



Elements of the Plan

Competitive and Sustainable Industries for the 21st Century

This Plan is designed to spur innovation and technological advancement, which is essential for the long-term transformation required to maintain a sustainable and competitive economy in the 21st century.

A sustainable economy produces goods and services that meet the demands of the domestic and global marketplace while generating low levels of waste and pollution. This Plan will help position Canada in the emerging world markets by increasing energy efficiency and encouraging greater reliance on renewable energy. At the same time, it will diversify our energy mix and bolster our energy security.

While domestic investments will cut pollution at home and abroad through exports of low-emitting technologies, Canada will work within the Kyoto Protocol framework to promote export of Canadian technologies that support the sustainable development aspirations of developing countries. Canada will do this because it is in our economic interests, and, just as importantly, we will do this because it is essential to achieving our domestic and global climate change goals. Canada will at the same time meet global responsibilities and seize global opportunities.

As noted earlier, a key element announced in Budget 2005 is the development of a Sustainable Energy Science and Technology Strategy. Investments in traditional and new sources of energy and innovative technologies resulting from this strategy and the Plan more generally will provide long-term environmental benefits, while maintaining a competitive and growing economy.

In addition, Budget 2005 made key tax policy changes that will improve productivity while helping businesses make the right environmental decisions, in other words, helping to make it more attractive to move now to make capital investments that will save energy and gain efficiency in the longer run. These enhanced tax incentives will contribute to reduced GHG emissions, better air quality and a more diverse energy supply. Further discussion of these tax changes is set out below in the section on Emerging Renewable Energy. In Budget 2005, the Government also committed to consult on other opportunities to use the tax system to further environmental objectives.

Large final emitter system

Canada's LFEs include companies in the mining and manufacturing, oil and gas, and thermal electricity sectors. These sectors make an important contribution to Canada's economic base, but they are also large contributors to our GHG emissions — just under 50 percent of total Canadian GHG emissions. They must play a significant role in meeting Canada's climate change goals.

The purpose of the LFE system is to secure emission reductions from Canada's largest emitters through a system that is market-based and in line with our policy regarding Smart Regulations. The LFE system will achieve significant reductions in GHG emissions in a manner that supports the continued competitiveness of our industry.

This Plan will help position Canada in the emerging world markets by increasing energy efficiency and encouraging greater reliance on renewable energy. At the same time it will diversify our energy mix and bolster our energy security.





The LFE system will cover about 700 companies operating in Canada; 80–90 of these companies account for approximately 85 percent of the LFE GHG emissions.

The *2002 Climate Change Plan for Canada* proposed an overall target for the LFE system of a 55 Mt reduction from the Business-as-Usual (BAU) baseline emissions projection for 2010 (i.e., the emissions that would occur in the absence of climate change action). The 2002 Plan stated that the system would include a number of adjustments, to address such issues as competitiveness, early action and regional burden. The system was to be implemented through the use of covenants (a system of contractual agreements between government and industry) with a regulatory or financial backstop.

As development of this system took place in consultation with industry over the last two years, it became clear that some sectors, particularly those with fixed process emissions (emissions which are driven purely by underlying chemical reactions and not by fuel combustion) faced competitiveness issues in reducing emissions. It also became clear that the proposed system of covenants backstopped by legislation added considerable complexity to the system.

Approach

The system that is being introduced respects all previous commitments that have been made concerning the LFE system, including that the cost of compliance to industry will not be more than \$15 per tonne of carbon dioxide equivalent. Appropriate mechanisms will be implemented to achieve that price cap commitment. A summary of previous commitments and how they are being met is set out in Annex 2.

The description of the LFE system that follows addresses the broad parameters of the system only; elaboration of the system will be undertaken in the coming months in partnership with industry, provinces and territories, Aboriginal peoples and environmental groups, building on the work conducted over the past two years.

Target

In light of experience gained through consultations, the Government has decided to take a streamlined approach to the LFE system. The overall target for the LFE system has been reduced to 45 Mt and will be implemented in an administratively simple manner — there will be no downward adjustments through covenants. As such, the target is firmer.

The 45 Mt target is based on a BAU baseline to which methodological improvements have been made to the electricity component. This 45 Mt target is equivalent to a 39 Mt target using the baseline from the 2002 Plan. Sectoral targets, to be developed by activity on an emissions intensity basis, will be implemented as described below.

In order to establish LFE targets, it is important to take into account two types of emissions: fixed process emissions and all other types of emissions. However, there is a fundamental distinction between these two categories, owing to the fact that the levels of fixed process emissions cannot be controlled by industry, other than by lowering production entirely. By contrast, available technologies do permit industry to reduce other types of emissions without lowering overall production levels. The LFE targets in this Plan address this important distinction.

Total emissions are taken into account in setting the

sectoral targets. Fixed process emissions receive a zero percent target during the 2008–2012 period. All other emissions receive a 15 percent target. However, the targeted reductions from these other emissions as a percentage of total emissions cannot exceed 12 percent of total emissions.

Targets for new facilities and facilities undergoing major transformations will be based on BATEA performance standards. This approach will assist in promoting technological advances and innovation.

LFE companies will have a number of options for compliance:

- Investment in in-house reductions. This is likely to be the first priority of LFE companies, since it allows them to invest in their own facilities and profit from increased productivity and reduced waste associated with such investments in emission reductions and modernization.
- The purchase of emission reductions from other LFE companies that have done better than their target.
- Investment in domestic offset credits (credits attesting that a real emission reduction or carbon sequestration has been generated outside the LFE system — these credits may be purchased by LFE companies and used for compliance with their obligations).
- The purchase of international credits provided that these represent verified emission reductions — i.e., only “green” international credits will be recognized for Canadian compliance purposes. Investment in international credits may be linked to sales of Canadian technology and provides LFEs with experience in an international trading market that is likely to be of increased importance over time.

