

One important concept that can aid in this transition is that of ecological fiscal reform (EFR). EFR uses policy tools such as taxation (tax exemptions, credits, and rebates), tradeable emission permits, direct spending, and program expenditure to "green" the way people buy, sell, and invest in the economy. An example is the federal government's decision to exempt from the federal excise tax alternative fuels such as ethanol produced from renewable sources.

EFR can also include ecological tax reform — adjusting taxes to make them sensitive to environmental impacts or imposing new taxes as an incentive to reduce environmental impacts. The revenue from the new tax could be recycled to fund, for example, reductions in existing taxes in manner that would make the over tax changes revenue neutral.⁴³

The Current Fiscal Situation Regarding Energy

The Commissioner of the Environment and Sustainable Development studied government support for energy investments in 2000, concluding:

3.83 We found that governments have intervened in energy markets in the past through direct spending, regulations and tax incentives. Sometimes this was to encourage investments in certain forms of energy and at other times it was to achieve specific policy objectives. Most of the federal spending and tax incentives have been for non-renewable resources, the predominant source of energy in Canada.

3.84 Overall, we found that with a few exceptions, federal government support today for energy investments, including support through the tax system, does not particularly favour the non-renewable sector over the renewable sector. The exceptions are investments in oil sands and coal mines, which receive a significant tax concession; nuclear technology investments, which receive substantial direct support; investments in alternative fuels, which receive more favourable excise tax treatment; and provincially owned energy companies, which pay no federal income tax. We also found that the income tax system does not give any preferential treatment to certain energy efficiency investments.

This situation may well have changed over the last five years, particularly following Budget 2005. Such analysis should be ongoing.

It is not simply a matter of giving support to low carbon sources that will help lead to emissions reductions. It must also be assured that fiscal measures in support of other industries that emit a lot of GHGs are reduced. One analysis, for example, has found that the government had expenditures on the oil and gas industry of over C \$8 billion dollars between 1996 and 2002.⁴⁴

In Budget 2005, the government announced \$920 million over 15 years (\$200 million over the first five) for the Wind Power Production Incentive and \$886 million over 15 years (\$97 million over the first five) for the Renewable Power Production Incentive.

⁴³ Commissioner of the Environment and Sustainable Development, 2004 Report, Chapter 3.

⁴⁴ Pembina Institute, "Government Spending on Canada's Oil and Gas Industry," 31 January 2005, <http://www.pembina.org/pdf/publications/GovtSpendingOnOilAndGasFullReport.pdf> accessed 19 May 2005.

While Pembina numbers may or may not be correct, the Committee is very concerned that the Department of Finance does not seem to track such expenditures on a regular basis and is apparently in no position to support or refute the numbers. If the government is to make informed decisions regarding the level of support it wishes to give different sectors of the economy that may have very different impacts on a stated central goal of the government, such as GHG emission reductions, it is incumbent on it to collect and analyze the appropriate data.

RECOMMENDATION 8:

That the Department of Finance analyze both direct and indirect federal expenditures on the energy sector and report to Parliament on an annual basis.

Support for the oil and gas sector can be necessary because oil and gas exploration can be risky, particularly if the price of oil is low. The price of oil now is around US\$60 a barrel. The risk is clearly lower, though given the volatility of the market this may not hold. In return, the oil and gas sector pay large amounts of money to governments through taxes and royalties. The extent to which these revenues are dependent on the investment of government expenditures is unknown, though it is certainly not a direct dependence.

Whether the Pembina numbers are strictly accurate is almost beside the point. There is clearly a fiscal regime that, because of the size of the oil and gas industry, results in very large expenditures. There may be a level playing field in the tax system (with important exceptions as outlined by the CESD), but the absolute amount of expenditures to the oil and gas industry are far greater than to the emerging technologies which need much more support. The fiscal playing field can therefore be tilted toward emerging technologies without resulting in major changes in expenditures or revenues. As the Committee heard,

In regard to tilting or level, the government needs to decide what it wants, and once it's decided what it wants, it needs to establish a policy to get it. So if you want Kyoto and you want sustainability, then you have to tilt the playing field. If you don't tilt the playing field, you have to question the sincerity of the goal. So tilt, tilt, tilt — or you won't get sustainability; you won't get Kyoto.⁴⁵

Unfortunately the Department of Finance has no idea about how to implement ecological fiscal reform to tilt the playing field in a comprehensive manner to support overarching environmental goals. The Department analyzes policy measures on a one-off basis as departments develop policy. This must change.

⁴⁵ Mr. Jeff Passmore (Executive Vice-President, Iogen Corporation), *Evidence*, 22 March 2005, Meeting 25.

This conclusion is shared by the Commissioner of the Environment and Sustainable Development, who wrote in her 2004 annual report that:

Finance Canada needs to do more work to meet its tax commitments, including its primary goal of identifying specific areas where the tax system may be acting as an impediment to the attainment of sustainable development. A systematic review, based on risk, of key opportunities for using the tax system to better integrate the economy and the environment is an important step toward using the tax system as a tool for sustainable development.

Calls for Ecological Fiscal Reform

Recommendations for the application of EFR have been made by numerous groups.

The National Round Table on the Economy and the Environment has been giving specific advice on EFR and now consider it so fundamental that it makes EFR part of every analysis it performs.

The External Advisory Committee on Smart Regulation (EACSR) made the following recommendation in its report released last fall:

Recommendation 25: The government should examine expanding the appropriate use of economic instruments in Canada. Efforts could include the following:

- examining the opportunities and challenges associated with EFR (ecological fiscal reform) in Canada and addressing whether and, if so, how EFR could be implemented to support environmental policy goals.

In addition, the Organisation for Economic Co-operation and Development (OECD) released a report this fall entitled *OECD Environmental Performance Review: Canada*. The report recommended among other things that Canada should:

- continue to phase out *environmentally harmful subsidies* at both federal and provincial levels, including subsidies in the form of tax incentives for the resource-based economic sectors;
- review existing *environmentally related taxes* (e.g. taxes on transport and on energy products) with a view to restructuring them in a more environmentally effective way, within a neutral fiscal context, at both federal and provincial levels.

Examples of revenue neutral EFR abound. The United Kingdom's climate change levy is a tax on the use of energy in industry, commerce and the public sector, with offsetting cuts in employers' National Insurance Contributions (NICs) and additional support for energy efficiency schemes and renewable sources of energy. It entails no increase in the tax burden on industry as a whole and no net gain for the public finances. The reforms are intended to promote energy efficiency, encourage employment opportunities and stimulate investment in new technologies.⁴⁶ The levy is a form of ecological tax reform, which is a subset of EFR.

The Committee now adds its voice to the growing calls for the government to do a thorough analysis followed by application of EFR. In the meantime efforts should be made to engage stakeholders towards determining which elements of current fiscal support can be eliminated for sectors which are large emitters of GHGs.

RECOMMENDATION 9:

That ecological fiscal reform be applied to the energy sector in order to give all emerging low impact renewable sources of energy greater support and to decrease GHG emissions.

RECOMMENDATION 10:

That the government make clear that it will reduce unnecessary fiscal support for well-established industries associated with large GHG emissions and that it engage these stakeholders in identifying the most appropriate expenditures for elimination.

Biofuels and Sinks

Canada has a great opportunity to take advantage of its geography and use biofuels as an important source of energy. Already the pulp and paper industry in particular derives a good deal of its energy from such fuels.

Because of the small size of Canada's population relative to the amount of carbon that flows in and out of its natural systems, learning to manipulate these flows to our advantage could help toward reducing our overall GHG emissions. This could be in the form of increasing the amount of carbon stored in natural systems (sinks) or by siphoning off some of that carbon to use as fuel, such as is done in Sweden.

⁴⁶ The United Kingdom Department for Environment, Food and Rural Affairs, "Climate Change Agreements, The Climate Change Levy," <http://www.defra.gov.uk/environment/ccl/intro.htm> accessed 15 June 2005.

Our understanding of Canada's carbon cycle is vital if this is to function and be accepted by the international community, particularly with respect to sinks. Because of Canada's distinct situation in this regard it is paramount that the science surrounding our use of this natural advantage be rock solid.

