

Provincial Government Performance on Climate Change: 2001

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About the Pembina Institute

The Pembina Institute is an independent, citizen-based think tank and activist organization. We seek to ensure environmental protection through research and education; practical technological solutions and advice to businesses, individuals and communities; and effective development and advocacy of environmentally-sound public policy. Our mission is to implement holistic and practical solutions for a sustainable world.

The Institute's Climate Change team works to design, develop, promote and implement actions that protect the climate through improvements in the efficiency of fossil fuel energy production and use, and through a transition to the renewable energy that will power the world's economy in the 21st century.

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SUMMARY RESULTS AND CONCLUSIONS

Background

Canada will not meet its international climate change commitments under the Kyoto Protocol and the United Nations Framework Convention on Climate Change without significant action by both the federal and provincial governments. In reality, federal and provincial governments have been “cooperating” for over a decade to deal with climate change. Some of the key milestones include:

- National Action Strategy on Global Warming (1990)
- 18-month National Consultation Process that identified 88 potential measures to address climate change (1994-95)
- National Action Program on Climate Change (1995)
- 18-month National Consultation Process that identified more than 300 potential measures to address climate change (1998-2000)
- National Implementation Strategy on Climate Change and Canada’s First National Climate Change Business Plan (2000)

Unfortunately, all the talk of “strategies” and “action programs” produced almost no new policy initiatives to protect the climate in the period from 1990 to 1995. In 1995, some voluntary initiatives were implemented and in the last few years the federal government has finally begun to commit initial resources to greenhouse gas emissions reduction. While the federal government could be doing much, much more to address climate change, its actions to date outshine any initiatives taken by provinces in this area.

It is a lack of political will—not a lack of policy options—that has prevented provincial governments from more aggressively tackling climate change. In October 2000, federal and provincial ministers of Energy and Environment met in Québec City where all except the Ontario ministers agreed on Canada’s new “National Implementation Strategy on Climate Change.”

The Pembina Institute prepared its first assessment of provincial government performance on climate change just prior to the adoption of the National Implementation Strategy to serve as a “baseline” against which to measure implementation of the Strategy. The lack of meaningful provincial government activity on climate change between 1990 and 2000 resulted in very low scores being awarded in that initial assessment. One year later, the present report contains an updated assessment, using the same criteria, to measure provincial governments’ progress in implementing some of the key greenhouse gas emission reduction measures identified on numerous occasions during the past several years.

Our assessment focuses on the five provinces that account for about 89% of Canada’s total greenhouse gas emissions—Alberta, British Columbia, Saskatchewan, Ontario and Québec. Each provincial government’s performance is assessed in nine areas of potential activity to address climate change, using a total of 38 criteria. Each criterion is used to determine whether or not a provincial government has implemented a specific measure that will likely be an integral component of any successful national effort to address climate change.

Results

Our assessment of provincial government performance on climate change awards each province a score out of 100. The total scores awarded this year and last are as follows:

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score in 2001	31.5	39.0	30.5	34.5	26.0
Score in 2000	26.5	30.5	27.5	22.0	20.5
<i>increase</i>	+5	+8.5	+3	+12.5	+5.5

Last year, all provincial governments reviewed received a very poor, failing grade. A notable feature was the narrowness of the gap between the best performer (British Columbia) and the worst (Saskatchewan); no province stood out as a climate protection leader within Canada.

One year later, there is a much greater spread of scores, with Saskatchewan beginning to lag badly behind the others, while British Columbia assumes a leadership position. However, this conceals widely varying increases in scores from province to province. Québec has made a major improvement; British Columbia has also achieved a significantly higher score; Alberta and Saskatchewan have made only weak improvements, and Ontario has almost stood still.¹

There is also an important caveat attached to British Columbia's score. The new government appears to have abandoned British Columbia's climate change business plan after only one year and all government programs are currently under review. If the abandonment of climate change activities is confirmed once program reviews are completed, then the province's score would likely fall considerably.