All of these options will either reduce Canada’s own emissions or provide us with qualifying international Kyoto credits that represent verified emission reductions and GHG reductions elsewhere in the world.

It is important to note that the ability of companies to sell surplus emission reductions to other companies (or potentially to the Climate Fund, to be discussed later) provides an incentive for companies to go

beyond their target. This is a key reason why early implementation of the LFE system is important, since without it there is much less financial incentive for companies to seek out opportunities to reduce emissions from their operations.

In addition to these options, LFEs would be able to invest in technology developments and count those investments for purposes of compliance. Legislation has been introduced in the House of Commons to establish a Greenhouse Gas Technology Investment Fund. The Fund would support the developments and deployment of innovative domestic technologies that can reduce GHG emissions. For the most part, investments in the Fund would not generate emission reductions until after the Kyoto period of 2008–2012. However, it is important to provide this additional compliance option to LFE companies so as to promote investment in Canadian technology and facilitate Canada’s long-term transformational change.

Access to investments in technology development as a compliance option for LFEs would be limited to 9 Mt, meaning that the balance of the LFE target would be met through domestic in-house reductions, domestic offsets and Kyoto credits. Since investments in the Fund are not expected to generate emission reductions within the Kyoto 2008–2012 timeframe, these 9 Mts have not been included in the Plan accounting. Should LFEs invest less than 9 Mt in the Fund or should the Fund’s technology investments lead to emission reductions in the Kyoto period, there would be additional emission reductions that are not counted in this Plan.

The proposed legislation establishing the Technology Investment Fund would cap the contribution rate at \$15 per tonne for the 2008–2012 period.

Rigorous monitoring and reporting requirements will be put in place to support compliance and public accountability, while protecting the confidentiality of industry competitive practices.

Targets for the period beyond 2012 will be determined in partnership with provinces and territories, Aboriginal peoples, industry, environmental non-governmental organizations, and other stakeholders. Possible criteria that could be used to determine specific longer term targets include:



- consistency with global and Canadian long-term climate change objectives;
- alignment with the proposed National Energy Science and Technology Strategy;
- the aim to make Canadian industry best-in-class;
- Canada's international obligations; and
- recognition of sectoral capabilities and relative compliance costs.

Implementation

The broad parameters of the LFE system are set out above with detailed implementation of the LFE system to be carried out in partnership with provinces and territories, Aboriginal peoples, industry and environmental groups. Our approach builds on extensive discussion with various industry groups, and incorporates a specific proposal developed by the oil and gas industry on implementation of the LFE system. The development of the LFE regulation, beginning in spring 2005, will be the partnership vehicle for further cooperation.

The Government has committed to a regulatory approach to LFE emissions for a number of reasons. The significance of LFE emissions as a percentage of Canada's total emissions makes it critical to Canada's climate change effort that there be certainty about the emission reductions that will result from the LFE system. It makes sense for Canada to build experience with regulatory approaches as partners such as the countries of the European Union are doing. It is through a regulatory approach that LFEs will have access to domestic and international trading and the Greenhouse Gas Technology Investment Fund flexibility mechanisms that will be critical to Canada's innovation and economic competitiveness going forward.

The Government's preferred option for implementing the LFE system is the *Canadian Environmental Protection Act, 1999* (CEPA 1999). Using CEPA 1999 makes sense for a number of reasons. Using existing environmental protection legislation is the most supportive of the Government's policy on Smart Regulations rather than the creation of new legislation. In addition, since CEPA 1999 is already used to control other releases from many of these same sectors, it is administratively more feasible for both government and industry to use it also to regulate GHG emissions.

Rigorous monitoring and reporting requirements will be put in place to support compliance and public accountability, while protecting the confidentiality of industry competitive practices.

A key aspect of CEPA 1999 is its ability to facilitate equivalency agreements with provinces, territories and Aboriginal governments. The Government may conclude equivalency agreements with interested provinces and territories whose legislation and regulation achieves an equivalent environmental outcome. In such cases, there could be an equivalency agreement to the effect that provincial jurisdiction will achieve the same result. An equivalency agreement would have to deliver the performance of the national LFE regulation. It is the Government's intent to make maximum possible use of equivalency agreements in implementing the LFE system.

The Government's working assumption is that CEPA 1999 will be chosen as the legislative vehicle for implementing the LFE system. The Government would regulate under Parts 5 and 11 of CEPA 1999. In order to do so, GHGs must first be added to the list of substances in Schedule 1 to the Act, using the criteria set out in Section 64. International science clearly demonstrates that GHGs meet the second criterion for listing, namely that they constitute a danger to the environment on which life depends.

Some industry groups and provinces have expressed concern over the use of the term "toxic substance" in Section 64 of CEPA 1999. This is a broad-based concern that goes beyond the issue of GHGs. To address this concern and to focus attention on the criteria set out in Section 64, the Government has indicated its support for removing the term "toxic" in Section 64 and related sections of the Act. This amendment would not alter the manner in which CEPA 1999 is currently administered and is not legally necessary in order to implement the LFE system under the Act.

It is important that implementation of the LFE system be timely, effective and efficient and be carried out in



a transparent manner. The Government will therefore consult Canadians on how CEPA 1999 could be used to implement the LFE system. As a vehicle for consultation, in spring 2005, the Government will release for public review and comment a draft Protocol setting out how CEPA 1999 could be used to implement the LFE system.

It is expected that the draft LFE regulation will be published for public review and comment in fall 2005.

Reductions

The overall target for the LFE system is a 45 Mt reduction from the revised baseline.