The credibility of the science is absolutely critical to what we're trying to do here — the credibility of the science in terms of government in reporting internationally, in terms of building the verification techniques for Canada, in terms of our international negotiations with nations like the EU, skeptical of some of the ways in which we can capture carbon through natural systems.⁴⁷

As a result of natural phenomena such as the pine beetle and emerald ash borer infestations and forest fires, Canada has reduced the level to which it may rely, if at all, on sinks to meet its Kyoto commitment.⁴⁸ This should not preclude Canada from using agricultural and forestry carbon sinks to help meet its Kyoto target. Nevertheless it must back up any use of sinks with solid science.

RECOMMENDATION 11:

That the government increase its support for science aimed at understanding Canada's carbon cycle.

Carbon Sequestration

The only longer term energy outlook for Canada is that of the National Energy Board. It has predicted that in 25 years time fossil fuels will still make up the majority of Canada's energy supply. The Committee believes that the work of the NEB is both relatively conservative and out of date. Interpreting such scenarios should be done with care in case they simply become self-fulfilling prophecies. In fact moving away from these scenarios toward low carbon sources should be the priority of efforts to reduce GHG emissions.

Working on the assumption that removing fossil fuels from the energy mix will take a relatively long time, it is essential that something be done with the carbon in the fuel. Handling the carbon in fossil fuels has two aspects. Methods must be created to trap the carbon (capture) and to store it in a long-term manner so that it does not enter the atmosphere (sequestration).

⁴⁷ Dr. Bob Page (Chair, Board of Directors (Vice-President, Sustainable Development, TransAlta Corporation), BIOCAP Canada Foundation), *Evidence*, 24 March 2005, Meeting 27.

⁴⁸ The Government of Canada, Project Green, Moving Forward on Climate Change, A Plan for Honouring our Kyoto Commitment, 2005.

There are many efforts under way in both carbon capture and sequestration. In fact Canada has been involved in one of the most successful experiments to date regarding sequestration: the Weyburn project in southwest Saskatchewan.

The first phase of the Weyburn Monitoring and Storage project ended upon the release of a summary report in September 2004.

The project achieved very encouraging results. A suite of leading-edge monitoring and verification technologies were developed and successfully applied.

Canada has achieved a world-leading position in the field of monitoring and verification. The project has fostered the development of Canadian expertise.

The technologies may be applicable to many sites around the world.

Effective integration of all elements of the project within and between technical disciplines and EnCana's high level of cooperation were critical to the successful outcome of the project.⁴⁹

If carbon sequestration can be established as a scientifically proven and an economically viable means to reduce greenhouse gas emissions, it could be one tool that could help in the mid-term, recognizing the ultimate goal of moving toward a carbon-constrained society. There are a number of questions, however, that need to be answered before this can come to pass.

Research issues remain. These include: reducing the cost of capturing CO₂; demonstrating the safety and long-term security of geological storage; identifying the regulatory factors that should be considered for the operation, abandonment, and long-term monitoring of geological storage sites; determining capabilities and requirements for monitoring to manage long-term liability for industry and the public sector; and finally, ensuring that the public understands this technology and its implications as a step towards comfortable public acceptance.⁵⁰

As carbon sequestration is currently being used under various circumstances internationally, including in Canada, it is the Committee's belief that carbon sequestration in a world where fossil fuels remain an important part of the energy mix could hold great potential to reduce GHG emissions.

RECOMMENDATION 12:

That the government, in partnership with provincial and territorial partners and with stakeholders, carry out the research

⁴⁹ Mr. Graham Campbell (Director General, Office of Energy Research and Development, Department of Natural Resources), *Evidence*, 21 April 2005, Meeting 35.

⁵⁰ *Ibid.*

necessary to determine and take advantage of the capacity for carbon sequestration as an effective means to reduce greenhouse gas emissions.

Policy Options: Mandatory and Voluntary

To date the government has relied on voluntary approaches in an effort to decrease greenhouse gas emissions. While the performance of individual policies so far has been difficult to measure (see measuring performance section above) it is clear that GHG emissions have continued to rise. Strictly volunteer approaches do not work. Professor Jaccard stated:

What if you subsidize some of the actions that people take to reduce emissions? Because those investments were happening all the time anyway, guess what happens? The people who would have made those investments in any case are mostly the ones who capture the subsidies.

We're not able, anywhere in the world, to run a program where you can separate out who would have and who would not have made a particular energy-saving investment.

In a growing, innovative market economy, greenhouse gas emissions must face restrictions and penalties if they are ever to decline. It is that simple.⁵¹

There is a wide range of policy options ranging from strict “command and control” regulation to entirely voluntary. So far the government has relied too heavily on the voluntary approach. Voluntary approaches have some advantages such as gaining buy-in from industry into learning processes (such as the Pilot Emissions Removals, Reductions and Learnings program).

Emissions have continued to grow, however, and it is clear that more mandatory restrictions must be put in place. Even many successful programs that seem voluntary are only successful because they have been backed up with legislation.

The automobile industry is an example. As the Committee was told numerous times, the automobile industry in Canada has met many targets through MOUs with the Canadian government.

We see MOUs, as we call them, as a very positive step in the regulatory development environment in an area where greater attention should be paid by governments to solve future challenges and avoid differences that we are faced with today. We have a track record on many fronts of

⁵¹ Ibid.

achieving environmental and safety policy objectives through more than 10 voluntary agreements.⁵²

This is indeed the case, but because the automobile market in North America is so integrated, the success of the MOUs in Canada was often the result of regulatory measures in the United States.

Those 14 agreements are actually enforced in the United States under the CAFE law, in which the EPA fines those companies \$5,000 per car if they don't make the targets. That's why we have vehicles now that are 200% more efficient than we had in the 1970s — because of one law passed in the United States in the late 1970s.⁵³

So if volunteer actions alone do not work, and observation and economic theory tell us that they do not, what form of policy is required? Evidence suggests that the answer lies in harnessing the evident ingenuity of industry by placing a cap on emissions but allowing industry to decide how to achieve reductions through a trading system.

Cap and Trade Systems

Such “cap and trade” systems have worked very well in the past, such as in the acid rain reduction program in the United States. (The comparison with sulphur dioxide reductions, however, may not be all that clear given that sulphur was not intrinsic to the production of product in the way that CO₂ release is an inevitable result of burning fossil fuels.)

In a cap and trade emissions trading scheme, a regulatory body sets an overall target for reductions that acts as the “cap”. Individual emitters are then allocated permits (there are different methods for allocation), the total number of which add up to the cap. The method of allocation of permits can also be used to establish greater fairness within the scheme including taking into account regional differences.⁵⁴

Some emitters will be able to reduce their emissions at a lower cost than others. Those for whom the cost is high may decide that it is cheaper for them to buy credits from emitters who can more cheaply reduce emissions than to reduce emissions. The selling emitter would sell the permit for a greater price than it costs them to reduce emissions. Both companies therefore lower their costs of meeting a

⁵² Mr. Mark Nantais (President, Canadian Vehicle Manufacturers' Association), *Evidence*, 3 May 2005, Meeting 36.

⁵³ Mr. John Bennett (Director, Energy and Atmosphere Campaign, Sierra Club of Canada (B.C. Chapter)), 17 February 2005, Meeting 20.

⁵⁴ Tradable Permits Working Group, *Using Tradable Permits to Help Achieve Domestic Greenhouse Gas Objectives*, 2000.

regulated target. Thus, while a government authority sets the overall target, market forces determine the distribution of reductions among the emitters.⁵⁵ The overall emissions targets are therefore achieved at lower costs than would be realized if each emitter were regulated. The savings are experienced by both the regulator and those being regulated because companies know their costs while the regulator does not.

The “cap and trade” system works best in a competitive market, which in turn depends on the design of the scheme. In particular, competitiveness requires a large number of participants that are willing to take part. Participation is greatest when the trade rules are clear, transaction costs are low, information on price and other aspects of the scheme are readily available and no single buyer or seller can influence the market in an anti-competitive way.⁵⁶

Initially, in a “cap and trade” system, the cap is set relatively high, allowing more emissions. At first the price is low and the “low hanging fruit” are picked. In many cases this could be through efficiency improvements, above business as usual. With time however the cap is reduced and more difficult reductions are achieved.

