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# **The One-Tonne Challenge: Let's Get On With It!**

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First Interim Report  
of the  
Standing Senate Committee on  
Energy, the Environment and Natural Resources

The Honourable Tommy Banks, *Chair*  
The Honourable Ethel M. Cochrane, *Deputy Chair*

Ce rapport est aussi disponible en français

Des renseignements sur le Comité sont donnés sur le site :

<http://www.senate-senat.ca/EEENR-EERN.asp>

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# THE STANDING SENATE COMMITTEE ON ENERGY, THE ENVIRONMENT AND NATURAL RESOURCES

The Hon. Tommy Banks – Chair

The Hon. Ethel M. Cochrane – Deputy-Chair

The Hon. Willie Adams\*

The Hon. Leonard J. Gustafson\*

The Hon. David Angus\*

The Hon. Colin Kenny

The Hon. John Buchanan, P.C.

The Hon. Raymond Lavigne\*

The Hon. Ione Christensen

The Hon. Lorna Milne

The Hon. Isobel Finnerty

The Hon. Mira Spivak

Ex-officio members of the Committee:

The Honourable Senators: Jack Austin, P.C. (or Bill Rompkey, P.C.) and Noël A. Kinsella (or Terry Stratton)

The Honourable Senator Spivak was the Deputy Chair during the Third Session of the Thirty-Seventh Parliament. In addition, the Honourable Senators Baker, Eyton, Merchant, Fraser, Johnson, Sibbeston and Watt were members of the Committee or participated from time to time during this study during that Session.

\*Senators were not members of the committee for the duration of this study on the One-Tonne Challenge.

Staff of the Committee:

Ms. Lynne C. Myers, Research Analyst, Science and Technology Division, Parliamentary Research Branch, Library of Parliament;

Mr. Frédéric Beauregard-Tellier, Research Analyst, Economics Division, Parliamentary Research Branch, Library of Parliament;

Ms. Keli Hogan, Clerk of the Committee, Committees Directorate, The Senate;

Ms. Kae Schade, Administrative Assistant, Committees Directorate, The Senate.

*Note:* Ms. Josée Thérien served as Clerk of the Committee and Ms. Louise Pronovost, Administrative Assistant during the Third Session of the Thirty-Seventh Parliament.

## ORDER OF REFERENCE

Extract from the *Journals of the Senate* of Tuesday, October 19, 2004:

The Honourable Senator Banks moved, seconded by the Honourable Senator Ferretti Barth:

That the Standing Senate Committee on Energy, the Environment and Natural Resources be authorized to examine and report on emerging issues related to its mandate:

- a) The current state and future direction of production, distribution, consumption, trade, security and sustainability of Canada's energy resources;
- b) Environmental challenges facing Canada including responses to global climate change, air pollution, biodiversity and ecological integrity;
- c) Sustainable development and management of renewable and non-renewable natural resources including water, minerals, soils, flora and fauna;
- d) Canada's international treaty obligations affecting energy, the environment and natural resources and their influence on Canada's economic and social development;

That the papers and evidence received and taken during the Third Session of the Thirty-seventh Parliament be referred to the Committee; and

That the Committee report to the Senate from time to time, no later than June 30, 2006, and that the Committee retain until September 1, 2006 all powers necessary to publicize its findings.

After debate,

The question being put on the motion, it was adopted.

*Le greffier du Sénat,*  
Paul C. Bélisle  
*Clerk of the Senate*

*Note:* Except for the last paragraph relating to papers and evidence from the previous session, this Order of Reference is identical to the Committee's Order of Reference for this study during the Third Session of the Thirty-Seventh Parliament, adopted by the Senate on Tuesday, February 10, 2004.

## PREFACE: THE NEXT, NEW, LOW-CARB (ON) DIET

The Government of Canada is asking Canadians to go on a diet – a new diet that has nothing to do with food. It is an energy diet that will see each of us lose a few pounds – well actually, a tonne– of the approximately five tonnes of greenhouse gases, such as CO<sub>2</sub>, that we add individually, on average, to the atmosphere, just by everyday activity.

Officially known as the One-Tonne Challenge, the new energy diet is not yet as popular as the low-carbohydrate diets that have fast-food retailers and brewers creating new products. But it could be that popular!

If all orders of government use their powers to convince us – and to help us save money on our new energy diet – then reducing our fossil fuel intake will be more than trendy. It will become a habit.

But there are roadblocks to changing our daily lives. Any kind of new diet means giving up a few things that we like. It means changing unconscious habits, and that is always difficult. There has to be a strong incentive to bring about change – a motivator. Our pocketbooks are one. The health of our children is another, and lifestyle still another. We are not going to do it until one day we see that we must. Now is the time. Let's get on with it.

Temperatures are rising in almost every part of Canada. Canada has also grown wetter – from 5 to 35 per cent wetter everywhere except in the southern prairies. The oceans are warming too. The Canadian Council of Ministers of the Environment has produced an excellent report<sup>(1)</sup> on these changes, and what they mean to each of us.

The Standing Senate Committee on Energy, the Environment and Natural Resources is convinced that we should, we must, and we can, change our energy use habits. We did it before in the 1970s when the price of oil rose dramatically. We can do it again and we have even better reasons now.

Your Committee asked some of the best minds in the country for their advice on how to get Canadians started. This report sets out much of what they told us; our reflections on their advice; and our recommendations to the Government of Canada.

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(1) Canadian Council of Ministers of the Environment, Climate, Nature, People: Indicators of Canada's Changing Climate, November 2003.

# THE ONE-TONNE CHALLENGE

## LET'S GET ON WITH IT!

### INTRODUCTION

We need to have greenhouse gases (GHGs) like CO<sub>2</sub> in our atmosphere. They've always been there. Without them, Earth would be too cold to sustain life. GHGs are part of the intricately-balanced system which keeps some of the sun's heat from escaping our atmosphere to sustain life as we know it. It now seems that human activity has begun to affect the balance, and the results are not good. Our climate is changing.

There is not unanimous agreement among scientists about the extent to which human activity is contributing to climate change. But again, a large majority believes that, to one extent or another, we ARE contributing to it.

Your Committee and the Government of Canada believe that we should lessen the extent to which we are contributing, lessen the harm that we are doing our environment and lessen the burden that we will pass to our children and grandchildren.

To achieve this, your Committee believes that, in the words of Mr. David McGuinty, former head of the National Round Table (NRTEE) on the Environment and the Economy, Canada urgently needs “an overarching vision” to align the fiscal and regulatory policies of all levels of government to address the climate change challenge.<sup>(2)</sup>

### **KYOTO AND CANADIANS**

Canada has ratified the Kyoto Protocol. In doing so, Canada has undertaken that, during the first commitment period (2008-2012), we will reduce our overall GHG emissions to 6 per cent below 1990 levels.

How much greenhouse gas does that mean Canadians have to eliminate during the commitment period? Current estimates put the figure at 240

***It now seems that human activity has begun to affect the balance, and the results are not good. Our climate is changing.***

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(2) David McGuinty, former CEO and President, National Round Table on Environment and the Economy, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 12 June 2003, Issue #17, 17:33.

megatonnes.<sup>(3)</sup> That means a 30 per cent overall cutback on what Canada would be spewing into the air if we continued on a “business as usual” path toward the target date. “Business as Usual” would be a very dangerous and short-sighted path indeed. It is inconceivable that we would not do everything possible to live up to our commitment.

In the *Climate Change Plan for Canada*,<sup>(4)</sup> published in November 2002, the Government of Canada outlined a strategy to meet our commitment. The plan pointed to initiatives already underway to take us closer to our Kyoto goal and other initiatives that will be needed if we are going to meet our target. Under that plan, all sectors of the economy, from power plants, to industries and other institutions, are being asked to cut their emissions. The One-Tonne Challenge is about our individual contribution.

Each Canadian is on average responsible for about five tonnes of GHG emissions every year. Half (49.9 per cent) comes from passenger road transportation. Another 28.7 per cent is attributable to a very Canadian energy use – heating our homes. So motor vehicles and heating constitute the bulk (78.6 per cent) of our problem.

Water heating (11.1 per cent), appliances (7.5 per cent), lighting (2.4 per cent) and air conditioning (0.3 per cent) make up the rest.<sup>(5)</sup> **So the challenge to individual Canadians is for each of us to curb our GHG emissions from all these uses by about 20 per cent, or one tonne.** That would cut Canada’s annual contribution to the world’s GHG emissions by about 32 megatonnes every year. In other words, Canadians are being asked to take responsibility for 32 of the 240 megatonnes that will take us to our Kyoto target.

Will individual Canadians cut back on GHG emissions by one tonne apiece as their personal contribution to meeting the national target? That’s what the One-Tonne Challenge is all about.

That one tonne won’t clean up Canada’s air. But it will be a good and healthy start. And citizens who are engaged in a personal mission to improve Canada’s air quality are more likely to apply pressure to ensure that governments and industry pull their weight as well.

So the question is: How can governments engage individual Canadians in this challenge? The first step is to ensure that we understand what is being asked of us.