Automobile industry

The Government of Canada has been working with the automotive industry to reduce GHG emissions from light-duty passenger cars and trucks. These vehicles account for 12.5 percent of Canada's total GHG emissions and are a significant source of smog and other pollutants that affect the health and quality of life of Canadians.

The Government and the automotive industry have reached an agreement on emission reductions. This agreement will result in actions on the part of the industry to reduce GHG emissions through:

- improvements in advanced vehicle emissions and diesel technology;
- production of more alternative fuel and hybrid vehicles; and

- development and application of high fuel efficiency technologies.

A voluntary approach to emissions reduction in the case of automobile emissions was put forward in the Action Plan 2000; the proposal was given further elaboration in the *2002 Climate Change Plan*. A key consideration in choosing a voluntary approach was that the emissions result from use of a product purchased by Canadian consumers, not from a production process in a Canadian manufacturing facility.

The Government will monitor progress and employ its legislative and regulatory instruments as necessary to ensure achievement of the objectives of the agreement. It recognizes that, from a climate change perspective, it is important to reduce all GHG emissions related to vehicle operation, including tailpipe emissions of carbon dioxide, methane and nitrous oxide, as well as HFC emissions from air-conditioning systems. Rigorous monitoring will ensure that the target is met and that it is met by actions taken by the automobile industry.

In addition to the agreement, the Government has also asked the NRTEE to examine a possible vehicle "feebate," consult, and make recommendations to the Government for the next federal budget. A feebate would provide a consumer rebate for fuel-efficient vehicles and impose a fee on fuel-inefficient vehicles. The program could be designed to be revenue neutral for the Government.

Reductions

The automobile industry has agreed to reduce GHG emissions in 2010 by 5.3 Mt.

The Government proposes to use a variety of mechanisms to promote renewable energy, including production and tax incentives.



Emerging renewable energy

Emerging renewable energy (e.g., wind, solar, tidal power) can make an important contribution in Canada's fight against climate change, moving Canada's electric power generating sector towards lower emissions intensity in the long term, diversifying Canada's energy mix and promoting sustainable economic growth.

The Government proposes to use a variety of mechanisms to promote renewable energy, including production and tax incentives.

Budget 2005 provided greatly expanded incentives for renewable energy. The WPPI first introduced in Budget 2001, was quadrupled in Budget 2005 which allocated \$200 million over five years to this popular program. This increases the target for new wind generating capacity to 4000 megawatts (MW), or the amount of power needed annually by approximately 1 million average Canadian homes. There will be no provincial caps or limits on project size, but there will be provisions to assure minimum access to the program for each province.

The expanded WPPI establishes the critical elements for Canada to realize the full potential economic benefits of a growing wind power industry. In addition to the environmental benefits, this initiative will support rural economic development, build a new economic sector and position Canada to be a leader in a vibrant wind energy industry in North America and internationally.

In addition to wind resources, many other forms of renewable energy are available in Canada. The competitiveness of renewable energy technology has improved in recent years as a result of technological developments and the increasing cost of more conventional technologies. There is an increasing need for these sources of power to meet growing electricity demand, while reducing impacts on the environment.

Therefore, in Budget 2005, the Government introduced the RPPI, with an investment of \$97 million over five years, to support other renewable energy sources including small hydro, biomass, and tidal power. RPPI builds on the successful



WPPI program and is targeted to lead to 1500 megawatts (MW) of capacity. The incentive will result in more investment in renewable energy projects in all regions of Canada and will help to diversify Canada's energy mix. Projects that receive WPPI or RPPI may also be eligible for the offset system.

Budget 2005 also built on existing tax measures to encourage Canadian businesses to invest more in energy efficiency and renewable energy generation. It increased capital cost allowance from the already very favourable 30 percent to 50 percent for highly-efficient cogeneration equipment and the full range of renewable energy generation equipment currently included in Class 43.1 of the *Income Tax Act* (including wind turbines, small hydro facilities, active solar heating equipment, photovoltaics and geothermal energy equipment).

Allowing tax deductions for capital cost to be taken more rapidly will improve the after-tax return on these investments. The resulting financial benefit will support additional investments in technologies that contribute to a reduction in GHG and other harmful emissions and a more diversified energy supply. This enhanced treatment will be in addition to support available under WPPI and RPPI.

One important opportunity for deployment of cogeneration is in district or community energy systems, where heat or steam is produced in a central generating plant and distributed through a system of pipes to a district of nearby buildings. Budget 2005 extends Class 43.1 to include distribution assets of district energy systems such as pipelines,

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pumps and meters where the heat energy has been produced using cogeneration equipment that qualifies for Class 43.1 treatment. These initiatives support private investment in district energy systems and complement the *New Deal for Cities and Communities*. Complementary support for cogeneration through the Climate Fund would make the Budget 2005 provisions all the more effective.

Accelerated capital cost allowance will also be extended to include certain equipment used to produce biogas (largely methane) from anaerobic digestion of farm manure, where the biogas is used to generate electricity. The use of biogas — a renewable energy source — to produce energy helps to reduce fossil fuel use, harmful emissions and agricultural pollution, as well as provide a new source of fertilizer.

The Government will also make qualifying start-up expenses of projects using these additional technologies eligible for treatment as Canadian Renewable and Conservation Expenses.

The Government will continue to review other investments for inclusion under Class 43.1 to ensure that appropriate incentives are provided for investment in efficient and renewable energy generation equipment.

Budget 2005 also undertook to actively consider other opportunities to use the tax system to support environmental objectives, in areas where it would be an appropriate instrument. It set out a framework and general criteria that may guide this assessment. Emission reductions from this exercise are not counted in this Plan.

Reductions

It is estimated that the combination of federal support through WPPI, RPPI, Budget 2005 tax incentives and other initiatives, as well as supportive provincial actions through measures such as renewable portfolio standards, could lead to renewable energy contributing about 15 Mt of reductions annually in the 2008–2012 period.