If communicated clearly to industry at the outset, a low initial ceiling permit price prevents premature retirement of existing capital stocks, but the expectation of higher future permit prices spurs the long-term development and diffusion of low-GHG technologies on pace with the natural turnover of capital stock.⁵⁷

Whether such a system could lead to sufficient reductions domestically to meet the Kyoto deadline is doubtful. However, if the government is serious about reducing emissions it should put in place a cap and trade system that casts as wide an economic net as possible. And it has to be done with care:

The point I want to get across is that what economists working in this area are very focused on is how we can provide the right long-term signals to consumers and to innovators without wrecking the economy in the short run. Obviously, you don't put on a large carbon tax tomorrow; you don't put on a highly restrictive cap-and-trade system tomorrow; you don't regulate energy efficiency in a dramatic way tomorrow.⁵⁸

⁵⁵ Tradable Permits Working Group, “Using Tradable Permits to Help Achieve Domestic Greenhouse Gas Objectives: Introduction to Concepts, Options and Issues”, December 1998.

⁵⁶ Ibid.

⁵⁷ Mr. Mark Jaccard, et al., “The Morning After, Optimal Greenhouse Gas Policies for Canada’s Kyoto Obligations and Beyond,” C.D. Howe Institute, Commentary, March 2004.

⁵⁸ Mr. Mark Jaccard (Professor, School of Resource and Environmental Management, Simon Fraser University), *Evidence*, 7 April 2005, Meeting 31.

The government has been studying cap and trade mechanisms for the large final emitters (LFE) sector for some time while other jurisdictions have moved ahead. Many decisions regarding new capital investments need to be made now, or in the near future, but they should be made with the clear knowledge that a cap and trade system, with a gradually reducing cap, will be in place. Since the Canadian domestic trading scheme will not be large, linkages to other systems should be in place but it is impossible to negotiate such international agreements without knowing what our own ground rules will be.

RECOMMENDATION 13:

The Committee recommends that the government put in place as soon as possible a cap and trade mechanism covering as many sectors of the economy as practicable. In so doing it should make it clear that the cap will be reduced over time, on a sectoral basis.

RECOMMENDATION 14:

In addition the Committee recommends that during this process, and subsequent to it, the government expedite international negotiations to ensure international compatibility of credits.

Moving Toward Greater Efficiency

Discussions of reducing GHG emissions have to include methods for decreasing the energy intensity of the economy. Changes in energy intensity come about through structural changes to the economy and through more efficient use of energy within the current structure.

Two important points must be stressed regarding energy intensity and GHG emissions. The first is that decreasing energy intensity will not lead to long-term decreases in greenhouse gas build up in the atmosphere. Decreasing rates of emissions will slow the build up of GHGs but will not prevent the eventual build-up because the residency time for CO₂ in the atmosphere is about 100 years.

The second point to be made, however, is that reducing intensity (increasing efficiency) can slow emissions, and in fact, on the whole, is the most cost-effective manner by which to do so. The Committee recognizes that this is not the case for all industries, some of which have increased efficiency to the point where no further cost-effective gains are easily achieved. Nevertheless, reducing intensity can be a cost-effective way to “buy some time” while longer term changes to the carbon intensity of primary energy take effect. In essence, many of these gains are what are termed “low-hanging fruit.”

In the oil and gas sector alone it was pointed out that there remain 29 Mt per year of profitable emission reductions, mostly through reductions in fugitive emissions.⁵⁹ The cost of the Energy Efficiency Commitment in the United Kingdom was negative (i.e. created a positive balance) £16 per tonne of CO₂. Despite this, efficiency increases may be low on the priority list of capital expenditures for companies. With the right incentives, the government can help make investments in efficiency more of a priority.

The Committee heard from many witnesses about the efforts they have made to decrease their emissions intensity. (Emissions intensity is the quantity of greenhouse gases given off per unit of economic activity. It is the result of multiplying energy intensity of economic activity and the carbon intensity of the energy.)

I think I'd like to note also, and I've listed this in my brief, that there are certain industry sectors that are very proud of their accomplishments in the past number of years, some of which started work well before the Kyoto Protocol was ever approved. I think if you look at aluminum, which has kept their GHG emissions stable while increasing their production by 73%, it's quite remarkable. In pulp and paper, the industry has cut oil consumption by half in the last 15 years. When we look at oil and gas, we see natural gas flaring has been reduced by 62% since 1996.⁶⁰

The Committee is impressed with many of the strides being made by industry in Canada. It shows that it can be done. Some, such as the fertilizer industry, have increased efficiency to the point where CO₂ emissions are almost strictly the result of chemical reactions of processes.

As was discussed in the section on the Kaya Identity, however, many such decreases in emissions intensity have occurred since 1980. The pressure to become more efficient is always present in industry as energy is a cost to be reduced. As Prof. Marc Jaccard put it:

There are innovations going on at all times that are improving or reducing energy use per unit value produced. So at any time we can draw up lists of all these innovations. We could have done it in 1920, 1940, and 1980. We just happened to decide we'd do it in 1990.⁶¹

Effectively what this means is that some level of increased efficiency is "business as usual." Increasing efficiency toward "buying time" must be above and

⁵⁹ Petroleum Technology Alliance of Canada, "A Compelling Business Case for Oil and Gas Facility Energy and Emission Auditing" 29 September 2003.

⁶⁰ Mrs. Nancy Hughes Anthony (President and Chief Executive Officer, Canadian Chamber of Commerce, *Evidence*, 15 February 2005, Meeting 19.

⁶¹ Mr. Mark Jaccard (Professor, School of Resource and Environmental Management, Simon Fraser University), *Evidence*, 7 April 2005, Meeting 31.

beyond “business as usual.” Up to now, any decrease in emissions intensity has been overridden by even greater increases in economic output, leading to ever increasing GHG emissions. The efforts of industry toward increased efficiency, which are real, must be accelerated.

Government programs to subsidize efficiency improvements must therefore also be very careful that the subsidies are not absorbed by those who would have made the improvements to begin with. The establishment of the Office of Energy Efficiency has been a positive step and such programs as the Energuide for Houses Retrofit Incentive are apparent successes, though their true worth can only be seen in how far they take efficiency beyond business as usual.

Both EFR and cap and trade systems can work toward increasing efficiency. Cap and trade systems, for instance, give the incentive to make investments in efficiency a priority.

The Commissioner noted in his 2000 report that while the government had spent about \$64 million annually on energy efficiency activities in the years leading up to the report, the income tax system does not give any preferential treatment to certain energy efficiency investments.

Implementing cap and trade systems and putting in place revenue-neutral ecological fiscal reform will not meet the Kyoto target, but they are the best way forward. The purchase of international credits therefore will be necessary for Canada to technically meet its Kyoto commitment.

International Activities

The purchase of international credits has become controversial despite the fact that:

When Canada signed on to its Kyoto protocol target, to 6% below 1990 levels, it only agreed to do so at that point because it would be able to acquire reduction credits through low-cost investments outside its borders. It's always been rather ironic to me that the system, which Jack is going to describe to you in a minute, was designed to satisfy Canada and the United States, and strangely enough it's Europe that's actually rushing ahead with implementing an emissions trading system. When the protocol was being negotiated, the strongest supporters for the Kyoto mechanisms were the energy-intensive industries and provinces, and its most vocal opponent was the EU. So the table has turned in an interesting way.⁶²

⁶² Mr. David Runnalls (President, International Institute for Sustainable Development), *Evidence*, 17 February 2005, Meeting 20.

Purchase of international credits, however, must be approached very carefully. In particular there must be mechanisms in place to ensure that emission reductions are transparent and verifiable.

The purchase of credits through the Clean Development Mechanism or the Joint Implementation Mechanism of the Kyoto Protocol will be the best way to guarantee that credits are for real emission reductions. Though opposition is becoming more vocal to the purchase of credits on the international market as a waste of money that could be spent at home, these types of purchases will also have advantages for Canada:

There are four benefits from the use of the Kyoto mechanisms, if they are properly designed and implemented: one, they'll significantly reduce the cost of compliance for Canada to meet its target; two, they will signal that Canada does plan to be an important player in the growing global carbon trading market; three, they will provide Canadian clean technologies with technology funding opportunities; and four, they will help provide Canada with an opportunity to demonstrate global leadership.⁶³

Unfortunately, despite having been relatively frequent purchasers of credits, Canada is now less involved in purchasing credits, mostly the result of an uncertain domestic climate surrounding GHG reduction requirements:

If you look at pie charts dating back five or six years ago in terms of the market share of Canadian participation in the international market you will see a very large pie chart with a very large slice identified with Canada. That slice has dropped tremendously. I think that is pure logic on the part of Canadian business because if you go in front of a senior management committee and ask for a substantial amount of money to buy credits, the answer to the question will be, what are your compliance needs? How much do you need? The answer at this stage for most of industry is I don't know, and they will tell you to come back when you know. So yes, I have seen a decline in the participation and it's too bad because we were pioneers in this area.⁶⁴

The delay in purchases means that companies may be purchasing credits later in the process when there is greater demand. This could mean that costs will be significantly higher.