***It is inconceivable that we would not do everything possible to live up to our commitment.***

***Will individual Canadians cut back by one tonne apiece as their personal contribution to meeting the national target? That’s what the One-Tonne Challenge is all about.***

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(3) One MT (megatonne) = one million tonnes.

(4) Government of Canada, *Climate Change Plan for Canada*, 2002.

(5) *Ibid.*, p. 45.



## **WHAT DOES ONE TONNE REALLY MEAN?**

Few Canadians are even aware of the “One-Tonne Challenge.” The One-Tonne Challenge is an attempt to start reducing Canada’s GHG emissions at a personal level. GHG emissions are threatening the climate, natural habitats, and in the largest sense, endangering the health of a growing number of Canadians and their neighbours.

One of the problems with the One-Tonne Challenge is that people have difficulty thinking that substances in the air have weight. But in fact, those substances, including GHGs, do have weight. It is not hard to conceive that the people in a full elevator may collectively weigh about a tonne (2,200 pounds). Most of us understand that a small automobile weighs about a tonne. But air is perceived differently. After all, who thinks of weighing what we can’t even see?

***...who thinks of weighing  
what we can’t even see?***

If Canadians can find ways to meet the One-Tonne Challenge, we will be able to remove GHGs weighing the same as 32 million small cars from our atmosphere each year. That’s the size of the job at hand. Then we will have met the Challenge.

## **CAN WE REALLY DO THIS? YES WE CAN!**

The One-Tonne Challenge is, of course, voluntary. Its goals can be met only if Canadians are sufficiently motivated to use less fossil-fuel energy by cutting back on personal consumption and by using more efficient devices to fulfil their needs.

Can we really do this? Yes we can. We can all think of ways in which we waste energy. Is it likely Canadians will respond? Some of us will, simply because we know – or will soon get the message – that this is a crisis that deserves both our attention and our commitment to change.

But will information and persuasion alone suffice? Or will some of us require more motivation?

In the February 2004 Speech from the Throne, the Government of Canada promised to get the One-Tonne message across to Canadians. It committed itself to raising our awareness about how our everyday decisions contribute to GHG emissions and how those emissions are harming our environment. The Government of Canada formally launched the One-Tonne Challenge on March 26, 2004.

As articulated in the *Climate Change Plan for Canada*, the Government of Canada will depend primarily on information, awareness and social marketing campaigns to convince individual Canadians to participate in the One-Tonne Challenge. In the words of one official, the purpose of the Challenge is to “promote climate-friendly living as the right thing to do.”<sup>(6)</sup>

**...by embracing energy efficiency, individual Canadians can reduce their greenhouse gas emissions AND save money in the process.**

The message, as delivered by the Office of Energy Efficiency (OEE) of Natural Resources Canada, is that by embracing energy efficiency, individual Canadians can reduce their greenhouse gas emissions AND save money in the process. To that end, the Government of Canada and several non-government organizations are providing helpful tips and online emissions calculators to assist individuals in reducing their GHG emissions. (Examples of these resources are attached in Appendix A to this report).

Your Committee believes that the reduction of greenhouse gases in general and the One-Tonne Challenge in particular are essential to the future well-being of Canadians. **We don't think that reliance on information and moral suasion alone can achieve those goals.**

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(6) Colleen Paton, Director, Outreach and Communication Services, Office of Energy Efficiency, Natural Resources Canada, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 27 February 2003, Issue #9, 9:50.

## CHAPTER ONE: WORDS ARE NOT ENOUGH!

The Committee heard from witnesses who argued that information programs and awareness campaigns do have a valuable role to play in helping each of us understand the impact of our actions. But is the message getting through? And more importantly, is it likely to change the way most of us behave?

A 2003 Decima research survey found that the great majority of Canadians could not recall seeing any of the federal climate-change advertisements that ran on Canadian television between September 2002 and March 2003. Those ads cost \$17 million.<sup>(7)</sup>

Similarly, focus-group research done for the Government of Canada shows that **for a majority of Canadians, concerns about energy efficiency and climate change are *not* the primary drivers when it comes to consumers' decisions.**<sup>(8)</sup>

This may not be the way we would like to see ourselves, but this is what research strongly suggests. When Canadians make purchases, factors such as price, comfort and style will usually come out ahead of concerns about energy efficiency or the environment.

The results from the focus group just mentioned suggest that many Canadians do not view climate change as a significant concern for one very visceral reason – because it seems to have “limited observable impact on their daily lives.”<sup>(9)</sup>

Some of the Canadians who participated doubted that the efforts of any one individual could really make a meaningful difference in addressing a problem as broad and as complex as climate change.<sup>(10)</sup> Yet it is precisely the concerns of individuals that will make the meaningful difference.

***... many Canadians do not view climate change as a significant concern ... because it seems to have “limited observable impact on their daily lives.”***

***Yet it is precisely the concerns of individuals that will make the meaningful difference.***

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(7) Kate Jaimet, “Federal Kyoto ads cost \$17M, but no one remembers them: Despite little success, government to spend another \$45M on ads,” *Ottawa Citizen*, 31 December 2003, p. A4.

(8) Phoenix Strategic Perspectives Inc., *The One Tonne Challenge Branding Concept Research*, submitted to Environment Canada and Natural Resources Canada, November 2003; and Sage Research Corporation, *One Tonne Challenge (OTC) Advertising Concepts Focus Groups Final Report*, prepared for Natural Resources Canada and Environment Canada, 21 September 2003.

(9) Phoenix Strategic Perspective Inc. (2003).

(10) *Ibid.*

If some Canadians do not think of climate change as a priority, or doubt that changing their individual personal behaviour will play any kind of meaningful role in countering it, then can governments really be satisfied with confining themselves to gentle persuasion when it comes to living up to our Kyoto commitments? We don't think so.

If it turns out that information and awareness campaigns alone don't make much of a difference in individual consumption patterns, then the One-Tonne Challenge will turn out to have been nothing more than a failed public-relations exercise.

The other shortcoming of gentle persuasion is that it tends to get drowned out by the contrary commercial messages that bombard consumers day after day. Vehicle manufacturers in North America spend billions of dollars a year promoting their wares. You only need to look at our highways to see how successful these manufacturers have been in convincing a lot of Canadians that gas-guzzling sport-utility vehicles (SUVs) and other light trucks are great toys. In the words of John Nyboer, an ecological economist at Simon Fraser University:

*"...[the manufacturers] have incredible power to shape the market."*<sup>(11)</sup>

In contrast, the Office of Energy Efficiency (OEE) has an annual budget of \$65 million with which to reach and influence Canadians.<sup>(12)</sup> We applaud the Government of Canada's August 2003 announcement of an additional \$131.4 million in spending to help individual Canadians reduce their GHG emissions.<sup>(13)</sup>

That's a lot of money. But it's only a drop in the bucket compared to what manufacturers of energy-consuming products are spending on advertising. So the question arises once again: While it is clear that consciousness-raising must be a significant component of the government's strategy in convincing individual Canadians to help reach our country's environmental goals, is that approach by itself going to meet those goals?

Matthew Bramley, the Director for Climate Change at the Pembina

***...can governments really be satisfied with confining themselves to gentle persuasion when it comes to living up to our Kyoto commitments?***

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(11) John Nyboer, Ecological Economist, Simon Fraser University, proceedings of the Standing Senate Committee in Energy, the Environment and Natural Resources, 25 March 2003, Issue #10, 10:29.

(12) Neil MacLeod, Director General, Office of Energy Efficiency, Natural Resources Canada, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 27 February 2003, Issue #9, 9:57.

(13) See Press Release dated 12 August 2003, at: [http://www.climatechange.gc.ca/english/publications/announcement/news\\_release.html](http://www.climatechange.gc.ca/english/publications/announcement/news_release.html)

Institute for Appropriate Development, told us bluntly that getting the message across was only a start:

*“The messages will prepare the ground. However, on their own, realistically, they will only have a marginal impact on emissions.”<sup>(14)</sup>*

Your Committee believes that if the Government of Canada is going to convince individual Canadians to make the kind of behavioural changes that might actually see us respond to the One-Tonne Challenge, it cannot rely on education and awareness campaigns alone. We must do more.

**..the Government of Canada... cannot rely on education and awareness campaigns alone.**

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(14) Matthew Bramley, Director, Climate Change, Pembina Institute for Appropriate Development, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 27 March 2003, Issue #10, 10:39.



## CHAPTER TWO: THE PRICE ISN'T RIGHT.

In most cases price is the key determinant in any purchasing or investment decision. Other things being equal, demand for nearly any good or service is inversely proportional to its price.

This relationship between price and demand holds true for energy, whatever its source. When energy prices are low, (as they are in Canada by comparison with most of the rest of the world), consumers are simply less-concerned about the amount of energy they use. As Michael Cleland, President of the Canadian Gas Association, noted:

*“Consumers do not pay much for their energy and they do not pay attention to it as a consequence.”<sup>(15)</sup>*

When consumers DO pay what they deem to be a lot, things change. When the price of oil spiked in the 1970s due to Organization of Petroleum Exporting Countries (OPEC) cutbacks, compact cars became popular and fuel-efficiency regulations won public support.