Examining the scores achieved this year in each of the nine areas of potential activity to reduce greenhouse gas emissions provides additional insights into the relative performance of provinces and helps to explain why Canada's total greenhouse gas emissions grew by 15% between 1990 and 1999.²

Transportation / Land Use Planning

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 15	5.5	7.0	5.5	7.5	3.5

Canada's greenhouse gas emissions from transportation grew 17% between 1990 and 1998.³ Only Québec received a passing mark (50%) for its activities in this area, as a result of its impressive start towards curbing greenhouse gas emissions from transportation in Montréal. British Columbia, Ontario and Alberta received lower marks that reflect some initial but largely

¹ We acknowledge that although last year's and this year's assessments attempted to use the best possible information, variations in information quality may account for a limited portion of the year-on-year changes in scores.

² Environment Canada (July 2001), *Canada's Greenhouse Gas Emissions 1990-1999*, media backgrounder, available at http://www.ec.gc.ca/press/2001/010711_b_e.htm.

³ 1990-1998 emissions data used throughout this section are from: Environment Canada (2000), *Trends in Canada's Greenhouse Gas Emissions 1990-1998*, Draft.

inadequate actions that these jurisdictions have taken to address poor urban air quality, with some associated greenhouse gas emission reduction benefits. There has been little use of meaningful incentives to encourage less greenhouse gas-intensive and more energy efficient transportation and land use planning choices.

Energy Utilities

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 15	0.5	3.0	3.5	2.5	1.0

Canada's greenhouse gas emissions from electricity generation grew 31% between 1990 and 1998. All provinces scored exceptionally poorly in this area, with little significant action to promote low-impact renewable energy or customer energy efficiency.

Buildings

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 15	2.0	5.5	4.0	5.5	3.5

Canada's greenhouse gas emissions from buildings in the residential and commercial sectors fell by 2.6% between 1990 and 1998. Once again, no provincial government received a passing grade in this sector. While few provinces have adopted the National Energy Codes for Buildings and Houses, actual construction practices are slowly creeping up to these standards. They still fall far short of more aggressive energy efficient building practices as epitomized by the 20-year old R-2000 standard. There are few examples of effective measures (regulations or financial incentives) at the provincial level to support energy efficiency retrofits of the much more extensive existing building stock—despite numerous studies indicating that such initiatives are cost-effective.

Industry

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 15	5.0	3.0	3.0	2.5	3.5

Canada's greenhouse gas emissions from industry (excluding electricity generation) increased by 11% between 1990 and 1998. This reflects, in particular, the fact that greenhouse gas emissions from the oil and gas industry increased by 28% in this period. While no province received a passing grade in this area, Alberta received the highest marks for its voluntary agreement with industry to reduce flaring and for the growth in the construction of industrial co-generation facilities that produce both electricity and heat. Unfortunately, provincial governments provide few incentives for industrial investments in energy efficiency or alternative energy sources while the major fossil fuel-producing provinces (Alberta, British Columbia and Saskatchewan) continue to strongly support investments in oil and gas development.

Facilitating Emissions Trading

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 10	2.0	3.0	4.0	3.5	2.0

It is increasingly evident that if Canada is going to meet its international climate change commitments, a domestic emissions trading system will need to be part of Canada's greenhouse gas mitigation strategy. Nonetheless, no government has taken an official position in favour of domestic emissions trading and no province received a passing mark in this area. While every province assessed is supportive of pilot greenhouse gas emission reduction credit trading initiatives, none has agreed to recognize those credits against any future regulatory obligations. In addition, Ontario is the only province to have mandated reporting of greenhouse gas emissions.

Government House in Order

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 10	7.5	8.5	3.5	4.5	6.0

One of the cornerstones of Canada's response to climate change has been the Climate Change Voluntary Challenge and Registry program (VCR). Launched with much fanfare by federal and provincial governments in 1995, the VCR encourages industry, businesses and governments to voluntarily take action to reduce greenhouse gas emissions. British Columbia and Alberta received good marks here because of their solid participation in the program and demonstrable results in building retrofits and fleet management. Saskatchewan is not actively participating in the VCR but it does have significant programs to reduce emissions from government operations. Ontario's and Québec efforts to reduce such emissions did not merit a passing mark.

Other Sources of Greenhouse Gas Emissions

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 10	3.5	3.0	4.5	2.5	3.0

While the combustion of fossil fuels accounts for the vast majority of Canada's greenhouse gas emissions, actions to reduce greenhouse gas emissions from landfills, agriculture and forests can also contribute to meeting Canada's international climate change obligations. Ontario received the highest mark here in large part because of its regulations requiring the capture and combustion of landfill methane. No provinces have any significant afforestation programs in place and virtually all measures targeted at reducing emissions from livestock feeding and manure are voluntary or educational in nature with no supporting incentives or regulations to ensure that actions are actually taken.