Kyoto mechanism credits, however, may be in short supply as, at least up to now, it seems the verification mechanism is fairly onerous. Plentiful and cheap international credits may be available from the Russian Federation, as a result of their economic collapse, though they may not be available if Russia has a rapid economic recovery. These cheap credits, the result of Russia's collapsed economy,

⁶³ Ibid.

⁶⁴ Mr. Andrei Marcu (Executive Director, International Emissions Trading Association), *Evidence*, 10 May 2005, Meeting 38.

are referred to as “hot air” and should not be purchased, as there would be no clear benefit to the environment associated with the purchase.

RECOMMENDATION 15:

The Committee recommends that the government refrain from purchasing international emission credits from nations with economies in transition or from any other source if they are not associated with significant environmental improvement.

But if Canada is not going to purchase “hot air” and the market for genuine Kyoto mechanism credits is small and expensive, it may be difficult for Canada to meet its Kyoto commitment through purchases.

By hosting the 11th Conference of the Parties to the UNFCCC (also the 1st Meeting of the Parties to the Protocol) Canada will likely hold the Presidency of the Bureau of the Conference of the Parties. As such it will be in a position of influence regarding the overall management of the intergovernmental process of COP 11 and should urge COP 11 to deal with issues surrounding international trading.

Canada will not be alone in needing to purchase international credits and it is likely that other countries will have the same reservations about purchasing credits from countries in transition. As well, it is in the interest of all Parties to ensure that the Kyoto mechanisms are effective.

The NRTEE has been asked to give advice for COP 11 on, among other things, improving the Clean Development Mechanism. While this advice will be welcome, it is with its international partners that the government should be negotiating now toward simplifying the Kyoto mechanisms. The NRTEE will release its advice in October but this delay should not stop the government moving now toward defining discussions at and around COP 11.

One important role the federal government can play is to negotiate with its international partners to ensure that international credits are as cheap as possible while being associated with verifiable emission reductions.

If Canada will not be able to meet its Kyoto target domestically, it should nevertheless do its utmost to maximize GHG reductions at home in order to reduce any reliance on purchases of international credits. Any such purchases must be transparent and verifiable.

Continental Discussions

The Committee also believes that there is an opportunity to open discussions regarding greenhouse gas emission reductions with Canada's NAFTA partners. There is already a North American Energy Working Group (NAEWG) for which the goal is to foster communication and co-operation among the three countries on energy-related matters of common interest. In addition the aim of the NAEWG is to enhance North American energy trade and interconnections, consistent with the goal of sustainable development, while respecting the domestic policies, divisions of jurisdictional authority and existing trade obligations of each country.

Energy policy is clearly going to be affected as we move into a carbon-constrained world, and this committee is an obvious starting point to "test the waters" regarding co-operation on GHG emission reductions. While these discussions would be welcome, they should not detract from the main negotiations toward truly global reductions in GHG emissions.

COMMENTARY ON PROJECT GREEN

The Committee was put in the somewhat awkward position of having the government's latest plan released halfway through its deliberations on what should be in it. Project Green, however, is by no means complete. There is much consultation still to occur and time to change or influence the outcome.

The Committee has not had any specific deliberations regarding Project Green, though of course the subject did come up at various meetings. It cannot, therefore, critique the plan in detail. It is hoped that this report will directly help influence this plan and, more than this, act as a framework to help those involved in the consultation process argue for more effective action to reduce GHG emissions in Canada.

There are a few points, however, that the Committee wishes to make, regarding Project Green.

The Climate Fund

A cap and trade system needs to be large to be effective. The trading system for the large final emitters (LFE) sector, while it is not evident how it will be designed, is not large enough to allow for sufficient liquidity. This means that the LFEs must be able to purchase offsets from outside of the trading system (assuming that a much larger domestic emissions trading system is not put in place).

Unfortunately, the government has created the multi-billion dollar Climate Fund, also to buy offset credits and retire them. This means that the government will essentially be acting as a very large competitor to the LFEs for the purchase of offset credits. This should not be the focus of the Climate Fund.

The Climate Fund is the central tool that the government has introduced to achieve GHG emission reductions, but it risks wasting vast sums of money for little result. There are better things that the money could go to, such as investment in research and development of carbon capture and sequestration, while leaving the offsets system in place for the benefit of the LFEs.

RECOMMENDATION 16:

The Committee recommends that the government use caution in purchasing domestic offset credits, leaving the majority for trading within the LFE trading scheme. The money allotted to this aspect of the Climate Fund should be used more to support capital-intensive and risk-related projects with great potential for emissions reductions.

The Large Final Emitters Target

The LFE target has been reduced from 55 Mt per year, as elaborated in the Climate Change Plan for Canada, to 45 Mt per year. In addition up to 9 Mt per year will be able to be purchased from the technology fund. This means that the final contribution of the LFE sector has been reduced from 55 Mt per year to about 36 Mt per year, because the technology fund purchases, while they will be counted against the LFE target, will not be counted against Canada's target.

The Committee understands that because of delays in implementing LFE policies and regulation that it now may be more difficult for the LFE sector to meet targets in the time left to the end of the Kyoto commitment period. However, the Committee also heard that there are at least 29 Mt per year of emissions reductions in the oil and gas sector alone that would be profitable to undertake. Others suggested that even a \$30 cap (as opposed to the \$15 cap guarantee under the Plan) would not be unduly harmful.⁶⁵

The Committee therefore is of the opinion that the LFE target must be maintained at the 55 Mt level as originally outlined in the 2002 Plan.

⁶⁵ Mr. Mark Jaccard (Professor, School of Resource and Environmental Management, Simon Fraser University), *Evidence*, 7 April 2005, Meeting 31.

The LFE Cap and Trade Regulations

The government is intent on using the *Canadian Environmental Protection Act 1999* as the legislative basis for the LFE cap and trade system. There has already been much work at Natural Resources Canada regarding the elements of such legislation. Canada is already well behind other nations in creating such a system and the move from NRCan to Environment Canada cannot be allowed to delay this any further. Our industries need the certainty of knowing what will be required of them for investment planning.

Should the government continue in its path to use CEPA, then it must do so in a manner that does not have any potential to weaken the Act. The Committee has already tabled a report on this subject and it is appended to this report.

Two important elements of the trading system must be fairness and the avoidance of perverse incentives to continue to pollute. In order to establish fairness the system of allocating permits must account for actions already undertaken to reduce GHG emissions. The business as usual case against which emission reductions are compared for the assigning of credits must be agreed to by stakeholders and updated as economic modelling of emissions improves.

In addition, the base year must be firmly established as 1990. Should the base year be anytime in the future (such as 2008) then there will be incentive to increase emissions of GHGs in order to maximize emission reductions.

Ecological Fiscal Reform

The fiscal elements of the Plan will be useless if the fiscal framework, on the whole, encourages greater GHG emissions. Nowhere in the Plan is there any discussion of anything that could be considered EFR. Various measures do support renewable energy, for instance, but these efforts will be swamped by increases GHG emissions elsewhere if incentives to increase emissions in other sectors are not identified and eliminated. The Plan must include an analysis of such ecological fiscal reform.

Various witnesses also pointed out that potential sources of low carbon energy and increases in efficiency are ignored in the fiscal framework. This problem should be rectified. All sources of low carbon renewable energy sources and increased efficiency should be given the same treatment within the tax system.

The Automobile Sector

The current MOU with the automobile sector makes it clear (though it was unnecessary to do so) that the government reserves the right to regulate the industry if need be. Regulations, however, take time to draft and to come into effect. The government should make it clear that the current MOU with the automobile industry is backed up by regulation by drafting backstop regulations now.

Further increases in fuel efficiency of cars will require action in the United States as well. Such initiatives are already beginning, notably in California. Canada should engage other interested parties in North America in moving toward greater regulation of automobile fuel efficiency.

Government Accountability

As pointed out above, if accountability remains as it has in the past then the chances are very good that this plan will fail, just as others have. There is a statement that “Rigorous monitoring and reporting requirements will be put in place to support compliance and public accountability, while protecting the confidentiality of industry competitive practices.”