But as soon as North American gasoline prices became a relative bargain in the 1990s, SUV sales started to climb. Economists know that when North American energy prices climb, consumers will again start looking for energy-saving automobiles and for other devices like programmable thermostats and compact fluorescent light bulbs. More of them will start reading EnerGuide or ENERGY STAR<sup>®</sup> labels when purchasing a new appliance.

Of course, we become very vocal about paying higher energy prices, particularly if we commute to work or live in poorly-insulated homes. Just as it is true of people everywhere, Canadians don't like paying prices higher than they have been used to paying. **But the prices we now pay are not realistic.**

If the government is truly serious about meeting its Kyoto commitment, it must quickly (and bravely) recognize the importance of price signals. As Michael Gerbis, President and Head of Clean Energy Business Unit, The Delphi Group, succinctly told us: *“Price talks.”<sup>(16)</sup>*

Another of our witnesses, Hans Konow, President and CEO of the

**... the government ... must quickly (and bravely) recognize the importance of price signals.**

**“Price talks”**  
(Michael Gerbis, 21:4)

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- (15) Michael Cleland, President and CEO, Canadian Gas Association, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 10 June 2003, Issue #17, 17:15.
- (16) Michael Gerbis, President and Head of the Clean Energy Business Unit, The Delphi Group, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 21 October 2003, Issue #21, 21:04.

Canadian Electricity Association, concurred:

*“When you look at energy efficiency in different markets, the first determinant is price; that is, the price signal to customers and the price of electricity in any given market.”<sup>(17)</sup>*

Anyone who has taken any interest in energy conservation knows that European consumers pay far more realistic prices for their energy than do North American consumers.

David McGuinty, former CEO and President of the National Round Table on the Environment and Economy, told us that he has had that experience:

*“I am a huge fan of price signals. I used to live in Rome, Italy, and I paid Canadian \$2.25 per litre for gas. I can assure you I was more careful about my driving than I am here. The price signals are a huge area to re-evaluate.”<sup>(18)</sup>*

### **WHO SHOULD PAY?**

Canadian energy prices reflect only a fraction of the real total costs to us....to all of us.... of delivering that energy. **There is no price in our marketplace of any goods or services involving the use of any form of energy that truly includes the costs of GHG emissions and their consequent environmental impact.**

The costs of greenhouse gas and other emissions that result from the combustion of fossil fuels are not borne directly by those who use the fuel. Society as a whole is burdened with the costs. To economists, these costs are known as negative externalities. Economic theory tells us that if costs were to be made internal to the activity in question (the user-pay principle), individuals and businesses would receive a more realistic price signal and would be able to adjust their consumption accordingly.

Overloading the environment with GHGs and other pollutants has not historically carried a direct cost to the offender. So the true environmental costs have generally not been reflected in the prices of goods and services, including energy. Mr. McGuinty described the problem in the following words:

**European consumers pay far more realistic prices for their energy than do North American consumers.**

**...environmental costs have generally not been reflected in the prices of goods and services, including energy.**

(17) Hans Konow, President and CEO, Canadian Electricity Association, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 3 April 2003, Issue #11, 11:29.

(18) McGuinty (2003), 17:39.



*“Canadians understand that if they want education systems, they have to pay. If they want health care they have to pay. If they want infrastructure, they have to pay for that too. However, they want a free environment, and they do not want to pay for it”.*<sup>(19)</sup>

He added that the Kyoto Protocol offers a starting point for addressing the need to come to terms with footing the bill for environmental costs:

*“We now have to move across a line in economic thinking where we must begin internalising costs that remain external. This is what the Kyoto Protocol has done for us. The Kyoto Protocol is, as they say on Sesame Street: ‘One thing is not like the others’.”*

The Kyoto Protocol has done something crucial to environmental recovery. It has placed a dollar value on carbon.<sup>(20)</sup> Carbon costs us. **It costs us dearly.**

### **GETTING EVERYONE ON SIDE**

We have come to expect low energy prices. This reality is one of the most significant barriers to the success of the One-Tonne Challenge and the whole Kyoto endeavour. Your Committee understands how politically difficult it will be to address this reality. But it is not a minor issue. Bold policies are called for. The Canadian public will have to be better informed if we are all to be fully convinced of the need for change. But once the information is out there, if it doesn't bring results by itself, then governments must be ready to implement other policies that will truly bring change.

Some of us will change our habits simply on the basis of having received information that our personal sacrifice is in everyone's best interests. Some of us at the other end of the spectrum will adamantly resist changing our habits unless and until we see greater incentives.

And there is a middle group to which most of us likely belong – Canadians who see that the change to greater efficiency and conservation makes good sense, but who aren't willing to make that sacrifice unless they know that their neighbours are also sacrificing. Motivating that third group requires more than appeals for voluntary restraint. Motivating that third group requires measures to ensure that the vast majority of us will comply.

**The Kyoto Protocol has done something crucial to environmental recovery. It has placed a dollar value on carbon.**

**Motivating ... requires measures to ensure that the vast majority of us will comply.**

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(19) McGuinty (2003), 17:35.

(20) *Ibid.*

In other words, we need to be informed, but we also need to be pushed a bit. And there are precedents for prodding Canadians in the right direction. Canadians now return bottles and pop cans, not just because it makes good sense, but also because it pays. We participate in blue-box garbage recycling programs, both because it has become the socially correct thing to do and because many municipalities are tough about making sure that we comply with their rules. In these cases, governments invoked incentives to help us all along in doing the right thing. And then there's smoking in public places.

**...we need to be informed, but we also need to be pushed a bit.**

It is going to take a combination of measures to make Canadians more vigilant about our excessive use of energy. Your Committee believes that there is one certainty here – consciousness – raising isn't going to do the trick on its own. As John Dillon, Vice President, Policy and Legal Counsel, Canadian Council of Chief Executives, pointed out:

**...consciousness-raising isn't going to do the trick on its own.**

*“There is relatively little appetite in this country for new energy taxes, or indeed higher energy prices. Yet, without that kind of signal, how will consumers make the necessary changes?”<sup>(21)</sup>*

We believe that unless energy prices more closely reflect the **true** economic and social costs of producing and delivering that energy, it will not be possible to convince individual Canadians that energy efficiency and energy conservation are urgently important, and that we all as individuals must do something about them. **Getting the prices right should be a priority for all orders of government, and the Government of Canada must provide the necessary leadership.**

#### **Recommendation #1:**

**The Committee recommends that the Government of Canada ensure that energy prices more realistically reflect all the costs, including environmental costs, associated with the production and use of energy.**

Various other fiscal measures could also be introduced to further encourage energy-efficient behaviour and the uptake of energy-efficient technologies. The following section looks at what some of those fiscal measures might be.

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(21) John Dillon, Vice President, Policy and Legal Counsel, Canadian Council of Chief Executives, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 3 April 2003, Issue #11, 11:34.

One way or another, the Government of Canada must promote the creation of environmentally-friendly energy options for Canadians. It must show us that, in the long run, those options will save us all money. And it needs to ensure that Canadians take advantage of those options in a way that turns the One-Tonne Challenge from a pipe dream into a reality.

It is a very good thing that governments in Canada are beginning to move in that direction. Right now they are talking to Canadians about changing their habits. Our governments are talking the talk. It is time for them to start walking the walk.

***Our governments are talking the talk. It is time for them to start walking the walk.***



## CHAPTER THREE: THE FEDERAL TOOL BOX

### LEVERS

The Government of Canada possesses fiscal tools that could help induce Canadians to reduce greenhouse gas emissions. Very little use is being made of those tools. David McGuinty, formerly of the National Round Table on the Environment and Economy, argued that:

*“The basic fundamental truth – and this will come as no surprise to most of you – is that our use of tax and other economic instruments to positively effect outcomes on climate change is weak. This situation means that Canadian governments, and I stress governments, have not capitalized on the potential major impact that a creative and concerted use of fiscal policy can have on addressing climate change.”<sup>(22)</sup>*

We found strong consensus among witnesses that incentives are needed to change the behaviour of individuals and help achieve Canada’s Kyoto goals. In fact, financial incentives would be the single most effective lever that governments could use to get Canadians to respond to the One-Tonne Challenge.<sup>(23)</sup> In response to questioning from the Committee, The Honourable David Anderson, former Minister of the Environment, agreed that financial incentives had proven themselves over the centuries:

*“Your premise, as I am sure Senator Buchanan would agree, comes from that great Scottish economist Adam Smith. People respond very well to financial incentives, and that is the best way to achieve goals.”<sup>(24)</sup>*

The Government of Canada has not been completely negligent in providing incentives. Financial incentives currently being offered for home retrofits will help Canadians meet the One-Tonne Challenge.<sup>(25)</sup>

**“...our use of tax and other economic instruments to positively effect outcomes on climate change is weak.”**  
(David McGuinty, 17:32)

**“People respond very well to financial incentives, and that is the best way to achieve goals.”**  
(David Anderson, 12:65)

(22) McGuinty (2003) 17:32.

(23) Bramley (2003), 10:39-40; and Louise Comeau, Director, Centre for Sustainable Community Development, Federation of Canadian Municipalities, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 8 May 2003, Issue #14, 14:51.