Harnessing Market Forces

Market mechanisms will be used to tap GHG emission reduction potential across the economy.

The Climate Fund established in Budget 2005 is a market-based, results-oriented mechanism to encourage emission reduction initiatives. Creation of this transformative institution is the single most important distinguishing feature between this Plan and the Government's past approaches to climate change. This Government believes that market-based approaches are critical to integrating climate change considerations into the day-to-day decisions of Canada's citizens and businesses and unleashing the power of innovation so as to move Canada towards a low-emissions trajectory.

Climate Fund

The purpose of the Climate Fund is to create a permanent institution for the purchase of emissions reduction and removal credits on behalf of the Government of Canada, which will be one of the primary tools for Canada's approach to climate change.



By tapping the potential of the market, Canada will:

- stimulate innovation;
- enable Canadians to take action;
- encourage energy efficiency;
- deliver cost-effective reductions and sequestration;
- drive the adoption of best available technologies; and
- stimulate the development of a domestic emissions trading system.

The Climate Fund will be results-based, with a focus on real and verifiable emission reductions.

Approach

Announced in Budget 2005, the Climate Fund will purchase domestic emission reductions and, in those cases that are demonstrably in the national interest, international reductions that are recognized under the Kyoto Protocol. It will make its purchases through a competitive process.

In a timely fashion, the Government will consult with Canadians on the specifics of how the Climate Fund may best achieve its mandate.

Domestic reductions

As a first step, individuals and organizations planning to substantially reduce or sequester emissions will apply to an offsets body under the authority of the Minister of the Environment to have their projects recognized as eligible for domestic offset credits. Once the emission reductions have occurred, this separate body will award credits for reductions. Opportunities for reduction and sequestration will be available across the economy. Potential examples include:

- farmers who adopt low-till or zero-till practices;
- forestry companies that engage in state-of-the-art forest management practices;
- property developers that include district heating and renewable energy elements in their plans for new sub divisions;
- businesses that develop innovative ways to reduce emissions through recycling and energy efficiency;
- companies and municipalities that invest in their communities by encouraging alternative transportation modes;



- municipalities that capture landfill gas and use it to generate electricity;
- large emitters that do better than their regulated emission targets;
- new electricity generation projects that lead to incremental GHG emissions displacement;
- remote communities that convert electricity generation from diesel to renewable resources; and
- companies and their employees that pool collective emission reductions from activities such as tele-commuting.

The Fund will contribute to Canada's sustainable competitiveness by encouraging Canadians to seize cost reducing opportunities across the entire economy.

As a second step, credits that have been issued for qualifying projects will be purchased by the Fund pursuant to a competitive process and retired on behalf of Canada's commitment to Kyoto.

There will be a minimum project size for qualifying emission reductions or carbon sequestration, so as to ensure that administrative costs do not outweigh the value of the environmental benefit.

The Fund will also engage in advance purchase of emission reductions from large strategic projects in partnership with the private sector. For example, projects that have the potential of generating significant GHG emissions in which the cost per tonne is initially high but is expected to fall over time could be considered if the project would contribute to the structural change necessary to move Canada to lower carbon intensity over the longer term. Conditions around advance purchases will be set so as to require

What is an offset credit?

Projects that result in emissions reductions or sequestration could earn offset credits.

- **Reductions** occur when emissions released into the atmosphere by a source are decreased. For example, property developers that include district heating and renewable energy elements in their plans for new sub-divisions could earn offset credits for the resulting emission reductions.
- **Sequestration** occurs when emissions in the atmosphere are trapped in a sink. For example, farmers who adopt low-till or zero-till practices or forestry companies that engage in state-of-the-art forest management practices could earn offset credits for the resulting sequestration.

Individuals and organizations that reduce or sequester emissions will be able to apply to a body under the authority of the Minister of the Environment for offset credits. To qualify for credits, certain criteria established by the Minister would have to be met. For example, emission reductions would have to go beyond BAU practices, so that offset credits are not awarded for reductions that would occur in the absence of the offset system.

Verification of projects against the criteria will be carried out and credits will be issued for qualifying reductions. Aggregation and verification of these reductions will be provided by all manner of actors in the economy, from municipalities to industry associations to private sector brokers and auditors.

Individuals or organizations awarded offset credits have a few options. They can retire their credits, helping Canada respect its Kyoto commitment, or they can sell them. Buyers would include companies facing emission reduction targets under the LFE system, who could use the credits to comply with their targets. The Climate Fund will also purchase offset credits through a competitive process and retire them, helping Canada respect its Kyoto commitment.

The Government will be consulting Canadians on the proposed rules for offset credit creation in the coming months.

repayment to the Fund should the associated GHG emission reductions not be realized.

Projects that receive funding from the Climate Fund may also be of interest to the Partnership Fund (see page 25) and the Greenhouse Gas Technology Investment Fund, allowing synergies to be realized between the different mechanisms. A monitoring program will be implemented to ensure that there is no double-counting of tonnes.

Legislation has been introduced in the House of Commons to establish the Fund. Aspects of the Fund's mandate, such as how to ensure benefits to Canada from investment in international emission reductions, will be put forward for public review and comment in spring 2005. At the same time, the proposed criteria to

be used in reviewing projects will be published. Project reviews, and the registration of eligible projects could begin as early as fall 2005, the same timeline that applies to the selection and initial signing of contracts for projects generating Kyoto credits. Initially, priority could be given to project types where quantification methodology is well advanced, such as afforestation, agricultural sinks and landfill gas capture projects.