Promoting Technology Development

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 5	3.0	3.0	1.0	2.5	2.0

The key ingredients to any substantive response to climate change—improved energy efficiency and increased use of low impact renewable energy sources—have been clear for some time. Many governments around the world have dramatically increased their support for new technology development and commercialization in these areas to help prepare their economies for a low-carbon energy future. Canada has fallen significantly behind these countries and some provincial governments are now beginning to try to catch up. Ontario and Saskatchewan, however, do not appear to be among them.

Enhancing Awareness and Understanding

Province	Alberta	British Columbia	Ontario	Québec	Saskatchewan
Score out of 5	2.5	3.0	1.5	3.5	1.5

It has long been recognized that public engagement is critical to dealing successfully with climate change. But even in this area, provincial governments score relatively poorly. While all governments assessed here except for Saskatchewan have targetted some resources at public education related to climate change, the overall level of funding remains low—dwarfed by the efforts of the federal government in this area in recent years. Ontario received a low score because its efforts consistently obscure the distinction between the climate change and clean air issues, and because of the low visibility of these efforts.

Conclusions

Provincial governments must be an integral and important component of any Canadian strategy to address climate change. Last year's assessment made it clear that the 1990s were a "lost decade" with respect to provincial government action on this issue. Instead of taking action to reduce greenhouse gas emissions, provincial governments spent ten years squabbling with the federal government about climate change reduction targets, jurisdictional issues and funding. Most provincial governments had not even acted to reduce greenhouse gas emissions in their own operations, much less the province as a whole. While the federal government had done far less than it should have to address climate change, its efforts put provincial governments to shame.

This year's assessment shows that two provinces, while failing overall, have made significant improvements. Québec has achieved a major improvement, and British Columbia has also achieved a much higher score although this is now threatened by the positions taken by its new government. This progress is largely explained by the fact that these were the only two provinces to produce climate change action plans announcing significant new measures at the October 2000 Joint Ministers' Meeting. Alberta and Saskatchewan have made only weak efforts to improve their climate change performance over the past year. As for Ontario, its claims to be a leader on climate change are simply not born out by the programs it has in place.

We must also acknowledge that our quantitative assessment does not necessarily capture “negative” actions taken by provincial governments that substantially increase their greenhouse gas emissions. That is why we have included in this year’s report qualitative overviews of each provincial government’s performance on climate change. These overviews emphasize, notably, a number of especially damaging actions taken by Alberta and Ontario with regard to climate change.

Federal and provincial ministers of Energy and Environment will meet again in Winnipeg on September 24, 2001. This meeting follows the July 2001 breakthrough in international climate change negotiations that led Prime Minister Chrétien to be “confident that the agreement... opens the way for Canada’s ratification of the Kyoto Protocol next year.”⁴ The Joint Ministers’ Meeting gives provincial governments an opportunity not only to support ratification, but also to commit to implementing measures capable of making a significant contribution to Canada’s efforts to realize the major reductions in greenhouse gas emissions required to meet our Kyoto commitment. Our assessment once again describes the kinds of measures provincial governments should be bringing to the table. If provinces do not take sufficient action to reduce greenhouse gas emissions, they increase the likelihood that the federal government will feel obliged to take that action for them.

⁴ Prime Minister’s Office (July 23, 2001), *Statement by the Prime Minister*, available at <http://pm.gc.ca>.

BACKGROUND

Canada first committed to address climate change in May 1990 when the federal government announced that this country would stabilize its net greenhouse gas emissions at 1990 levels by the year 2000. The federal government reaffirmed this commitment when Canada ratified the United Nations Framework Convention on Climate Change in 1992. Then, in 1997, Canada negotiated the Kyoto Protocol. Finally, in July 2001, an international agreement was reached in Bonn that led Prime Minister Chrétien to be “confident that the agreement... opens the way for Canada’s ratification of the Kyoto Protocol next year.”⁵ If enough countries ratify the Protocol for it to enter into force, Canada will be committed to reducing its greenhouse gas emissions to 6% below 1990 levels in the period 2008-2012.