(24) David Anderson, former Minister of the Environment, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 4 April 2003, Issue #12, 12:65.

(25) The program offers grants to cover part of the costs homeowners incur in improving the energy efficiency of their houses. The amount of the grant is tied to the actual energy savings achieved. Those savings are calculated by having both a pre and post-improvement energy audit performed by

This is the first national program since Kyoto to offer direct incentives to help us reduce our greenhouse gas emissions. The government should monitor this program very closely to determine its impact and cost-effectiveness, in keeping with the admonition of the Office of the Auditor General.

As part of its examination of the One-Tonne Challenge, your Committee heard from Ms. Johanne Gélinas, Commissioner of the Environment and Sustainable Development in the Office of the Auditor General of Canada, who discussed with us the chapter of her 2003 report to the House of Commons entitled *Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases*. The Commissioner told the Committee that her review of these few selected programs, designed to reduce GHG emissions from the transportation sector, should serve as "... an early warning to the federal government. It needs to improve how it sets performance targets, measures them, and reports on them to Canadians."

What else can the Government of Canada do to promote the One-Tonne Challenge? Get sales clerks involved? Maybe. Prodding the people who sell cars and stoves and washing machines to get behind the One-Tonne movement was among the suggestions we heard. A salesperson who steers a consumer toward a measurably more efficient product, for instance, might get a larger (and presumably subsidized) commission.<sup>(26)</sup>

Other witnesses focused on consumers. The United States provides financial incentives to encourage the purchase of hybrids and other advanced, low-emission vehicles, why does Canada not? Louise Comeau, Director of the Centre for Sustainable Community Development, Federation of Canadian Municipalities, decried the government's "timid" approach to financial incentives:

*"There need to be strong incentives at the federal level. The kinds of incentives that we have today are minimal and timid. If you buy a hybrid vehicle in the U.S., you get a \$2,000 rebate. We need a \$2,000 rebate to buy hybrid vehicles in Canada. If you want to make the shift from SUV purchases to more efficient vehicles, you have to give an incentive to the consumer. We should offer incentives to get people when they are in the store and target them on information .... There is much that can be done to move the consumer*

**"The kinds of incentives that we have today are minimal and timid."**  
(Louise Comeau, 14:51)

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qualified agents. Further program details are available at: <http://oee.nrcan.gc.ca/houses-maisons/english/homeowners/grant/question.cfm>

- (26) John Nyboer, Ecological Economist, Simon Fraser University, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 25 March 2003, Issue #10, 10:29-10:30.

*along, but I would not argue that it is through general education. We will get better results when it is targeted at point of purchase and includes incentives for both the consumer and the retailer.’<sup>(27)</sup>*

Several witnesses advocated the “greening up” of Canada’s tax system to encourage Canadians to be more energy-efficient. Former Environment Minister David Anderson acknowledged that:

*“There are real opportunities for reductions and the use of the tax system to encourage energy savings. ... We must spend some time determining what we can do to green up the tax system.”<sup>(28)</sup>*

“Spend some time”? Maybe. But your Committee argues that the government should not spend **too** much time coming up with workable fiscal incentives. The end of the first Kyoto commitment period is only eight years away, and the evidence suggests that **the One-Tonne Challenge has yet to play its proper role** in stimulating more intelligent and efficient energy consumption. **It needs a boost...a kickstart.**

Better use of the tax system in the interest of improved energy efficiency is on the agenda of the National Round Table on the Environment and the Economy (NRTEE). A current NRTEE study calls for “ecological fiscal reform,” with specific reference to the energy sector. David McGuinty described NRTEE’s focus:

*“We also have a program on ecological fiscal reform on energy. We are looking at how fiscal policy can be used over the long term to promote the reduction of carbon emissions from Canadian energy systems, both in absolute terms and as a ratio of the Canadian GDP... Those sectors are: hydrogen, the hydrogen economy; energy efficiency, what we can be doing from a fiscal perspective to drive up energy efficiency in Canada; and renewable energy.”<sup>(29)</sup>*

Your Committee intends to follow the Round Table’s progress with great interest. The NRTEE is doing valuable work on these issues, and we urge all governments to pay close attention.

The Committee heard an argument that the federal Goods and Services Tax (GST) could be used to promote energy efficiency. The GST could be removed on products that meet or exceed certain baseline energy-

**“We must spend some time determining what we can do to green up the tax system.”**  
(David Anderson, 12:64-65)

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(27) Comeau (2003), 14:51.

(28) Anderson (2003), 12:64-65.

(29) McGuinty (2003), 17:32.

efficiency standards, or a rebate could be offered.<sup>(30)</sup> Alternatively, the GST could be higher on those products deemed to use excessive energy.

Surely – given Canadians’ distaste for the GST – a sliding-scale GST would prompt more intelligent purchases. The Ontario government has been more adventuresome than its federal counterpart in this area. Ontarians who purchased ENERGY STAR®-qualified refrigerators, dishwashers and clothes washers between November 26, 2002 and March 31, 2004 were eligible to receive a rebate equivalent to the provincial sales tax (PST).<sup>(31)</sup> The Government of Saskatchewan also offers a provincial sales tax rebate for ENERGY STAR®-qualified refrigerators, freezers, dishwashers and clothes washers sold on or after October 1, 2003.

The provincial programs have not yet been fully evaluated. From a government’s perspective any such tax rebate scheme would of course result in some foregone revenue. Exempting or lowering the GST on energy-efficient products could cost the federal government more than it is willing to spend. But increasing the GST on energy-inefficient products could make up the difference. This sort of revenue-neutral tax incentive could well prove itself to be a cost-effective way of “greening the tax system.”

So-called “feebates” have the potential to accomplish the same end.<sup>(32)</sup> Under such a plan, those who purchase fuel-inefficient vehicles would pay a fee. Those who purchase fuel-efficient vehicles would receive a rebate. Fees and rebates could be established as fixed lump sums, or determined on a sliding scale according to a particular vehicle’s fuel economy. Feebate programs could also be designed to be revenue-neutral.

Whatever fiscal mechanisms are used, the government should get moving on using fiscal policy to address the problem of greenhouse gas emissions. The tax system can – and should – be applied to move the

**...the federal Goods and Services Tax (GST) could be used to promote energy efficiency.**

**Whatever fiscal mechanisms are used, the government should get moving on using fiscal policy to address the problem of greenhouse gas emissions.**

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(30) Nyboer (2003), 10:29.

(31) The rebate was also available on ENERGY STAR®-qualified freezers sold between January 1, 2003 and March 31, 2004. ENERGY STAR® is an international symbol of energy efficiency that helps consumers to quickly and easily identify energy-saving home appliances and other energy-using equipment. ENERGY STAR® identifies products as the highest-efficiency performer in their category. It was introduced in 1992 by the U.S. Environmental Protection Agency (EPA) as a voluntary labelling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. For more information, see <http://www.energystar.gov> and <http://oee.nrcan.gc.ca/energystar/english/consumers/estar.cfm>.

(32) Nyboer (2003), 10:30.



country towards a less GHG-intensive future.

**Recommendation # 2:**

The Committee recommends that the Government of Canada offer a five-year GST moratorium on the retail purchase of all energy-saving and energy efficient consumer products (excluding motor vehicles – see Recommendation # 4) and on all renewable-energy equipment. Surcharges on inefficient products should be introduced to make this measure revenue neutral for the government.

**Recommendation # 3:**

The Committee recommends that the provinces introduce a similar five-year provincial sales tax moratorium. Discussions with the provinces should not be considered a reason to delay an immediate start to the federal tax realignment.

**Recommendation # 4:**

The Committee recommends that buyers of new, energy-efficient vehicles (including hybrid vehicles) receive graduated rebates of up to \$2,000 from the Government of Canada. To make this measure revenue neutral for the government, buyers of fuel-inefficient vehicles should pay a clearly identified, point-of-purchase surcharge.

**Recommendation # 5:**

The Committee recommends that the Government of Canada re-examine all other fiscal policies to favour energy-efficiency. As one example, the Government should give employers who provide workers with transit passes the same favourable tax treatment now granted to employers who provide staff with company cars or light trucks.

***REGULATORY REFORM***

The power to regulate is another powerful government tool for altering personal behaviour when there is an imperative. We are now faced with such an imperative - changing Canadians' attitudes toward the use of energy.

Incentives will be an effective tool, but regulations are an important backup in changing our behaviour. Governments must ensure that energy-efficiency regulations applicable to consumer goods are effective without being unduly heavy-handed.

***The power to regulate is another powerful government tool for altering personal behaviour.***

Appropriate regulation can and should play an important role in helping us meet the One-Tonne Challenge.<sup>(33)</sup>

Many witnesses argued for new, and/or more stringent, regulations governing energy-efficiency standards for everything from new vehicles, appliances, and furnaces to buildings.<sup>(34)</sup> Tougher standards, said David Poch, a director of the Green Communities Association, would “be more effective than advertising/education.”<sup>(35)</sup>

**Appropriate regulation can and should play an important role in helping us meet the One-Tonne Challenge.**

### **A. Transportation: Our Half-Tonne Problem**

Regulatory changes would be the measure most likely to have an effect on what we drive and how we drive it. Our personal vehicles account for about half of the average Canadian’s greenhouse gas emissions. These emissions have been rising steadily over the past decade for two reasons: Canadians are driving more kilometres than ever before; and many of us are driving vehicles that are less fuel-efficient than they were in the late 1980s.