International investments

The Climate Fund's primary mandate is to promote domestic GHG emission reductions, with a view to positioning Canada to compete in the 21st century carbon-constrained global economy. The Fund will also invest in internationally recognized Kyoto emission reductions through the Clean Development Mechanism



and Joint Implementation, as well as through procedures for “greening” other international credits. Only “green” credits — i.e., credits that represent real and verified emission reductions — will be recognized; there will be no purchases of so-called “hot air.”

Investment in international emission reductions will be undertaken in a manner that advances Canada’s broader sustainability interests. Specifically, investment in international emission reduction projects would have at least one of the following characteristics:

- apply Canadian technology;
- improve Canada’s international competitiveness;
- expand Canada’s trade or otherwise advance our national interest (e.g., deliver environmental benefits by reducing the mercury that reaches our borders); and
- advance Canada’s international development objectives.

In the initial years, Fund purchases will primarily be directed to domestic projects. During this period, participation in the international market will take the form of purchases from emission reduction projects in developing countries and some purchases of options for future investment in “greened” credits. It is expected that the Fund’s participation in the international carbon market will evolve over time, as we gain experience and our domestic climate change regime develops.

To facilitate the process of international purchases, the Government may develop MoUs with countries of interest. The “greening” of any international credit purchases would be governed by a bilateral agreement between the government of Canada and the seller country in which Canada would want to ensure both environmental benefits and trade benefits for Canadian companies. Such agreements would ensure environmental benefits by stipulating that 100 percent of the proceeds from the purchase must be reinvested in projects and activities that contribute to GHG emission reductions in the seller country.

Reductions

Budget 2005 provided minimum funding of \$1 billion. It is estimated that the Climate Fund could yield in the order of 75–115 Mt of reductions annually in the

2008–2012 period, with funding in the order of \$4–5 billion.

It is not possible to predict how many of these reductions will occur domestically. The Climate Fund will give a priority to domestic emission reductions. However, the amount of domestic emission reductions that will be realized depends on many factors, including: the entrepreneurial spirit of Canadians and their interest in finding innovative means of reducing emissions; the success of the Climate Fund in tapping into that spirit of entrepreneurship and innovation; how “market friendly” are the rules for domestic offset creation; and the economic and fiscal circumstances at that time. The Government has great confidence in the innovative spirit of Canadians; a great deal of interest is already being expressed with respect to the Climate Fund.

The Climate Fund will also invest internationally. However, just as it is not possible to predict the scale of domestic emission reductions, it is not possible to say at this point how many international reductions Canada may seek to purchase.



International trading market for carbon

Canadian investment in international emission reductions can be an important vehicle for the promotion of Canadian technologies. International trading in GHG emission reductions is expected to become a feature in global efforts to combat climate change. It should be noted that a tonne of GHG emissions reduced anywhere in the world contributes to the global climate change challenge. The Climate Fund's participation in the international carbon market will provide Canada with both environmental and economic advantages.

From an environmental perspective, the Fund will purchase from projects that use technologies that deliver co-benefits — i.e., that not only reduce GHG emissions, but also reduce other harmful emissions. For example, mercury emitted from coal-burning power plants in other countries leads to serious health and environmental impacts on Canada. Canadian investment in cleaner energy generation overseas might therefore provide multiple benefits to Canada.

From an economic perspective, Canada will use these international investments to develop and deploy its expertise in the field of environmental services and technologies. The international market for climate change technologies is growing quickly. Government investments in international credits will give Canadian innovators early and supported exposure to identify and develop technologies with strong international applications. This type of assistance is often all that is required for a promising technology to reach a stage at which it is competitive on its own.

Projects in the areas of renewable energy, biogas capture, clean coal, carbon sequestration, pipeline retrofits and efficiency and conservation projects can demonstrate Canadian goods and services and increase field experience in foreign markets.

Investment in international emission reductions, in conjunction with or parallel to addressing climate change impacts, can also advance development objectives. Developing country GHG emissions are expected to surpass industrialized country emissions in the coming decades; a combination of technology transfer and development assistance is needed for the sustainable development of these countries. This approach was key to the success of the world's efforts to address the depletion of the ozone layer. In the climate context, these strategies would reduce GHG emissions, promote sustainable development, and prevent thousands of premature deaths from air pollution in developing countries.

In addition to these immediate economic and environmental benefits to Canada and development benefits, the experience acquired by the Climate Fund in international trading for carbon emission reductions will position Canada to influence and benefit from the future evolution of the market.

Similarly, the experience gained by Canada's LFEs in international carbon trading will prove advantageous in the post-2012 period.





A Partnership among Canada's Governments

Recognizing the necessity of cooperative action, this Plan will leverage investments across all orders of government to realize success in our fight against climate change.

Climate change is a challenge that affects all jurisdictions, and so our response must be a national one that reflects our federal structure. This means a joint effort, with all orders of government — federal, provincial, territorial and municipal — working together within their own areas of responsibility to make a contribution and deliver a harmonized approach.

Partnership Fund

Canada's provinces and territories play a fundamental role in achieving climate change goals. The *2002 Climate Change Plan for Canada* made a good start in developing effective federal-provincial-territorial partnerships. Pursuant to the 2002 Plan, Budget 2003 provided \$160 million for an Opportunities Envelope to fund emission reduction projects of interest to federal, provincial and territorial partners. We have also initiated MoUs with interested provinces and territories.

However, much more is needed to maximize the potential of partnerships with provinces and territories and with Canada's industry. Enhancing these efforts is critical to Canada's success in transforming our economy, fighting climate change and protecting our environment. The Partnership Fund will be the key vehicle to do that.

Approach

The Government of Canada will strengthen its partnerships with provinces and territories.