Unfortunately, greenhouse gas emission trends in Canada completely contradict our commitments to protect the climate. Greenhouse gas emissions in Canada increased by 15% between 1990 and 1999.⁶ By 2010, the most recent official projections⁷ show emissions 27% higher in 2010 than in 1990. It is true that the Bonn agreement allows Canada to go a large part of the way toward its 6% Kyoto reduction goal using (i) credits from agricultural and forestry activities that absorb greenhouse gases and are not included in these figures, and (ii) purchases of emission reductions or rights to emit from other countries. However, very substantial domestic emission reductions will still be required.

Responsibility for Canada’s failure to meet its commitments on climate change is usually placed at the feet of the federal government. While the lack of strong federal government leadership on climate change has certainly contributed to Canada’s dismal record, it is also true that the federal government cannot easily do the job on its own. If Canada is to successfully address climate change, provincial governments must play a significant role.

Provincial Governments and Climate Change

Why are provincial governments central to any Canadian climate change mitigation strategy? Simply put, many of the key sources of greenhouse gas emissions fall under the responsibility of provincial governments. For example, in 1998:⁸

- 18% of Canada’s greenhouse gas emissions came from the production of electricity, and provincial governments are responsible for regulating this industry. In fact, most major electric utilities in Canada are provincial Crown corporations.
- 25% of Canada’s greenhouse gas emissions come from transportation, and provincial governments are responsible (with municipalities) for transportation and land use planning; they are also the primary source of funds for alternatives to the automobile, like public transit.

⁵ Prime Minister’s Office (July 23, 2001), Statement by the Prime Minister, available at <http://pm.gc.ca/>

⁶ Environment Canada (July 2001), *Canada’s Greenhouse Gas Emissions 1990-1999*, media backgrounder, available at http://www.ec.gc.ca/press/2001/010711_b_e.htm.

⁷ National Climate Change Process Analysis and Modelling Group (1999), *Canada’s Emissions Outlook, An Update*. The projections made in this document are based on policies in place in late 1999 and do not take account of any emission reduction measures implemented since then.

⁸ The figures are derived from Environment Canada (2000) *Canada’s Greenhouse Gas Inventory, 1990-1998: Final Submission to the UNFCCC Secretariat*; and Chia Ha, Greenhouse Gas Division, Pollution Data Branch, Environment Canada, personal communication.

- 10% of Canada's greenhouse gas emissions come from buildings, and provincial governments are responsible for regulating the building industry through instruments such as building codes.
- 3% of Canada's greenhouse gas emissions come from landfills, and provincial governments (with municipalities) are responsible for waste management.
- 16% of Canada's greenhouse gas emissions come from fossil fuel exploration, production and transmission—activities regulated primarily by provincial governments.

In reality, federal and provincial governments have been “cooperating” for a decade to deal with climate change. Some of the key milestones include:

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- 18-month National Consultation Process that identified 88 potential measures to address climate change (1994-95)
- National Action Program on Climate Change (1995)
- 18-month National Consultation Process that identified more than 300 potential measures to address climate change (1998-2000)
- National Implementation Strategy on Climate Change and Canada's First National Climate Change Business Plan (2000)

Unfortunately, all the talk of “strategies” and “action programs” produced almost no new policy initiatives to protect the climate in the period from 1990 to 1995. In 1995, some voluntary initiatives were implemented and in the last few years the federal government has finally begun to commit initial resources to greenhouse gas emissions reduction. While the federal government could be doing much, much more to address climate change, its actions to date outshine any initiatives taken by provinces in this area.

In fact, ever since Canada made its first climate change commitment in 1990, provincial governments have not been focused on actions they can take to reduce greenhouse gas emissions. Rather, their climate change efforts have focused largely on:

- demanding a larger role in determining what international commitments Canada adopts on climate change, as well as seeking greater influence in determining what mix of policy tools will be used to meet such commitments; and
- seeking funding from the federal government to support potential provincial government activities to address climate change.

It is a lack of political will—not a lack of policy options—that has prevented provincial governments from more aggressively tackling climate change. Federal and provincial ministers of Energy and Environment will meet in Winnipeg on September 24, 2001. This meeting is the first to follow the July 2001 breakthrough in international climate change negotiations in Bonn. The Joint Ministers' Meeting gives provincial governments an opportunity not only to support ratification, but also to commit to implementing measures capable of making a significant contribution to Canada's efforts to realize the major reductions in greenhouse gas emissions required to meet our Kyoto commitment. This assessment describes the kinds of measures provincial governments should be bringing to the table.