The rise in the popularity of light-duty trucks such as SUVs and minivans since the 1990s, has contributed to a marked increase in vehicular greenhouse gas emissions. We only need to look at our roads to see that these vehicles have become enormously and discouragingly popular. Gasoline prices have been relatively low in recent years, and too many of us have become dismissive about the need for fuel economy.

**...why are Canadian fuel consumption standards for cars the same as they were in 1988?**

That raises an important question. If there have been significant improvements in vehicle technology (which there have) and if there is a growing awareness of the need to reduce greenhouse gas emissions (which there is), then why are Canadian fuel consumption standards for cars the same as they were in 1988? Why have the standards for light trucks not changed since 1996?

The North American automotive industry is highly integrated. So it is not surprising that Canada’s fuel consumption standards mirror those of the U.S. In your Committee’s meetings in Washington, it was made clear to us that U.S. federal legislators are in no hurry to introduce tighter standards.

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(33) Bramley (2003), 10:35.

(34) David Poch, Member, Board of Directors, Green Communities Association, Written Response to Questions Raised by Senator Banks, Submitted to the Standing Senate Committee on Energy, the Environment and Natural Resources, June 2003.

(35) *Ibid.*

Mandatory U.S. Corporate Average Fuel Economy (CAFE) standards for cars and light trucks were introduced in the wake of the oil crisis of 1973-1974.<sup>(36)</sup> Automakers that do not meet these standards must pay a fine. But despite the technological advances in the ensuing thirty years, the standards have not kept up.

To avoid the introduction of similar mandatory legislation in Canada, vehicle manufacturers struck an agreement with the Canadian government to voluntarily match American CAFE. This satisfied the Canadian government of the time. Consequently in Canada, the Motor Vehicle Fuel Consumption Standards Act – although passed by Parliament and given Royal Assent in 1981 – has never been proclaimed.

Current voluntary Canadian standards require a fleet average of 8.6 litres (or less) per 100 kilometres for cars, and 11.4 litres (or less) per 100 kilometres for light-duty trucks (i.e., vans, minivans, pick-up trucks and SUVs).

In the *Climate Change Plan for Canada*, the Government of Canada set a goal of negotiating a voluntary agreement with vehicle manufacturers to reduce the fuel consumption of new passenger vehicles by 25 per cent by the year 2010. The Government of Canada seems to have indicated that it is no longer willing to rely solely on U.S. standards that have become outdated and inadequate.

It is not clear what progress, if any, is being made in these negotiations. Your Committee is not convinced that the automobile industry is likely to comply voluntarily with a 25 per cent improvement in fuel efficiency standards. Improving these standards is arguably the most important measure that the Government of Canada could take to reduce greenhouse gas emissions in our transportation sector. There is no doubt that technologies already exist that could reduce fuel consumption in most light-duty motor vehicles. Matthew Bramley of the Pembina Institute for Appropriate Development, made that clear to the Committee:

*“Producers could, fairly easily, using existing technology, dramatically improve the fuel efficiency of new vehicles sold in Canada. The result would be that individuals would have correspondingly lower greenhouse gas emissions.”<sup>(37)</sup>*

**...the Motor Vehicle Fuel Consumption Standards Act – although passed by Parliament and given Royal Assent in 1981 – has never been proclaimed.**

**...technologies already exist that could reduce fuel consumption in most light-duty motor vehicles.**

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(36) Fuel consumption is typically expressed in litres per 100 kilometres (i.e., the amount of fuel it takes to travel a given distance, in this case, 100 kilometres). Fuel economy, on the other hand, is expressed in miles per gallon (i.e., the distance that can be travelled using a given amount of fuel, in this case, a gallon).

(37) Bramley (2003), 10:39.

However, unless governments mandate stricter fuel-consumption standards, technology innovation will be directed at making vehicles larger and more powerful, rather than at making vehicles that burn less fuel. An excellent opportunity to assist Canadians in reducing their greenhouse gas emissions will have been squandered.<sup>(38)</sup>

**Recommendation # 6:**

**The Committee recommends that the Government of Canada ensure that retail gasoline prices reflect all of the costs, including environmental costs, associated with the production and use of gasoline.**

**Recommendation # 7:**

**The Committee recommends that the Government of Canada introduce motor vehicle fuel consumption standards by 2010 that are 25 per cent more rigorous than they are now.**

Thanks to Canada's already high standards for consumer goods, Canadians have access to the most energy-efficient products in the world.<sup>(39)</sup> Governments should ensure, however, that higher standards are introduced as technology improves.

**Recommendation # 8:**

**The Committee recommends that, by 2010, the Government of Canada introduce energy-efficiency standards for all consumer goods (excluding motor vehicles – See Recommendation #7) that make Canadian standards equal to, or better than, the most stringent standards found in other industrialized countries.**

## **B. Renewable Energy**

For decades environmentalists and many economists have argued that the use of alternate, renewable energy sources should be encouraged. There are clear advantages to the use of such energy sources as wind,

***... unless governments mandate stricter fuel-consumption standards, technology innovation will be directed at making vehicles larger and more powerful, rather than at making vehicles that burn less fuel.***

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(38) A typical Canadian who drives 20,000 kilometres a year and operates a car that consumes, on average, 8.6 litres of fuel per 100 kilometres will use approximately 1,720 litres in the course of a year, releasing a little over 4 tonnes of carbon dioxide in the process. If this car were 25% more efficient, the individual would use 1,300 litres of fuel in the course of a year, releasing a little over 3 tonnes of carbon dioxide in the process, a reduction of approximately one tonne. Similarly, an individual who drives 20,000 kilometres a year and operates a light-duty truck that consumes, on average, 11.4 litres of fuel per 100 kilometres will use approximately 2,280 litres in the course of a year, releasing nearly 5.4 tonnes of carbon dioxide in the process. By driving a truck that is 25% more fuel-efficient, the same individual could reduce his or her greenhouse gas emissions by over 1.3 tonnes.

(39) MacLeod (2003), 9:19.

sun, biomass and small hydro developments. But there are also disadvantages associated with some of these sources. High initial costs are often correctly cited. But when long-term societal and environmental costs are mixed into the equation, those initial disadvantages become far less intimidating.

Some witnesses<sup>(40)</sup> argued that our country should establish mandatory standards for the inclusion of a specified percentage of renewable energy in the Canadian energy mix. This is already the case in the European Union and in thirteen American states.<sup>(41)</sup> The introduction of Renewable Energy Portfolio standards, as they are known, would moderate consumption of fossil fuels and reduce greenhouse gas emissions. This is a fertile area for technological innovation and offers significant export potential if Canadian companies are encouraged to innovate in this field.

**Recommendation # 9:**

**The Committee recommends that, by 2006, the Government of Canada introduce Renewable Energy Portfolio Standards for all federal operations.**

**Recommendation # 10:**

**The Committee also recommends that provincial, territorial and municipal governments adopt similar Renewable Energy Portfolio Standards to increase the percentage of Canadians' energy supply coming from renewable resources.**

***INVESTING IN INFRASTRUCTURE***

Canada's approach to transportation needs to be overhauled if we are to have a legitimate opportunity to meet the One-Tonne Challenge. If there is not a significant shift here, the One-Tonne Challenge will remain a public relations exercise.

Buying more fuel-efficient vehicles would help Canadians respond to the One-Tonne Challenge. So would driving less. But if we are to drive less, Canadians will want improved access to safe, affordable and convenient public transportation. Canada's municipalities need help in providing it.

***...our country should establish mandatory standards for the inclusion of... renewable energy in the Canadian energy mix.***

***Canadians will want improved access to safe, affordable and convenient public transportation. Canada's municipalities need help in providing it.***

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(40) Bramley (2003), 10:41; Comeau (2003), 14:53.

(41) See, for example, [http://www.ucsusa.org/clean\\_energy/renewable\\_energy/page.cfm?pageID=47](http://www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=47) and [http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/1-283/1\\_28320011027en00330040.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/1-283/1_28320011027en00330040.pdf) (in Europe RPFs are known as “natural indicative targets”).

They also need help in encouraging energy-efficient land-use patterns and waste-management practices.