MoUs will be developed where none currently exist and MoUs that are already in place will be enhanced. These agreements will focus on achieving Canada's climate change goals in the short and long term, as well as bringing about the transformational changes necessary for ensuring the competitiveness of the Canadian economy in the 21st century. They will identify goals and strategies for key sectors of the economy in each province and territory and areas of synergy and collaboration among provinces, territories and with the federal government. Examples of such synergies include the setting of building codes by provinces and appliance standards by the federal government.

Newly created in Budget 2005, the Partnership Fund will support these government-to-government agreements through cost-sharing. Through the Partnership Fund, the Government will invest in technologies and infrastructure development that are important to both orders of government, such as clean coal technology. Nearly 70 percent of Canada's coal-fired power plants are due to retire by 2020. Clean coal technology offers the potential to reduce a plant's emissions significantly over its 40-year lifetime. To ensure that we can achieve these reductions in the future, it is critical that investments in clean coal technology are made today. Other strategic investments could include a carbon dioxide capture and storage pipeline, cellulosic ethanol plants, east-west electricity transmission grids and other options related to the phase-out of coal-fired power plants. The Fund will also explore options for more efficient integration of intermodal freight transportation.

These investments in major projects are expected to contribute significant emission reductions in the Kyoto period. Some projects are likely to deliver the greater

Canada's provinces and territories play a fundamental role in achieving climate change goals.

part of their emission reductions after 2012. Priority in investments under the Partnership Fund will also be given to projects that will deliver reductions in the 2008–2012 period.

It is expected that, under the Partnership Fund, investment will also be made in smaller projects of a local nature, including, for example, the cost-sharing of climate change centres in each province and territory along the lines of Alberta's Climate Change Central. It could also support national strategies in areas such as demand-side management, conservation and combined heat and power (cogeneration).

To ensure that emission reductions are incremental, the Partnership Fund will be coordinated with existing complementary federal climate change measures, such as the Climate Fund and the Green Municipal Funds, and with other federal investments expected to contribute to climate change, such as the *New Deal for Cities and Communities*. An important thrust of the Fund will be enhanced synergies among provinces and territories in fighting climate change. The Partnership Fund would subsume and expand the current Opportunities Envelope.

The Partnership Fund will also support partnerships between governments and Canadian industry on major emission reduction projects. It may also work together with the Climate Fund and Technology Investment Fund in supporting certain projects.

Reductions

Budget 2005 provided funding for the Partnership Fund of at least \$50 million per year for the next five years, with amounts to be augmented as projects are identified and developed. It indicated that funding could grow to \$2–3 billion over the next decade.

The amount of emission reductions that may be generated through the Partnership Fund will depend on the level of federal funding, the willingness of provincial and territorial governments and the private sector to enter into partnerships, and the availability of innovative projects. It is estimated that with federal funding in the order of \$2–3 billion and with the leverage it could create with other sources of funds, the Partnership Fund could yield GHG emission reductions of 55–85 Mt annually in the 2008–2012 period.



Greening Government

In order for the federal government to be a true partner with other orders of government, and indeed with Canada's citizens, it must demonstrate leadership in climate change action. Major steps have already been taken. The Government builds all its new facilities to be 25 percent more energy efficient than the existing Model National Energy Code for Buildings. Government has committed to retrofitting a further 20 percent of its commercial buildings by 2010 to improve energy efficiency, financed through energy cost savings.

To date, 7,000 federal buildings — about 30 percent of the federal building stock — have undergone energy audits under the Federal Buildings Initiative. The follow-up work undertaken has resulted in a total savings of \$27 million a year on energy bills and a reduction in GHG emissions of 20 percent on average. Important steps have also been taken to reduce GHG emissions from federal vehicles and to engage employees in reducing emissions in their everyday actions.

Approach

The Government of Canada will build on its achievements to date by ensuring that its internal operations are among the "greenest" in the world. The federal government spends over \$13 billion per year on goods and services and will use this purchasing power to demonstrate leadership in climate change action. The Government will implement a new Green Procurement Policy to govern its purchases by 2006.

Green Procurement, including life cycle costing, will be a priority and will include purchases of energy, in



particular electricity; purchases of other goods and services, such as automobiles; and investments in new fixed assets, such as buildings.

The federal government will seek innovative means of modernizing its central heating and cooling plants with increased involvement of the private sector. This modernization is key to further reducing the GHG emissions of its office-building inventory. The Government will also explore partnerships with the private sector and other stakeholders to access innovative technology for this project and leverage its investment to benefit the broader community, including possible participation in community energy system projects.

To lead by example and encourage a focus on sustainability in the Canadian marketplace for real property, the Government will ensure that as of 2005, the construction of new government office buildings will be funded to meet the Leadership in Energy and Environmental Design Gold standard. Buildings meeting this standard use, on average, slightly over one-half of the energy required by the average equivalent office building currently in the Government's inventory. This standard will also be sought in the case

of new long-term leases.

The Government will also take a series of measures to ensure that its fleet of vehicles is among the greenest in the country, including:

- replacing its vehicles more quickly and choosing more efficient models;
- significantly increasing its purchase of hybrid vehicles and vehicles that operate on E85 and other alternative fuels; and
- adopting more stringent user practices such as anti-idling and vehicle sharing.

Provincial, territorial and municipal governments also have similar initiatives to reduce GHG emissions from their operations. All governments of our federation will learn from each others' experience in this area. To the extent that GHG emission reductions will occur as the result of actions from provincial, territorial and municipal governments, they are not counted in this Plan.

Reductions

Total federal emissions are about 3 Mt annually. The Government is setting a target to reduce these emissions by 1 Mt annually over the 2008–2012 period, to be funded primarily through internal reallocation.

Engaged Citizens

A sustainable environment is important to Canadians, and this Plan will provide citizens with the tools they need to take action.

Together, individual Canadians are responsible for 28 percent of Canada's GHG emissions. On average, each Canadian produces 5 tonnes of GHGs annually. Therefore, their buy-in and active involvement are critical if we are to achieve our climate change and sustainability goals.