This statement is not elaborated upon. It is hoped that the government will heed the advice of this committee and that of the CESD when creating such mechanisms. The creation of a central authority that will report on an annual basis to Parliament is needed if this plan is to succeed.

Engaging the Public

The One Tonne Challenge is the main thrust of the government’s attempts to engage the Canadian public in reducing greenhouse gases. As a program, it is rather weak, because a public education program has not been coupled with an effective reduction strategy.

In addition public advice on emission reductions should be tailored to the different regions of the country. Different regions have different GHG emissions issues. Partnering with the provinces in adjusting the One Tonne Challenge Message would be useful in obtaining better buy-in from the Canadian public.

In many respects achieving greenhouse gas emission reductions will require a similar change in behaviour and thought as will achieving sustainable development. One way to help in this behavioral change is for the government to report on progress in sustainable development to the Canadian public.

Such is, in part, the concept of sustainable development indicators. The NRTEE was asked by the Finance Minister to develop such indicators that could be reported to the Canadian public in a similar manner, and along side, indicators of economic progress such as GDP. These Indicators include GHG emissions. The Committee believes that the reporting of these indicators should be given the same importance as the GDP and should be reported along side it.

Adaptation

The current plan gives only cursory attention to the problem of adaptation stating:

Developing Appropriate Adaptation Tools: The impacts of climate change are far-reaching and have major implications for governments in terms of the relevancy and adequacy of existing policies and regulations. Comprehensive risk assessments could play a critical part in ensuring that the governments have a solid understanding of climate change related risks on operations and planning. It will be important for the governments to clearly identify liability issues.

The need for adaptation is far more urgent than is implied by this paragraph. Canada's north is already seeing changes that pose greater challenges to people than their capacity to adapt. Historic climate records on the Prairies show droughts much longer and more intense than any experienced since the advent of modern agriculture in that area. Strategies to assist Canadians and the Canadian economy to adapt to changes in climate are absolutely necessary. Much more attention needs to be placed on this aspect of the Plan.

RECOMMENDATION 17:

The Committee recommends that the government, in cooperation with the provinces and territories, develop a climate change adaptation strategy.

CONCLUSION

Had a reasonable combination of regulatory, fiscal and voluntary policies been put in place soon following the signing of the Kyoto Protocol, then Canada may have been able to meet its Kyoto target through domestic emissions reductions. This is no longer the case and Canada will have to purchase international credits to honour its Kyoto commitment. This reality, however, should not preclude the government putting into place a fair and reasonable set of policy measures that give the right long-term signals and allow industry to innovate to adjust to them.

Long-term cap and trade emissions trading schemes are one such measure, the other is revenue-neutral ecological fiscal reform. In addition targeted investment in high-risk technology such as carbon sequestration may be necessary, particularly if Canada and the world continue to use fossil fuels. All of this must be done with a proper accountability framework in place.

It has not been easy for governments to establish policies. They are often bombarded by conflicting messages from the industrial stakeholders and the public. As one witness stated:

I think in the final analysis our efforts only will achieve concrete results and results commensurate with the challenge if there is sufficient political will.⁶⁶

Reducing GHG emissions, in particular CO₂, is about managing how we use energy. Political will can best be derived by realizing that, although Canada's energy sources are abundant, the world is moving into a time where energy and environment interactions will dictate how we use our energy. We need to put in place policies now that will move us safely toward achieving energy security in a carbon constrained world.

⁶⁶ Mr. Elliot Diring (Director, International Strategies, Pew Center on Global Climate Change), *Evidence*, 31 May 2005, Meeting 41.



HOUSE OF COMMONS
OTTAWA, CANADA
K1A 0A6

38th Parliament, 1st Session

The Standing Committee on Environment and Sustainable Development has the honour to present its

FIFTH REPORT

In accordance with its permanent mandate under Standing Order 108(2), your Committee undertook a study of a draft report on the subject-matter of Bill C-43, *An Act to implement certain provisions of the budget tabled in Parliament on February 23, 2005* and agreed to report the following:

INTRODUCTION

Budget 2005 included announcements of \$5 billion dollars towards sustainable development initiatives with a strong emphasis on addressing climate change. The budget announced, among other things, two market based systems to provide incentives for the reduction or removal of greenhouse gases and to develop technology towards the same goal.

The budget also referred to other market mechanisms, namely a credit trading system for Large Final Emitters (LFE), stating:

In the coming months, the Government will set out the details of a mandatory emissions reduction regime and emissions trading system, including the related legal framework, for LFEs to support further improvement in the performance of this sector in addressing the challenge of climate change.

The budget implementation bill, Bill C-43 *An Act to implement certain provisions of the budget tabled in Parliament on February 23, 2005*, received first reading on 24 March 2005. Bill C-43 included two parts that implemented the Budget 2005 announcements related to market mechanisms. Part 13 related to the creation of the Canada Emission Reduction Incentive Agency, to oversee the Clean Fund, and Part 14 to the creation of a Greenhouse Gas Technology Investment Fund.

Section 15 of Bill C-43, was also related to sustainable development. This section would amend the *Canadian Environmental Protection Act 1999 (CEPA)* to remove the word “toxic” from most parts of the *Act*. In particular it removes the word “toxic” from section 64 which defines the criteria used to establish whether substances should be found “toxic” under the *Act*. This change is apparently intended to facilitate discussions surrounding back-stop legislation for the Large Final Emitter credit trading system.

While the House of Commons Standing Committee on Environment and Sustainable Development (the Committee) acknowledges that there is some relationship between Part 15 and the discussion in the Budget of a legal framework for an emissions trading system, it does not believe that Part 15 is strictly a budgetary measure.

In addition the Committee is very concerned about the process by which these amendments have been introduced and possible implications beyond the stated goal of facilitating regulation of CO₂ emissions from LFEs. The Committee has had two meetings regarding Part 15 of Bill C-43 and has the following concerns.

IMPLICATIONS OF REMOVING THE WORD TOXIC

The Committee acknowledges that there are problems with using the word “toxic” for every substance that meet the criteria of section 64 of CEPA. Labelling such substances as ammonia in water (which is listed) and road salt (which met the criteria but has not been listed) as “toxic” is confusing to Canadians who use them in very different circumstances and may give an unfair stigma to products produced by Canadian industry.

It is unclear however if removing the word “toxic” from CEPA is the best way of resolving this issue. As the Committee heard, removal of the word “toxic” could present a small but significant risk that the *Act* could be challenged as unconstitutional. It could also impact on the management and use of inherently toxic chemicals by changing perception of the hazards that they pose.

IMPACT ON THE PARLIAMENTARY REVIEW OF CEPA

The five year review of CEPA 1999 has recently been delegated to this Committee. Work by Environment Canada in the lead-up to the review identified the use of the word “toxic” as an issue¹. Without the benefit of the review, the government has decided that the word should be removed.

This arbitrary action to facilitate the use of CEPA for a single purpose without any discussion of the possible consequences could weaken the impact of the review by decreasing the level of trust, on the part of the Committee and witnesses, that the Government will listen to their recommendations.

LACK OF DISCUSSION OF ALTERNATIVES

The large final emitters group at the Department of Natural Resources has been working on the issues surrounding legislation for the LFEs for some time. There has never been any open discussion during that time regarding the use of CEPA as the legislative tool for implementing such regulation.

CEPA may be the best legislative tool for this purpose. As the Committee heard it does have some advantages, such as sections enabling emissions trading and provincial/federal equivalency agreements. Without hearing about the discussions of alternatives, however, the Committee is not in a position to say whether alternatives would be better or worse.

CONCLUSION

The Committee does not believe that Part 15 of Bill C-43 is strictly a budgetary measure. It has, however, even greater concerns regarding the substance of this section. There remain many questions regarding the impact of removing the word “toxic” from CEPA that need to be discussed publicly. As the Committee heard, there is no legal requirement to remove the word “toxic” from the *Act* to use it as the legislative basis for LFE back-stop regulation. While the Committee would prefer to see legislative options for LFE regulations, it remains open to stand-alone legislation for such regulation.

Whichever enabling legislation is used to create regulations to back-stop the LFE credit trading system, it is the substance of the regulations that should be discussed.

¹ Environment Canada, SCOPING THE ISSUES: Preparation for the Parliamentary Review of the *CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999*
http://www.ec.gc.ca/CEPARRegistry/review/CR_participation/CR_Scope/CEPA_Scope_e.pdf.