Purpose and Structure of this Assessment

This report is the second in a series of annual quantitative assessments to assess the performance of Canada's provincial governments in addressing climate change. It focuses on only five provinces (Alberta, British Columbia, Ontario, Québec and Saskatchewan) because these provinces account for about 89% of Canada's total greenhouse gas emissions.

The purpose of the assessment is:

- to provide a standard and comprehensive methodology for assessing a provincial government's progress on climate change that reflects all the key areas identified by federal and provincial governments as necessary components of Canada's National Implementation Strategy on Climate Change;
- to focus on provincial government performance with respect to the most significant measures that could be taken in each of the key areas identified by federal and provincial governments for action (the vast majority of these measures were recommended for implementation by national consultation processes); and
- to serve as a tool for assessing the relative performance of provincial governments on the climate change issue.

The review is divided into nine sections, each corresponding to a specific greenhouse gas emitting sector or area in which government action is needed. A set of 38 questions was devised to assess provincial government performance in these nine areas, focusing particularly on the key measures that need to be implemented in each area if Canada is to meet its international climate change commitments. Each question was assigned a mark such that the total score of the review equals 100.

The full quantitative assessment framework can be found in Appendix A, but the table below illustrates the relative weight given to different elements of a provincial climate change strategy within the framework.

Element of a Provincial Climate Change Strategy	Relative Weight
Reducing Greenhouse Gas Emissions from Transportation	15%
Reducing Greenhouse Gas Emissions from Energy Utilities	15%
Reducing Greenhouse Gas Emissions from Buildings	15%
Reducing Greenhouse Gas Emissions from Industry	15%
Actions to Facilitate Greenhouse Gas Emissions Trading	10%
Reducing Greenhouse Gas Emissions from Government Operations	10%
Reducing Greenhouse Gas Emissions from Other Sources	10%
Actions to Promote Technology Development	5%
Actions to Enhance Awareness and Understanding	5%
Total	100%

The assessment was undertaken through a review of published materials on provincial climate change initiatives and many interviews with key provincial government representatives and other experts.

Each quantitative assessment of provincial government performance on climate change is preceded by an introductory section that includes:

- a summary of the province's current greenhouse gas emissions profile, including recent and projected future emission trends; and
- a qualitative overview of the provincial government's performance on climate change that draws on the quantitative assessment but also raises important aspects of that performance that may not always be fully captured by the quantitative methodology.

ALBERTA

Current Greenhouse Gas Emissions Profile (1998)⁹

Total emissions (Mt CO ₂ E)	200
Per capita emissions (t CO ₂ E / person)	68.8
Per unit GDP emissions (kg CO ₂ E /\$ GDP)	1.88

Sources of Emissions (1998)

Electricity and steam generation (%)	26
Buildings (%)	6.0
Transportation (%)	14
Industry (%)	44
Other human activities (%)	11

Emission Trends

Emissions increase 1990-1998 (%)	19	
Emissions increase 1997-1998 (%)	0.0	
Projected increase ¹⁰ 1990-2010 (%)	40	or* 65

*This alternative projection, made in August 2001 by Paul Hunt of Climate Change Central, assumes that all the latest publicly announced oil sands and coal-fired electricity projects go ahead.