Canadians need to take action themselves and can play an important role in driving sustainability improvements in communities and industry. In the longer term, increasing the awareness of Canadians will help to create a generation that understands and embraces sustainability.



One-Tonne Challenge

To date, initial steps have been taken to engage Canadians in the One-Tonne Challenge, a public education program launched to challenge Canadians to reduce the 5 tonnes of GHGs each citizen produces annually to 4 tonnes. These steps are focused on:

Information Products & Tools: An on-line GHG calculator helps Canadians determine their current emissions and build 1-tonne reduction plans.

National Awareness: A major national advertising campaign on television, print and radio encourages Canadians to get a copy of the Guide so that they can take part in the Challenge.

Communities: More than 40 communities are rolling out Community Challenges involving more than 200 organizations and local governments. They are engaging individuals in reducing GHG emissions and making local investments to create healthier, more sustainable communities for all their citizens.

Youth: A network of youth organizations has created a youth version of the One-Tonne Challenge and is working with youth across the country on local emissions reduction or education projects.

Educators: Expert teachers from across the country are helping to create lesson plans and other web based resources on climate change that will be accessible to all educators.

Private Sector: Retailers are linking the marketing of energy-efficient products to the One-Tonne Challenge goal. Many employers are creating Challenges targeted to their employees.

Consumers: The “*Guide to the One-Tonne Challenge*” provides more than 20 pages of tips to consumers for saving money (and reducing GHG emissions). This includes an EnerGuide for Houses audit, which can lead to savings of 20–35 percent on heating bills. In addition, tips are provided for reducing costs at the gas pump by driving more efficiently, selecting a fuel-efficient vehicle or keeping vehicles tuned. Through a searchable database on the One-Tonne Challenge web site, consumers can find out about the current rebates and incentives available to them from all orders of government to reduce GHG emissions.

While a good start has been made, more needs to be done.

Approach

The One-Tonne Challenge will build on work to date to increase awareness, knowledge, commitment and action by Canadians. In particular, we will work with partners in communities, youth groups, private sector and educators to provide real opportunities for Canadians to make lifestyle changes and informed purchases to reduce individual emissions by at least 20 percent. National promotion will focus on improving access for Canadians to programs and services from all orders of government that provide them with consumer information, technical advice and incentives for action.

Canadians need better information to allow them to make informed decisions about products they are considering. Product marks such as ENERGY STAR®, EcoLogo[®] and EnerGuide will be a focus of point-of-sale and other promotions to help Canadians in their search for greener products. Government, through partnerships with retailers and utilities, will also build consumer confidence in green products and green power.

The One-Tonne Challenge program will actively promote opportunities presented by the Climate Fund.

Vehicle fuel efficiency improvements provide a significant opportunity for partnerships with vehicle



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manufacturers and dealers. The One-Tonne Challenge will work with these groups to ensure that Canadians have the information and tools they need to make informed purchases and operate their vehicles in the most efficient way.

Partnerships with provinces and territories, including new investments in regional Climate Change centres, shared delivery of Community Challenges, co-promotions to help increase transit ridership, and joint efforts to increase the capacity and provide support to environmental groups to help deliver GHG emission reductions, will bring programs and services closer to the individuals who need them. Climate Change Centres for example, will provide emission reduction expertise, technical advice and service to individuals, local business and communities.

Climate change centres will also provide regional capacity for the Federation of Canadian Municipalities' Partners for Climate Protection Program. The Federation of Canadian Municipalities will still need to play an important role at the national level in recruitment, coordination and recognition and will receive support to do so for at least the next five years.

When it comes to small and medium-sized enterprises, the Government of Canada will build on a successful model developed by Environment Canada in Quebec. The model is Enviroclub, which helps company managers in small and medium-sized enterprises to better understand the profitability advantages of environmental management and provides hands-on experience by taking on a pollution prevention project within each of their plants.

The 41 community challenges under way will continue to be supported over time to allow them to make substantive gains in GHG emission reduction and to learn collectively the most effective interventions when it comes to engaging consumers in the challenge.

At least 20 additional community challenges will be supported, and longer term investments will be made in those already under way.

We will engage Aboriginal and northern communities in climate change activities and undertake specific initiatives to address GHG emission reductions.

In sum, what is being launched is a strengthened and more focused public engagement effort that will help move Canadians from concern to action.

Reductions

The challenge to Canadians will be to collectively generate 5 Mt in incremental reductions annually over the 2008–2012 period. Additional funding of \$120 million would be provided to bring this about.

Programs

Climate change programs have an important role to play in generating emission reductions, promoting early action, improving our understanding of climate change and laying the groundwork for long-term behavioural, technological and economic change.

Since 1998, the Government has made incremental investments in climate change through successive





budgets. These investments, touching all sectors of the economy, were aimed at the “low hanging fruit” — those measures that put us on the path to emission reductions at the lowest cost. Of the \$3.7 billion set aside in previous budgets for climate change, approximately \$700 million remains unallocated, while a further \$1.1 billion of the funds allocated is intended for use in the coming fiscal years.

Approach

In moving forward, the Government will learn from past investments.

As indicated in Budget 2005, the Government will undertake a comprehensive review of existing programs to determine which programs should be maintained or expanded, which programs should be modified and which programs have been performing below expectations or have outlived their usefulness and so should be terminated. Savings in terms of funds previously allocated will be redirected. A key criterion for a program to continue will be its ability to deliver cost-effective emission reductions over the short and long term.

Some programs have already been identified as clearly successful and will continue or be expanded. For example, Budget 2005 invested \$225 million over five years to quadruple the number of homes retrofitted under the successful EnerGuide for Houses Retrofit Incentive, from 125,000 to 500,000. This

program is designed to help homeowners reduce their energy consumption by offering grants for people who improve the energy rating of their houses.