For these reasons the Committee makes the following recommendation:

The Committee recommends that the government remove Part 15 of Bill C-43 and that it expedite the publication of Large Final Emitter regulations for parliamentary and public scrutiny.

Climate change requires immediate action. Canada's large final emitters are ready and willing to make the decisions necessary to reduce emissions, but they need certainty in their investment environment. The government must act clearly and accountably, and it must do it now.

REQUEST FOR GOVERNMENT RESPONSE

In accordance with Standing Order 109, the Committee requests that the government provide a comprehensive response to the report within 120 days.

Copies of the relevant *Minutes of Proceedings* ([Meetings Nos. 28, 30 and 32](#)) are tabled.

Respectfully submitted,

ALAN TONKS
Chair

LIST OF RECOMMENDATIONS

RECOMMENDATION 1:

That the government establish an agency to oversee the implementation of climate change policies on a government-wide basis. The agency should establish standard protocols for departmental reporting requirements and should table a consolidated progress report annually.

RECOMMENDATION 2:

The Committee recommends that the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals be given a legislative basis and that the Privy Council Office be directed in the legislation to report annually to Parliament on the application of SEA across government.

RECOMMENDATION 3:

That the Canadian Environmental Assessment Agency be given the task of producing regulations under the SEA legislation outlining how federal climate change goals are to be accounted for in assessments of policy, plan and program proposals.

RECOMMENDATION 4:

That the Privy Council Office create a secretariat for sustainable development and that this secretariat be given the tasks of:

- producing a federal sustainable development strategy with key priorities identified, and;**
- reporting annually on progress toward the goals of departmental sustainable development strategies**

RECOMMENDATION 5:

That a significant portion of their performance bonus be used as an accountability mechanism for holding deputy and assistant deputy ministers responsible for sustainable development targets.

RECOMMENDATION 6:

That Natural Resources Canada produce a comprehensive and fully accessible summary of energy use in Canada on an annual basis and that it update and make accessible its energy outlook at least every two years.

RECOMMENDATION 7:

That the government of Canada's long-term energy strategy acknowledge that a federal role in energy be one of facilitating better coordination of energy policies across Canada in partnership with the provinces and territories. The Committee recommends that the federal government develop a "Green" paper on energy.

RECOMMENDATION 8:

That the Department of Finance analyze both direct and indirect federal expenditures on the energy sector and report to Parliament on an annual basis.

RECOMMENDATION 9:

That ecological fiscal reform be applied to the energy sector in order to give all emerging low impact renewable sources of energy greater support and to decrease GHG emissions.

RECOMMENDATION 10:

That the government make clear that it will reduce unnecessary fiscal support for well-established industries associated with large GHG emissions and that it engage these stakeholders in identifying the most appropriate expenditures for elimination.

RECOMMENDATION 11:

That the government increase its support for science aimed at understanding Canada's carbon cycle.

RECOMMENDATION 12:

That the government, in partnership with provincial and territorial partners and with stakeholders, carry out the research necessary to determine and take advantage of the capacity for

carbon sequestration as an effective means to reduce greenhouse gas emissions.

RECOMMENDATION 13:

The Committee recommends that the government put in place as soon as possible a cap and trade mechanism covering as many sectors of the economy as practicable. In so doing it should make it clear that the cap will be reduced over time, on a sectoral basis.

RECOMMENDATION 14:

In addition the Committee recommends that during this process, and subsequent to it, the government expedite international negotiations to ensure international compatibility of credits.

RECOMMENDATION 15:

The Committee recommends that the government refrain from purchasing international emission credits from nations with economies in transition or from any other source if they are not associated with significant environmental improvement.

RECOMMENDATION 16:

The Committee recommends that the government use caution in purchasing domestic offset credits, leaving the majority for trading within the LFE trading scheme. The money allotted to this aspect of the Climate Fund should be used more to support capital-intensive and risk-related projects with great potential for emissions reductions.

RECOMMENDATION 17:

The Committee recommends that the government, in cooperation with the provinces and territories, develop a climate change adaptation strategy.

APPENDIX A LIST OF WITNESSES

Associations and Individuals	Date	Meeting
National Round Table on the Environment and the Economy Jean Bélanger, Chair, Ecological Fiscal Reform Task Force Gene Nyberg, Acting Executive Director and Chief Executive Officer Alex Wood, Policy Advisor	2004/12/09	13
Clean Air Renewable Energy Coalition Mark Rudolph, Coordinator	2005/02/03	16
Green Budget Coalition Dale Marshall, Member		
Department of Finance Denis Gauthier, Assistant Deputy Minister, Economic Development and Corporate Finance Ralph Goodale, Minister Bob Hamilton, Assistant Deputy Minister, Tax Policy Branch	2005/02/08	17
David Suzuki Foundation Morag Carter, Director, Climate Change Program	2005/02/10	18
Équiterre Sidney Ribaux, General Coordinator and Co-founder		
Friends of Science Society Tim Patterson, Expert Witness, Carleton University Charles Simpson, President		
Greenpeace Canada Steven Guilbeault, Campaigner, Climate and Energy		
Canadian Chamber of Commerce Nancy Hughes Anthony, President and Chief Executive Officer	2005/02/15	19
Energy Dialogue Group Michael Cleland, Chair, President and Chief Executive Officer of Canadian Gas Association		
Ontario Centre for Environmental Technology Advancement S. Ed Mallett, President and CEO		

Associations and Individuals	Date	Meeting
Pembina Institute Matthew Bramley, Director, Climate Change	2005/02/15	19
International Institute for Sustainable Development David Runnalls, President	2005/02/17	20
Natsource Jack Cogen, President Doug Russell, Managing Director		
Sierra Club of Canada John Bennett, Director, Energy and Atmosphere Campaign		
Canadian Natural Gas Vehicle Alliance Al Basham, Executive Vice-President, Clean Energy Graeme Feltham, General Manager, Regulatory, ATCO Gas Charlie Ker, Director, Government and Industry Affairs, Westport Innovations Inc. Gerry MacDonald, Director, NGV Business Development, Enbridge Gas Distribution Inc. F.S. (Rick) Thomas, President	2005/02/22	21
Department of Public Works and Government Services Scott Brison, Minister George Butts, Director General, Acquisition Program Integrity Secretariat Sector François Guimond, Associate Deputy Minister Walt Lastewka, Parliamentary Secretary to the Minister		
Canadian Environmental Assessment Agency Steve Burgess, Executive Director, Special Projects, Regional Liaison and Guidance	2005/02/24	22
Department of Natural Resources Sheila Riordon, Director General, Energy Policy Branch		
Department of the Environment Alex Manson, Acting Director General, Climate Change Bureau, Policy		
National Energy Board Robert Steedman, Professional Leader, Environment		
Canadian Association of Petroleum Producers Pierre Alvarez, President Rick Hyndman, Senior Policy Advisor, Climate Change	2005/03/08	24

Associations and Individuals	Date	Meeting
Canadian Energy Pipeline Association David MacInnis, President	2005/03/08	24
Coal Association of Canada George White, Senior Energy Advisor Allen Wright, Executive Director		
TransAlta Corporation Bob Page, Vice-President, Sustainable Development Don Wharton, Director, Offsets and Strategy		
Canadian Hydro Developers, Inc. John Keating, CEO	2005/03/22	25
Canadian Solar Industries Associations Rob McMonagle, Executive Director		
Canadian Wind Energy Association Robert Hornung, President		
logen Corporation Jeff Passmore, Executive Vice-President		
Canadian Hydropower Association Pierre Fortin, Executive Director Pierre Lundhal, Environmental Advisor	2005/03/23	26
Canadian Nuclear Association Duncan Hawthorne, President		
Canadian Renewable Fuels Association Kory Teneycke, Executive Director		
Enbridge Gas Distribution Inc. David Teichroeb, Business Development, Fuel Cell Markets		
BIOCAP Canada Foundation David Layzell, CEO and Research Director Bob Page, Chair, Board of Directors (Vice-President, Sustainable Development, TransAlta Corporation)	2005/03/24	27
Canadian Fertilizer Institute Clyde Graham, Vice-President, Strategy and Alliances Russ Holowachuk, Vice-President and General Manager		
Propane Gas Association of Canada Bob Cunningham, Managing Director		