Canada needs more investment from all orders of government in sustainable infrastructure. The Government of Canada already invests in municipal infrastructure through programs that include Infrastructure Canada, the Canada Strategic Infrastructure Fund, the Green Municipal Investment Fund and Green Municipal Enabling Funds.<sup>(42)</sup>

Witnesses told your Committee that the Government of Canada must do more “environmental targeting” with those investments. In its report *Environmental Quality in Canadian Cities: The Federal Role*, the National Round Table on the Environment and the Economy pointed out that:

*“Although Budget 2003 added \$2 billion to the Canada Strategic Infrastructure Fund and gave climate-change-related projects particular consideration, there is still no coherent approach to integrating consideration of urban environmental impacts in funding decisions.”<sup>(43)</sup>*

Environmental objectives can be achieved by tying federal infrastructure grants to the attainment of certain sustainability criteria. In order for those objectives to be achieved, it is also important that funding for infrastructure projects be both stable and long-term. The NRTEE report further states:

*“Federal municipal infrastructure investments must ensure maximum contributions to urban environmental improvements and the attainment of other federal objectives, such as reaching Kyoto targets...A new approach to federal funding for urban infrastructure is required – one that offers stable, long term funding, and is both flexible and results-oriented.”<sup>(44)</sup>*

This is just one example of why governments should be listening to the NRTEE. The Committee urges that governments adopt the NRTEE template for upgrading municipal infrastructure.

Direct government investment in infrastructure is critical to improving the quality of life of Canadians and helping to shape a climate-friendly environment.<sup>(45)</sup> Louise Comeau of the Federation of Canadian

***Environmental objectives can be achieved by tying federal infrastructure grants to the attainment of certain sustainability criteria.***

(42) National Round Table on the Environment and the Economy, *Environmental Quality in Canadian Cities: The Federal Role*, 2003, p. 37.

(43) *Ibid.*

(44) *Ibid.*

(45) Bramley (2003), 10:35.

Municipalities urged that greenhouse gas reduction requirements be incorporated into all government programs and initiatives, including the \$3 billion, 10-year infrastructure program announced in Budget 2003:

*“[T]here is a need to integrate greenhouse gas requirements into all programs and initiatives including the new 10-year infrastructure program. It would be unfortunate if that 10-year program now funded at \$3 billion, with increases over the 10-year period, were to fail to invest in greenhouse gas reductions.”<sup>(46)</sup>*

The Government of Canada seems, at least to some extent, to be starting to heed these messages. The Honourable Herb Dhaliwal, then Minister of Natural Resources, assured the Committee that climate change would be a criterion in future federal infrastructure investment decisions.

#### **Recommendation # 11:**

**The Committee recommends that the reduction of greenhouse gas emissions be designated as an essential criterion for all relevant federally funded infrastructure projects.**

### ***SUCCESS THROUGH PARTNERSHIPS***

While the One-Tonne Challenge is an initiative of the Government of Canada, its ultimate success or failure will depend on broadly-based partnerships. Many inducements for emission reduction should be designed and delivered by other orders of government, the private sector, and NGOs.

Your Committee heard from an array of those would-be partners. They outlined ways in which they felt they could contribute. We heard from representatives of utilities, municipal governments and community-based action groups. All are ready and willing to play a role in helping Canadians meet this challenge.

David McGuinty, then of the National Round Table on the Environment and the Economy, is quoted at the beginning of this report on the need for coordination among all orders of government in developing the fiscal measures needed to meet Canada’s obligations under the Kyoto Protocol.

Your Committee subscribes to those views, and believes, to borrow the words of Mr. McGuinty, and add some of our own, that if we are to succeed in the One-Tonne Challenge:

***While the One-Tonne Challenge is an initiative of the Government of Canada, its ultimate success or failure will depend on broadly-based partnerships.***

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(46) Comeau (2003), 14:36.

Canada urgently needs an overarching vision. It is the view of your Committee that this vision must include provisions for the prudent use of fiscal policy. There is at present in Canada no explicit alignment of fiscal policy to address the broad challenges posed by climate change. There is no alignment within the federal level, but more importantly, no alignment among all three orders of government. If you were to cut a vertical swath between the federal, provincial, and municipal governments, you would find measures that work at cross-purposes at the federal level, in the other orders of government, and among the three orders of government. Given the critical importance of our energy sector in the health of Canada's economy, and given the substantial climate-change challenges that lie ahead of us – Canada is committed to a reduction of 30 per cent of our greenhouse gas emissions by about 2012 – this is a situation that is very troubling for our country, and that greatly concerns your Committee.<sup>(47)</sup>

***There is at present in Canada no explicit alignment of fiscal policy to address the broad challenges posed by climate change.***

A rainbow of partnerships is going to be needed if there is to be any hope of meeting the One-Tonne Challenge. Utility companies will be key partners. These companies are uniquely positioned to deliver the right message directly to Canadian households.

Representatives of the Canadian Electricity Association (CEA) discussed their ongoing role in delivering energy-efficiency programs to individual Canadians and how they are working in tandem with Natural Resources Canada (NRCan) on the One-Tonne Challenge. Roy Staveley, Senior Vice-President of the CEA, said his organization was in a unique position to help:

***Utility companies ...are uniquely positioned to deliver the right message to Canadian households.***

*“... the Canadian Electricity Association reaches out to every household in Canada and, as a result, provides a good mechanism for delivering energy efficiency programming. CEA is actively supporting the delivery of these services in a number of ways.”<sup>(48)</sup>*

Mr. Staveley said that over the past decade the CEA's efficiency programs have reduced annual electricity demand by 5 million megawatt-hours - enough electricity to power a city the size of Victoria, B.C. or St. John's, Newfoundland and Labrador.

Under its existing programs the CEA anticipates an equally large reduction over the next 5 to 10 years. That would reduce greenhouse gas emissions by four megatonnes. A CEA survey shows that about half of

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(47) McGuinty (2003), 17:33.

(48) Roy Staveley, Senior Vice-President, Canadian Electricity Association, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 3 April 2003, Issue #11, 11:19.



Canadians are currently able to take part in a broad range of energy-efficiency programs.

While some provinces have fairly robust programs (e.g., British Columbia's Power Smart Program), there is no uniformity across the country. And, as Mr. Staveley noted, "Even those who have robust energy efficiency programs are saying they could do much more."<sup>(49)</sup> The Government of Canada seems to be alert to the potential inherent in this partnership. Again, in the words of Mr. Staveley:

*"[T]he federal government has approached us about the One-Tonne awareness-raising program. They would like to work with the electricity industry and use it as a delivery tool, in some fashion, to further that program. Again, we see both the electricity and gas industries as being effective delivery tools on a day-to-day basis for raising and reinforcing that awareness."*<sup>(50)</sup>

Utilities will encourage wiser use of household energy if governments get behind what the industry is already doing, to better leverage the investment that has already been made. From the utilities' point of view, investments in energy-efficiency programs must be profitable, and cooperation between utilities and provincial regulatory bodies must ensure a fair return. According to Mr. Staveley:

*"Individual companies will not invest in energy efficiency programs unless they can either receive full cost recovery through their rate base or earn a rate of return on a program that is equal to or better than other investment opportunities at which they may be looking. This requires the utility to develop a business case to show that energy efficiency programming can achieve energy savings at a lower cost than alternative solutions such as adding new generation capacity and infrastructure to meet growing demand."*<sup>(51)</sup>

Michael Cleland, President of the Canadian Gas Association (CGA), had a similar message. He said the CGA has extensive expertise in reducing household energy consumption, and that the Government of Canada can work with the CGA to leverage their respective investments in meeting the One-Tonne Challenge. Like the CEA, the CGA is currently negotiating a partnership arrangement with NRCan to help meet the One-Tonne Challenge. Mr. Cleland outlined the issues as follows:

**"...we see both the electricity and gas industries as being effective delivery tools on a day-to-day basis for raising and reinforcing that awareness."**  
(Roy Staveley, 11:19)

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(49) *Ibid.*

(50) *Ibid.*, 11:21.

(51) *Ibid.*, 11:19-20.

*“Nearly one-third of our total annual primary energy consumption comes from gas, and more than two-thirds of gas emissions occur at the burner chip. Our argument is that [this] is the big opportunity area in which to look for reductions. Consumers do need to play a role, but in order for them to do so we need to provide them support, as does government.*

*The natural gas industry has a lot of experience in demand side management, DSM, programs. There are opportunities to get leverage on that experience, as well as on the extensive experience that the federal government has with these programs. We are the interface with more than five million customers.*

*...With that in mind, we have been working with Natural Resources Canada to develop an industry-government partnership. We think that if government and industry can work together we can achieve synergies – leverage, if you will – from our respective efforts and take the reductions beyond what current programs do. We can work together to address regulatory barriers and ultimately to assist consumers to make smart and efficient decisions in their natural gas use.*

*...The potential benefits of this are pretty clear. We can help the government increase the reach of its programs by getting directly to the customers. We can improve the effectiveness of them through our experience. Finally, the government can demonstrate leadership by creating programs that assist Canadians to meet the One-Tonne Challenge.’<sup>(52)</sup>*

**“...We are the interface with more than five million customers...We can help the government increase the reach of its programs by getting directly to the customers.”**

**(Michael Cleland, 17:7-8)**

## **A. The California Experience**

Your Committee travelled to California where it met with representatives of the largest utility in the state – Pacific Gas and Electric (PG&E). PG&E outlined how the State of California works successfully with utilities to deliver energy-efficiency programs. These arrangements depend on secure, long-term funding. The State of California is not in every respect a model that we recommend emulating; but there are some very good programs that have been successful there.

California’s energy-efficiency programs are funded through a Public Goods Charge of about 1.0 per cent on electricity bills and a Demand Side Management Charge of 0.7 per cent on natural gas bills. These surcharges apply to all state consumers.