In the transportation sector, we have a range of programs aimed at encouraging private motorists to develop energy-efficient purchase, use and maintenance practices. Key components include the EnerGuide fuel consumption label and the annual Fuel Consumption Guide, which provides fuel consumption data for new light-duty vehicles, as well as the Idle-Free Campaign, which seeks to curb vehicle idling. These initiatives help individual Canadians understand how their automobile purchase decisions and driving habits affect climate change and the environment.

Another program that has clearly demonstrated its value is the Green Municipal Funds, which directs funding to municipalities for innovative sustainability projects. Thus far, the Green Municipal Funds have been effective in stimulating community-based feasibility work and green infrastructure investments, contributing to more than 340 projects across the country. Budget 2005 allocated \$300 million for the Green Municipal Funds (\$150 million of which will be used to help communities remediate and redevelop brownfields, which are abandoned sites where environmental contamination exists).

New programs will be introduced where a clear rationale exists, including a demonstration that the objective can be best accomplished through a program rather than a market mechanism such as the Climate Fund.

Reductions

Budget 2005 provided \$2 billion for existing climate change programs. It is estimated that continued funding of these programs through 2012 could yield up to 40 Mt of GHG emission reductions annually in the 2008–2012 period. There is no overlap between the emission reductions expected to be generated from these programs and our LFE target.

Sustainable Agriculture and Forest Sectors

This Plan recognizes our abundant forests and agricultural land as national advantages that Canada has in our fight against climate change.



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Sinks occur when GHG emissions are removed from the atmosphere and stored elsewhere, such as in forests or agricultural soils. Sinks are an important component of Canada's overall approach to climate change and also contribute to biodiversity and conservation objectives. In the international negotiations on Kyoto, Canada received recognition for the contribution its ongoing practices make to biological carbon sequestration — this contribution is commonly termed BAU sinks and is counted towards our Kyoto target.

Approach

By definition, BAU sinks are the result of the continuation of existing practices.

However, it is estimated that Canada's biological sinks can play a much greater role in fighting climate change. Biological carbon sequestration beyond BAU levels will be incented through the Climate Fund and through Government initiatives aimed at protecting ecological lands. It is estimated that the potential for beyond BAU agriculture and forest sinks is in the order of 15–20 Mt. How best to measure and incent incremental carbon sinks will be determined in partnership with the provinces, territories, Aboriginal peoples, farmers, forestry companies and other stakeholders.

These measures will also allow us to gain significant co-benefits from carbon sink enhancement, including conservation of natural habitat and preservation of Canada's biodiversity.

Organizations such as the BIOCAP Canada Foundation, a national not-for-profit research foundation, play a very important role in advancing our understanding of the role of our natural resources in climate change.

Reductions

In agriculture, BAU practices are predicted to generate a carbon sink of 10 Mt in the Kyoto commitment period of 2008–2012. An incremental sink of 16 Mt or more beyond BAU levels may be possible through practices such as reduced tillage, less summerfallow and increased use of forage which could be incented through the Climate Fund. Incremental emission reductions from agriculture could result from activities such as beef feeding strategies and hog manure management.

With respect to forestry, the projection in the *2002 Climate Change Plan for Canada* was that existing forest practices would result in a BAU carbon sink of 20 Mt. Federal and provincial governments are currently working towards a revised estimate; that estimate could fall to zero as a result of the Mountain Pine Beetle infestation and forest fires in British Columbia. An incremental sink of 4 Mt beyond BAU levels may be possible through practices such as afforestation, reforestation and avoided deforestation which could be incented through the Climate Fund.

Sustainable Cities and Communities

This Plan recognizes the synergies between the parallel efforts of fighting climate change and greening our cities and communities.

A large portion of GHG emissions — as well as the opportunities to reduce them — are directly or



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indirectly associated with urban regions. As of 1990, municipalities directly controlled about 38 Mt of GHG emissions.

The Government of Canada's *New Deal for Cities and Communities* will help advance climate change goals.

Approach

The New Deal includes a targeted gas tax transfer of \$5 billion of federal funds over five years to support environmentally sustainable infrastructure. This will help to reduce Canada's GHG emissions and encourage more efficient use of energy through investments in sustainable infrastructure such as landfill gas capture, community energy systems, solid waste management, capacity building, and especially public transit, which is a key focus of the New Deal where investments will make gains in the areas of climate change, smog and congestion in our urban centres.

The New Deal aims to transform how infrastructure investments are made in our cities and communities, by providing an outcomes-driven vision for community and city sustainability. The gas tax transfer will support capacity building to enable municipalities to develop and implement long-term, integrated sustainable plans, focused on the achievement of commonly-defined sustainability outcomes.

Budget 2005 committed to renew the Canada Strategic Infrastructure Fund, the Municipal Rural Infrastructure Fund and the Border Infrastructure Fund. The Government's infrastructure programs contribute towards environmental sustainability, including reducing GHG emissions. For example, in total across Canada, a minimum of 60 percent of funding under the Municipal Rural Infrastructure

Fund, with a minimum of 40 percent per jurisdiction, will target "green infrastructure" that provides a better quality of life and promotes sustainable development.

The Partners for Climate Protection program includes more than 120 municipalities committed to GHG emission reductions. In addition, InfraGuide, a series of infrastructure best practices funded by Infrastructure Canada, develops best practice tools that can be used to help municipalities cut GHG emissions and adapt to climate change.

Reductions

While the New Deal can be expected to generate important GHG reductions in the Kyoto period, the magnitude of those reductions will depend on the conclusion of agreements with provinces and territories. Consequently, this Plan does not include those reductions.