Associations and Individuals	Date	Meeting
Teletrips Inc. Scott Fleming, CEO Robert Schulz, Professor, Strategy & General Management, Acting Academic Director, Executive MBA Program, Haskayne School of Business	2005/03/24	27
Canadian Climate Impacts and Adaptation Research Network, North Region Peter Johnson, Science Advisor John Streicker, Manager	2005/04/07	31
Simon Fraser University Mark Jaccard, Professor, School of Resource and Environmental Management		
University of Guelph Ross R. McKittrick, Associate Professor, Economics		
Assembly of First Nations Phil Fontaine, National Chief Peigi Wilson	2005/04/12	32
Department of Industry David Emerson, Minister		
Canadian Gas Association Michael Cleland, President and Chief Executive Officer	2005/04/19	34
Federation of Canadian Municipalities Elisabeth Arnold, Director, Centre for Sustainable Community Development Yves Ducharme, Past president, Mayor, City of Gatineau		
Forest Products Association of Canada Paul Lansbergen, Association Secretary, Director, Taxation and Business Issues Avrim Lazar, President and Chief Executive Officer		
Sustainable Development Technology Canada Vicky Sharpe, President and Chief Executive Officer		
Department of Natural Resources Mondher BenHassine, Energy Policy Sector Graham Campbell, Director General, Office of Energy Research and Development Bill Pearson, CANMET Energy Technology Centre Carolyn Preston, CANMET Energy Technology Centre, Devon, Alberta	2005/04/21	35

Associations and Individuals	Date	Meeting
Infrastructure Canada Cécile Cléroux, Assistant Deputy Minister, Program Operations John Godfrey, Minister of State (Infrastructure and Communities) André Juneau, Deputy Head	2005/04/21	35
Canadian Auto Workers Union Ken Bondy, Coordinator, Health and Safety Fund, Windsor Regional Office	2005/05/03	36
Canadian Vehicle Manufacturers' Association Mark Nantais, President		
Communications, Energy and Paperworkers Union of Canada Keith Newman, Director, Research Brian Payne, President		
Ducks Unlimited Canada Rhonda I. McDougal, Research Scientist Barry Turner, Director, Government Relations		
Canada Green Building Council Alex Zimmerman, President	2005/05/05	37
Canadian Chemical Producers' Association Richard Paton, President and Chief Executive Officer		
Canadian Construction Association Michael Atkinson, President		
Cement Association of Canada François Lacroix, President		
Net-Zero Energy Home Coalition Rob McMonagle, Executive Director, Canadian Solar Industries Association Gordon Shields, Coordinator		
Department of Natural Resources Neil MacLeod, Director General, Office of Energy Efficiency Louis Marmen, Director, Housing and Equipment Tony Taylor, Director, Transportation Energy Use	2005/05/10	38

Associations and Individuals	Date	Meeting
International Emissions Trading Association	2005/05/10	38
Andrei Marcu, Executive Director		
Bob Page, Vice-President, Sustainable Development, TransAlta Corporation		
Hugh Porteous, Vice-President, Government Relations, Alcan Aluminium Limited		
Office of the Auditor General of Canada	2005/05/17	39
Johanne G�linas, Commissioner, Environment and Sustainable Development		
Neil Maxwell, Principal		
Bob Pelland, Director		
Treasury Board of Canada Secretariat		
Reg Alcock, President of the Treasury Board		
Blair James, Executive Director, Real Property and Material Policy Directorate		
Jamshed Merchant, Economic Sector		
PEW Center on Global Climate Change	2005/05/31	41
Elliot Diringer, Director, International Strategies		

APPENDIX B LIST OF BRIEFS

Adey, Marcella

Assembly of First Nations

AWS Consulting

BIOCAP Canada Foundation

Canada Green Building Council

Canadian Association of Petroleum Producers

Canadian Chamber of Commerce

Canadian Chemical Producers' Association

Canadian Climate Impacts and Adaptation Research Network, North Region

Canadian Construction Association

Canadian Energy Pipeline Association

Canadian Environmental Assessment Agency

Canadian Fertilizer Institute

Canadian Gas Association

Canadian Hydro Developers, Inc.

Canadian Hydropower Association

Canadian Natural Gas Vehicle Alliance

Canadian Nuclear Association

Canadian Solar Industries Associations

Canadian Vehicle Manufacturers' Association

Canadian Wind Energy Association

Cement Association of Canada

Clean Air Renewable Energy Coalition
Coal Association of Canada
Communications, Energy and Paperworkers Union of Canada
Computare
David Suzuki Foundation
Department of Natural Resources
Department of the Environment
Department of Public Works and Government Services
Ducks Unlimited Canada
Eliuk, Richard
Embassy of the United States of America
Enbridge Gas Distribution Inc.
Energy Dialogue Group
Federation of Canadian Municipalities
Forest Products Association of Canada
Friends of Science Society
Green Budget Coalition
Greenhouse Emissions Management Consortium
House of Commons
Infrastructure Canada
International Emissions Trading Association
International Institute for Sustainable Development
Iogen Corporation
National Energy Board
Natsource

Net-Zero Energy Home Coalition
Office of the Auditor General of Canada
Pembina Institute
PEW Center on Global Climate Change
Propane Gas Association of Canada
Sierra Club of Canada
Simon Fraser University
Sustainable Development Technology Canada
Swedish Environmental Protection Agency
Teletrips Inc.
TransAlta Corporation
Treasury Board of Canada Secretariat
University of Guelph

REQUEST FOR GOVERNMENT RESPONSE

In accordance with Standing Order 109, the Committee requests that the Government provide a comprehensive response to the report within 120 days.

A copy of the relevant Minutes of Proceedings of the Standing Committee on Environment and Sustainable Development (*Meetings Nos. 13, 16 to 22, 24 to 27, 29, 31, 32, 34 to 39, 41, 42, 50 and 51 which includes this report*) is tabled.

Respectfully submitted,

Alan Tonks, M.P.
Chair

A Liberal Whitewash

A dissenting opinion from the Conservative Party of Canada to the Standing Committee on Environment and Sustainable Development

Overview

1) The world agreed to reduce greenhouse gas (GHG) emissions in 1992 when it signed the United Nations Framework Convention on Climate Change (UNFCCC). In the 13 intervening years the federal government has failed to develop a realistic plan that would result in significant emission reductions.

2) The Kyoto protocol, which states that Canada must reduce its greenhouse gas emissions to 6 per cent below the 1990 level during 2008–12, became international law on February 16, 2005. Today Canada's emissions are 24% above the 1990 level, while our Kyoto target is 6% below the 1990 level. Such a discrepancy is not because we agreed to a too stringent emissions target, but rather because this government dithered in taking significant steps in taking action to reduce green house emissions.

3) Indeed, this government has not shown great determination in trying to secure a reduction of GHGs. The PMO and most federal departments have not made any serious effort to assess policies for potential environmental impact. Moreover, all "green initiatives" proposed by this government since 2000 have been ad hoc, lacked any details for timelines and implementation, and were not accompanied by an accountability framework. More than \$3.7 billion has been spent or allocated to "environmental measures" since 2000; yet GHG emissions have soared since.

4) Delaying action on climate has significant international costs. The only nations that are close to meeting their Kyoto targets are those that, for whatever reason, took early action or had their economies destroyed after the collapse of the Soviet Bloc. Because this government's inaction will lead us to miss our targets by a wide margin, we will not be able to credibly compel the developing world to reduce their GHG emissions.

5) Throughout the Committee's study it was clear that there is no shortage of creative ideas about how to reduce GHG. The consensus of witnesses believed not only that Canada can and should be a world leader in renewable energy technology, but years of Liberal dithering has proven that this government is not up to the job. Many witnesses have suggested that using innovative technology in order reduce GHGs will create the kind of 21st century "green economy" that Canada needs. Industry - from aluminum to pulp and paper to oil and gas - is making great strides to achieve that endeavor; the government is not however.

6) Because of delays in taking action on GHG emissions, our Kyoto targets are now impossible to meet through domestic action alone. Thus Canada will be forced to ship billions of dollars off-shore buying hot air, supporting other dubious projects overseas, or fund projects that compete directly with Canadian companies on Canadian soil.

Furthermore, if we don't have the ability to monitor and audit GHG reduction results in Canada, what hope do we have of accomplishing the same with an overseas project? The government has failed to develop a fair and reasonable set of policies that will allow industry to innovate and adjust. Despite all of the Liberal 'hot air' we still do not have a comprehensive, realistic plan to reduce GHGs.