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(52) Cleland (2003), 17:7-8.

Those charges generate about \$540 million US a year in revenue that the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) can use for “public benefits.” Of this amount, about \$220 million US is allocated for energy-efficiency programs administered by the CPUC. Every year, the CPUC approves the energy-efficiency program plans of the four large utilities in California and disburses the funds to them.<sup>(53)</sup> The utilities are then responsible for carrying out the energy-efficiency programs within their service area.<sup>(54)</sup>

The CEC performed a detailed assessment of the costs and benefits of the efficiency programs throughout the 1990s. The assessment found that, rather than being a drain on the economy, the investment in energy efficiency had actually returned net benefits of approximately \$3 billion US during the 1990s. Officials estimated that these programs may have saved Californians another \$1 billion US when they were being otherwise gouged during the 2001 California energy crisis. Without the programs their fate would have been even worse.<sup>(55)</sup>

#### **Recommendation # 12:**

**The Committee recommends that all orders of government continue to take full advantage of the offers made by Canada’s energy distributors to assist in delivering the One-Tonne Challenge message and related programs.**

#### **Recommendation # 13:**

**The Committee recommends that, in order to fund stable, long-term energy efficiency programs, the Government of Canada and the provincial and territorial governments introduce energy surcharges.**

## **B. Partnering with Municipalities**

The Government of Canada must also enlist the expertise and cooperation of Canada’s municipalities, many of which are already engaged in climate change-related programs. Louise Comeau, Director

**...rather than being a drain on the economy, the investment in energy efficiency had actually returned net benefits of approximately US\$3 billion during the 1990s.**

(53) The four utilities are Pacific Gas and Electric, Southern California Edison, Southern California Gas Company and San Diego Gas and Electric.

(54) California Public Utilities Commission, Energy Efficiency Program Funding, [http://www.cpuc.ca.gov/static/industry/electric/energy+efficiency/ee\\_funding.htm](http://www.cpuc.ca.gov/static/industry/electric/energy+efficiency/ee_funding.htm)

(55) Natural Resources Defence Council, *California Policies to Support Efficiency and Renewable Energy*, Presentation to the Standing Senate Committee on Energy, the Environment and Natural Resources, 20 March 2003, p. 6; and California Energy Commission, *The Energy Efficiency Public Goods Charge Report: 1999*.

of the Centre for Sustainable Community Development of the Federation of Canadian Municipalities, was blunt about FCM's assessment of its own importance to the process:

*"[M]unicipal governments, directly and indirectly, control or influence up to one-half of Canada's greenhouse gas emissions and [that] municipal governments could directly and indirectly contribute up to one-quarter of the Kyoto target.*

*Municipal governments can reduce greenhouse gas emissions through land-use planning, energy and transportation planning, transit investments, infrastructure design, green procurement, building retrofits, water conservation, solid waste diversion, renewable energy investments and engagement of the citizens. Essentially, you cannot do it without us.*<sup>(56)</sup>

Ms. Comeau noted the following conclusion from a 2003 meeting of the FCM Partners in Climate Change communities:

*"The key conclusion was that federal and provincial-territorial governments must partner with municipal governments to implement the Kyoto Protocol. Municipal governments have essential experience in citizen engagement and should be a critical partner in delivering the One-Tonne Challenge and other public awareness programs."*<sup>(57)</sup>

The FCM has already partnered with the federal government in addressing climate change, and the Government of Canada should keep building on this relationship. In 2000, and again in 2001, the FCM received endowments from the federal government totalling \$250 million to establish the Green Municipal Funds. These two separate funds invest in green infrastructure by providing grants of up to one-half the cost of feasibility studies (Green Municipalities Enabling Fund) and low-interest loans for projects (Green Municipalities Investment Fund).

Already these funds have approved \$40 million in grants and loans and leveraged an additional \$135 million in economic activity. About one-half of the approved projects are designed specifically to reduce GHG emissions, and the FCM expects that projects funded under this program will contribute 10 megatonnes of greenhouse gas reductions during the first Kyoto commitment period. If the government of Canada continues to fund the program, the FCM believes that communities should be able to contribute an additional 10 megatonnes

**"[M]unicipal governments, directly and indirectly, control or influence up to one-half of Canada's greenhouse gas emissions..."**

**"Essentially, you cannot do it without us."**  
(Louise Comeau, 14:34)

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(56) Comeau (2003), 14:34.

(57) *Ibid.*, 14:35-36.

of emissions reductions. This is clearly a partnership that the Government of Canada should strengthen.

**Recommendation # 14:**

**The Committee recommends that the Government of Canada continue to support the Federation of Canadian Municipalities' Partners for Climate Protection Program, and to expand its focus by engaging municipal governments in the design and execution of the One-Tonne Challenge.**

### **C. Mobilizing NGOs**

Your Committee met with a representative of the Green Communities Association (GCA), a group of non-profit organizations that delivers environmental services in many communities. We believe that these 'grassroots' groups can be very useful in delivering specific energy-efficiency programs to Canadian households.

David Poch, a member of the CGA's board of directors, said his organization is:

*"...trying to develop what we would call a mature partnership with the federal government to take it to the next step in our joint effort to implement the Kyoto Protocol."<sup>(58)</sup>*

GCA members have been the leading delivery agencies for the NRCan EnerGuide for Houses program. Under the terms of that program, homeowners agree to (and share the cost of) an energy audit of their home. Qualified inspectors do the work and provide recommendations as to how the owner can improve the energy performance of the home and thus save money on utility bills.

GCA members have done over 120,000 such energy audits over the past decade. They have identified two main stumbling blocks in promoting the program: reaching people and getting them to invest in the audits, and convincing them to spend the money required to make the efficiency improvements identified through the audit. The cost of improvements was a major deterrent.

With sponsorship funds from Enbridge, an Ontario gas utility, and from the Ontario government, the GCA carried out a pilot project aimed at addressing the cost issue. Under this modified EnerGuide program, homeowners who undertook improvements had a second audit

**...these 'grassroots' groups can be very useful in delivering specific energy-efficiency programs to Canadian households.**

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(58) David Poch, Member, Board of Directors, Green Communities Association, Proceedings of the Standing Senate Committee on Energy, the Environment and Natural Resources, 17 June 2003, Issue #18, 18:1.

following the completion of the work. They were rewarded with a financial incentives related to the improvement in the energy performance of the house.

Under the original EnerGuide program, the average participant made improvements that reduced emissions by about one tonne per year. With the financial incentives in place, more improvements were made and the amount of reduced emissions tripled. For the 300 homes that took part in the pilot project, the cost per tonne of carbon savings was not, in fact, a cost but a net savings of \$107 per tonne.<sup>(59)</sup>

This pilot project was the model that the federal government chose to follow in its August 2003 announcement of the first round of funding for the One-Tonne Challenge under its Climate Change Action Plan. Mr. Poch's testimony provided the Committee with a perfect example of how important it is to use local, community-based groups to deliver these kinds of programs. As he noted:

*"We engage Canadians where they live, in their homes and communities. We deliver a wide range of results-oriented environmental programs ... The heart of the Green Communities' model is the community-based feature. While we may have national programs, they are delivered at a community level. They are tailored to the particular communities.*

*... The community-based situation allows for partnerships with the various community partners – municipal governments, local utilities, church groups, you name it. The strength of this is summed up in the phrase, "community-based social marketing." We are able to pitch our ideas to the public in a way that commercial enterprises or government on its own cannot. We are embedded within the community."<sup>(60)</sup>*

Mr. Poch said that if the Government of Canada intends to build on these initial successes, it must invest modest but stable and predictable funding in supporting what he called "community organizational infrastructure."

#### **Recommendation # 15:**

**The Committee recommends that the Government of Canada commit to stable funding for community action groups that have demonstrated a capacity to develop and deliver household energy-saving programs.**

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(59) *Ibid.*, 18:4.

(60) *Ibid.*

**"We engage Canadians where they live, in their homes and communities."**

(David Poch, 18:21)

The Government of Canada has committed our country to reach reasonable objectives under the Kyoto Protocol. But your committee believes that we will not reach Kyoto goals or succeed in the One-Tonne Challenge without the active and determined engagement of our partners including the Provinces, Territories, utilities, private companies, NGOs and most importantly, consumers.

The provinces and territories are responsible for regulating the utility sector and for establishing building standards. Utilities, public or private, deal directly with consumers and are uniquely positioned to promote energy-efficient living. Municipalities, because they are responsible for waste management, land-use, transportation planning, and a variety of other energy-related activities, play a critical role in reducing greenhouse gas emissions. These partnerships are indispensable.

***These partnerships are  
indispensable.***





## CONCLUSION

The One-Tonne Challenge is an essential component of Canada's effort to meet our Kyoto objectives. It is essential because it seeks to change not only our wasteful habits, but our attitudes as well.

It would be pleasant to think that if all Canadians were aware of the urgency of the problem, we would each respond by doing everything in our power to reduce harmful emissions, but this is the real world. Some of us need informing, some of us need coaxing, and some of us need to be pushed. To do this, the Government of Canada will have to make full use of all its available tools, including fiscal and regulatory policies.