7) The first version of the Committee's draft report had highlighted some of these concerns. This government however has whitewashed the original intent of the report. The final report does not acknowledge the government's primary responsibility in failing to reduce GHGs emissions. It also says nothing about the unfeasibility of our Kyoto targets, nor how much Kyoto implementation will cost for the taxpayer. The report does not lay out the potential impact of buying foreign credits for the global environment. Finally, it proposes a set of recycled recommendations that will not send a strong enough signal to the government that it must act with determination against global warming. This is unacceptable.

That is why we, the Conservative Party of Canada, propose the following recommendations in order to reduce carbon emissions and GHGs. The principles guiding our framework are: accountability and transparency of federal departments; strategic environmental assessments of federal initiatives; cooperation with the provinces; and finally, use of technology and research of made-in-Canada solutions that will foster a greener, more dynamic and diversified economy.

- **Proposition 1:**

That, given the expense and incompatibility of the Kyoto Protocol targets with Canada's growing, resource-based economy, sparse population and cold climate, the government develop, in cooperation with the provinces, a long-term made-in-Canada plan to reduce real air pollution and greenhouse gas emissions.

Proposition 2:

- **That the government of Canada, in close cooperation with the provinces, territories and stakeholders, develop a long-term national strategy for energy that will include a comprehensive examination of Canada's energy situation in a carbon constrained world;**

- **Proposition 3:**

That made in Canada technology and research and development energy be a key component of Canada's climate change strategy;

- **Proposition 4:**

In the strongest of terms, that the Department of Finance increase its capacity in environmental economics and perform a thorough analysis of ecological fiscal reform in order that the government can better use the fiscal framework in support of environmental goals;

-

Proposition 5:

That, in consultation with the scientific community, the government increases its in-house capacity to study the science of the Canada's carbon cycle;

- **Proposition 6:**

That the government stimulate alternative energy commercialization initiatives, including wind, solar, small hydro, geothermal, co-generation and transportation fuel;

- **Proposition 7:**

That the government invest in areas that have the potential to reduce carbon emission per unit of energy while maintaining economic growth, such as: Co₂ separation and sequestration, transportation and storage; clean coal; transmission line optimization, etc.

- **Proposition 8:**

In the strongest possible terms, that the government does not purchase international emissions credits. That rather the government focuses on domestic credits, including carbon sinks and carbon sequestration.

- **Proposition 9**

In the strongest possible terms, that the government does not use CEPA as a way to regulate large final emitters emissions. That rather the government uses fiscal incentives (tax and emissions credits) to induce more efficient technology development for the LFEs.

Bloc Québécois Supplementary Opinion

The Bloc Québécois is asking that the efforts to reduce polluting emissions be divided up on a territorial basis, with 1990 as the reference year, and that, through a specific agreement, the federal government cede to the government of Quebec, with full financial compensation, full responsibility for implementing the Kyoto Protocol on its territory.

The Bloc Québécois recalls that the purchase of international credits must not be at the centre of the federal strategy, which must instead concentrate on reducing greenhouse gas emissions on Canadian territory. However, all the stakeholders agree that it will be impossible for Canada to respect its international commitments for the first period without purchasing credits outside the country. We deplore the fact that the federal government did not assume its responsibilities earlier and that it has systematically ignored the territorial approach proposed by the Bloc Québécois, which would have made it possible to avoid this impasse. That being said, since it is essential that Canada maintain its credibility internationally, we consent to the federal government's buying credits outside the country for certain well-defined ends. However, it is imperative that the government limit itself to purchasing green credits, that is, credits that produce improvements to the environment. Moreover, the purchase of international credits must not in any case substitute for the reduction efforts of the large emitters, who must cover the cost themselves in accordance with the polluter pays principle.

Finally, it is understood that none of the recommendations in the report are inconsistent with the Bloc Québécois's demands concerning the territorial approach and the need for a specific agreement with Quebec. In particular, the Bloc Québécois's support for recommendation 13 must not be interpreted as signifying an implicit renunciation of Quebec's right to manage the conditions for reducing the emissions of large emitters located on its territory.

The Bloc Québécois's detailed position on the implementation of the Kyoto Protocol

The application of a territorial approach

The Bloc Québécois is asking for a territorial division based on the international rules of the Kyoto Protocol. Since Canada has committed itself to reducing its emissions on average by 6% compared with the emissions of 1990 during the period from 2008 to 2012, the Bloc is proposing that Quebec and the provinces be required to produce 6% less greenhouse gas than they produced in 1990 on their respective territories.

The signing of a specific agreement between Ottawa and Quebec

It is time for Ottawa to keep its promises and sign a specific agreement with Quebec. This agreement must cede to the government of Quebec, with full financial compensation, full responsibility for implementing the Kyoto Protocol on its territory.

This agreement should have been signed several years ago and the urgency of the situation is unmistakable. Since autumn 2002, the government of Quebec has been asking the federal government to sign a bilateral agreement. Last April, the National Assembly unanimously adopted a motion demanding a bilateral agreement recognizing Quebec's specificity with regards to Kyoto.

An agreement such as this is essential because Quebec is in the best position to respect the Kyoto objectives. Quebec can make fair decisions by taking account of the efforts already made in the past. Moreover, it knows Quebec society and can thus properly judge the most suitable measures to apply, particularly in the energy plan, so as to maximize the effects of the application of the Kyoto Protocol. Finally, the government of Quebec is the only one able to organize the indispensable coordination by acting with the other partners that fall under its jurisdiction, such as the municipalities and companies.

For all these reasons, the bilateral agreement signed between Quebec and Ottawa must recognize Quebec's right to fully implement the Kyoto Protocol on its territory and allow Quebec to withdraw from the federal policies and programs developed for the implementation of the Kyoto Protocol whenever Quebec deems it appropriate to do so, and with full financial compensation. It is imperative that the agreement go further than the agreements in principle signed with Ontario, Manitoba, Prince Edward Island and Nunavut, which are simply some good intentions for cooperation, exploring ideas, raising awareness and recognizing the importance of combating climate change.

The legislation on large emitters

The Bloc is recommending a territorial approach and maintains that the sectoral approach proposed to date by the federal government is not a good strategy. Since the time is passing and the federal government persists in applying its sectoral approach and since, for the Bloc Québécois, what counts in the end is the reduction of emissions, we are not opposing legislation on the large emitters if (1) it provides for a just and fair division of efforts, (2) the federal government cedes to Quebec the management of all the targets imposed on industries located on Quebec's territory, and, (3) as previously explained, Quebec is given full control of the implementation of the Kyoto Protocol on its territory.

MINUTES OF PROCEEDINGS

Tuesday, June 28, 2005
(Meeting No. 50)

The Standing Committee on Environment and Sustainable Development met *in camera* at 11:10 a.m. this day, in Room 237-C Centre Block, the Chair, Alan Tonks, presiding.

Members of the Committee present: Bernard Bigras, Nathan Cullen, Brian Jean, Bob Mills, Yasmin Ratansi, Lee Richardson, Christian Simard, Alan Tonks, Jeff Watson and Bryon Wilfert.

Other Members present: Wajid Khan and Anthony Rota.

In attendance: Library of Parliament: Tim Williams, Analyst.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on November 23, 2004, the Committee resumed its study on Canada's Implementation of the Kyoto Protocol.

At 1:10 p.m., the Committee adjourned to the call of the Chair.

Tuesday, June 28, 2005
(Meeting No. 51)

The Standing Committee on Environment and Sustainable Development met *in camera* at 3:15 p.m. this day, in Room 237-C Centre Block, the Chair, Alan Tonks, presiding.

Members of the Committee present: Bernard Bigras, Nathan Cullen, Brian Jean, David J. McGuinty, Bob Mills, Hon. Denis Paradis, Yasmin Ratansi, Lee Richardson, Christian Simard, Alan Tonks, Jeff Watson and Hon. Bryon Wilfert.

Acting Members present: Susan Kadis for David J. McGuinty.

Other Members present: Susan Kadis.

In attendance: Library of Parliament: Tim Williams, Analyst.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on November 23, 2004, the Committee resumed its study on Canada's Implementation of the Kyoto Protocol.

The Committee resumed consideration of a draft report.

It was agreed,--That the Committee append to its report dissenting and supplementary opinions, if any, and submit them electronically to the Clerk of the Committee.

It was agreed,--That, pursuant to Standing Order 109, the Committee request that the Government table a comprehensive response to the report.

It was agreed,--That the Chair present the report to the House.

At 4:10 p.m., the Committee adjourned to the call of the Chair.

Eugene Morawski
Clerk of the Committee