Only an intelligent combination of information, incentives, regulations and cooperation will get the One-Tonne job done. Without all of these, the likelihood of failure looms large.

There is a misconception on the part of many Canadians that when it comes to climate change, the only way to fix things is on a very large scale. Power plants and industries, most of us agree, must reform their ways. But, as individuals, we don't want to hear about it. "Anything one little consumer can do," the argument goes, "is insignificant."

Not true. There will be nothing insignificant about the combined efforts of millions of us making each of our homes, vehicles and lifestyles more compatible with the environment; the environment that we will leave to our grandchildren.

The first tentative steps have already been taken, but much remains to be done. Canadian businesses and industries have already begun to do their part. Politicians and bureaucrats must be honest about what motivates people. They are also going to have to be brave. Energy prices that more accurately reflect associated environmental costs must be part of the equation. There is no getting around the fact that higher energy prices will significantly diminish consumption and help people to use energy more wisely.

Now it is time for individual Canadians to do their part. That is the One-Tonne Challenge.

The Kyoto commitment period starts in less than four years. There is no more time to waste.

Let's get on with it!

***Only an intelligent combination of information, incentives, regulations and cooperation will get the One-Tonne job done.***

***The first tentative steps have already been taken.***

***Let's get on with it!***



# RECOMMENDATIONS

## **Recommendation # 1:**

The Committee recommends that the Government of Canada ensure that energy prices more realistically reflect all the costs, including environmental costs, associated with the production and use of energy.

## **Recommendation # 2:**

The Committee recommends that the Government of Canada offer a five-year GST moratorium on the retail purchase of all energy-saving and energy efficient consumer products (excluding motor vehicles – see Recommendation # 4) and on all renewable-energy equipment. Surcharges on inefficient products should be introduced to make this measure revenue neutral for the government.

## **Recommendation # 3:**

The Committee recommends that the provinces introduce a similar five-year provincial sales tax moratorium. Discussions with the provinces should not be considered a reason to delay an immediate start to the federal tax realignment.

## **Recommendation # 4:**

The Committee recommends that buyers of new, energy-efficient vehicles (including hybrid vehicles) receive graduated rebates of up to \$2,000 from the Government of Canada. To make this measure revenue neutral for the government, buyers of fuel-inefficient vehicles should pay a clearly identified, point-of-purchase surcharge.

## **Recommendation # 5:**

The Committee recommends that the Government of Canada re-examine all other fiscal policies to favour energy-efficiency. As one example, the Government should give employers who provide workers with transit passes the same favourable tax treatment now granted to employers who provide staff with company cars or light trucks.

## **Recommendation # 6:**

The Committee recommends that the Government of Canada ensure that retail gasoline prices reflect all of the costs, including environmental costs, associated with the production and use of gasoline.

## **Recommendation # 7:**

The Committee recommends that the Government of Canada introduce motor vehicle fuel consumption standards by 2010 that are 25 per cent more rigorous than they are now.

**Recommendation # 8:**

The Committee recommends that, by 2010, the Government of Canada introduce energy-efficiency standards for all consumer goods (excluding motor vehicles – See Recommendation #7) that make Canadian standards equal to, or better than, the most stringent standards found in other industrialized countries.

**Recommendation # 9:**

The Committee recommends that, by 2006, the Government of Canada introduce Renewable Energy Portfolio Standards for all federal operations.

**Recommendation # 10:**

The Committee also recommends that provincial, territorial and municipal governments adopt similar Renewable Energy Portfolio Standards to increase the percentage of Canadians' energy supply coming from renewable resources.

**Recommendation # 11:**

The Committee recommends that the reduction of greenhouse gas emissions be designated as an essential criterion for all relevant federally funded infrastructure projects.

**Recommendation # 12:**

The Committee recommends that all orders of government continue to take full advantage of the offers made by Canada's energy distributors to assist in delivering the One-Tonne Challenge message and related programs.

**Recommendation # 13:**

The Committee recommends that, in order to fund stable, long-term energy efficiency programs, the Government of Canada and the provincial and territorial governments introduce energy surcharges.

**Recommendation # 14:**

The Committee recommends that the Government of Canada continue to support the Federation of Canadian Municipalities' Partners for Climate Protection Program, and to expand its focus by engaging municipal governments in the design and execution of the One-Tonne Challenge.

**Recommendation # 15:**

The Committee recommends that the Government of Canada commit to stable funding for community action groups that have demonstrated a capacity to develop and deliver household energy-saving programs.

## APPENDIX A:

### Where To Find Tips For Individual Canadians On Saving Energy And Reducing Greenhouse Gas Emissions

#### Sources:

<http://www.climatechange.gc.ca>

[http://www.climatechange.gc.ca/plan\\_for\\_canada/challenge/](http://www.climatechange.gc.ca/plan_for_canada/challenge/)

Information on the One Tonne Challenge can also be obtained by telephoning 1-800-O-CANADA.

#### Other Web resources:

Natural Resources Canada's Office of Energy Efficiency, *Energy and Money-Saving Tips*, available on the web at <http://oee.nrcan.gc.ca/tips/introduction.cfm?Text=N&PrintView=N>. This booklet offers 365 energy efficiency tips for individuals and families. A copy of the brochure can also be obtained by telephoning 1-800-O-CANADA.

Two other Canadian Web sites also offer helpful suggestions for individuals and families wishing to reduce their GHG emissions. They are both sponsored in part by the Government of Canada. The first is a GHG emissions calculator, available at: <http://onesstonne.ca>. The second is the Pembina Institute's <http://www.climatechangesolutions.com>.



## APPENDIX B:

### Witnesses heard and submissions received during the Second Session of the 37<sup>th</sup> Parliament:

Name of Organization	Name of Witness	Date of Appearance
<b>B.C. Hydro — Power Smart</b>	Ted Ferguson, Environmental Coordinator and Greenhouse Gas Management	June 17, 2003
<b>Canadian Chamber of Commerce</b>	Michael Murphy, Senior Vice-President, Policy	April 3, 2003
<b>Canadian Council of Chief Executives</b>	John Dillon, Vice-President, Policy and Legal Counsel	April 3, 2003
<b>Canadian Electricity Association</b>	Hans Konow, President & Chief Executive Officer	April 3, 2003
	Roy G. Staveley, Senior Vice-President	
<b>Canadian Gas Association</b>	Michael Cleland, President	October 2, 2003
	Bryan Gormley, Director, Policy and Economics	
	Michael Cleland, President	June 10, 2003
	Brendan Hawley, Communications and Marketing Management	
<b>Climate Change Secretariat</b>	David Oulton, Head	February 25, 2003 and April 8, 2003
<b>Delphi Group</b>	Michael B. Gerbis, President and Head of the Clean Energy Business Unit	October 21, 2003
	Melissa L. Creede, Vice-President and Head of Climate Change	

<b>Environment Canada</b>	The Honourable David Anderson, P.C., M.P., Minister of the Environment	April 10, 2003
	Mr. Alan Nymark, Deputy Minister	
	Norine Smith, Assistant Deputy Minister, Policy and Communications	
	Karen Anderson, Acting Director General, Administrative Services and Environmental Management Directorate	February 18, 2003
	Berny Latreille, Director, Environmental Affairs	
	Paul Fauteux, Director General, Climate Change Bureau	February 25, 2003
<b>Federation of Canadian Municipalities</b>	Louise Comeau, Director, Centre for Sustainable Community Development	May 8, 2003
<b>Green Communities Association</b>	David Poch, Member, Board of Directors	June 17, 2003
<b>HTC Hydrogen Thermochem Corporation</b>	Lionel Kambeitz, Chairman and CEO	October 23, 2003
<b>National Round Table on the Environment and the Economy (NRTEE)</b>	David McGuinty, CEO and President	June 12, 2003
	Alex Wood, Policy Advisor	
<b>Natural Resources Canada</b>	The Honourable Herb Dhaliwal, P.C., M.P. and Minister of Natural Resources	April 8, 2003
	Howard Brown, Assistant Deputy Minister, Large Industrial Emitters Group	
	Bryan Cook, Director General, CANMET Energy Technology Centre	
	Neil MacLeod, Director General, Office of Energy Efficiency	



	Jim Comtois, Chief, Industrial, Commercial and Institutional Branch	February 18, 2003
	A.C. Taylor, Director, Transportation and Energy Use	
	Neil MacLeod, Director General, Office of Energy Efficiency	February 25, 2003 and February 27, 2003
	Colleen Paton, Director, Outreach and Communications Services, Office of Energy Efficiency	February 27, 2003
<b>Office of the Auditor General of Canada</b>	Johanne Gélinas, Commissioner of the Environment and Sustainable Development	October 30, 2003
	John Affleck, Principal, Audits and Studies, Sustainable Development Strategies	
	Robert Pelland, Director, Audits and Studies, Sustainable Development Strategies	
<b>As an individual</b>	Dr. John Nyboer, Ecological Economist, Simon Fraser University; co-author of The Cost of Climate Policy	March 25, 2003
<b>As an individual</b>	The Honourable Nicholas Taylor, former senator	October 23, 2003