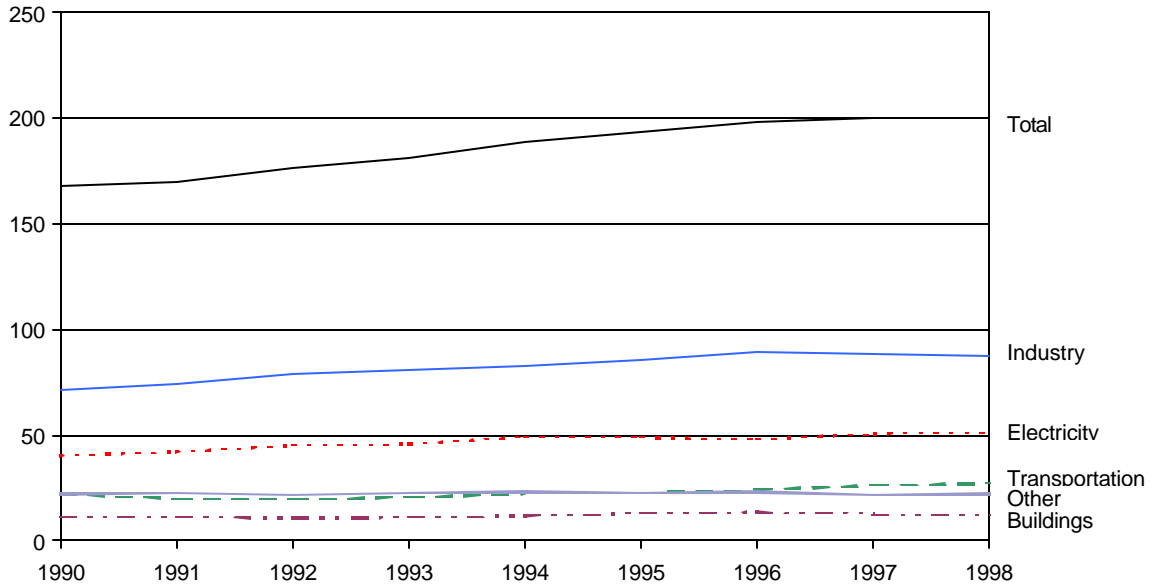
⁹ 1990-1998 emissions data here and in subsequent tables, chart and text from: Environment Canada (2000), *Trends in Canada's Greenhouse Gas Emissions 1990-1998, Draft*. Population data from: <http://www.statcan.ca/english/Pgdb/People/Population/demo02.htm>.

GDP data (at market prices) from: <http://www.statcan.ca/english/Pgdb/Economy/Economic/econ15.htm>.

Note: The buildings sector covers residential, commercial and institutional buildings; pipelines are included under industry; stationary sources in forestry and agriculture are included under "other human activities."

¹⁰ National Climate Change Process Analysis and Modelling Group (1999), *Canada's Emissions Outlook, An Update*. The projections made in this document are based on policies in place in late 1999 and do not take account of any emission reduction measures implemented since then.

Greenhouse Gas Emission Trends, 1990-1998 (Mt CO₂E)



Unswerving commitment to the fossil fuel economy

The Alberta government has once again received a very poor, failing grade in our quantitative assessment of its climate change performance, with only a weak improvement over last year. Worse, the few minor positive actions taken by the government over the past year that are captured in our assessment stand in stark contrast to two extremely negative developments for Alberta’s greenhouse gas emissions during the same period. These are the dramatic pace of development in the oil sands, and announcements amounting to a massive 1700 MW increase in the province’s coal-fired electricity capacity.

With its greenhouse gas emissions rising by 19% between 1990 and 1998,¹¹ Alberta has now overtaken Ontario as Canada’s largest emitter, despite having a population almost four times smaller. Federal government projections made in 1999 showed Alberta’s emissions rising to 40% over their 1990 level by 2010. But if one assumes that all the latest publicly announced oil sands and coal-fired electricity projects proceed, Alberta’s greenhouse gas emissions in 2010 would rise to 65% above the 1990 level.

Premier Klein’s message to U.S. Vice-President Cheney in June 2001 that “we have energy to burn” left no doubt about the Alberta government’s commitment to the maximum possible expansion of the oil sands—extraction of which involves far more energy, and therefore more greenhouse gas emissions, than conventional oil. The government’s weak new standards for emissions of air contaminants from coal-fired electricity plants appeared designed to guarantee that the most greenhouse gas-intensive energy source in the province would remain the cheapest one.

¹¹ 1998 is the latest year for which data are available.

The Alberta government's commitment to a fossil fuel economy was never more clearly demonstrated than in early 2001, when it provided several billion dollars in subsidies to energy consumers to help cover the cost of their increasing energy bills. Instead of using these funds to invest in energy efficiency measures that would reduce pollution, cut bills and decrease the vulnerability of Albertans to future price increases, the government in essence provided a huge subsidy to fossil fuel industries to allow them to pursue business as usual.

In such circumstances it was extremely difficult to believe that the Alberta government had the slightest intention of seriously addressing climate change.

But that was before the unexpected breakthrough in international climate change negotiations in July 2001, in Bonn. The federal government now says that it hopes to ratify the Kyoto Protocol sometime in 2002. Alberta urgently needs to demonstrate some seriousness in reducing greenhouse gas emissions if it is to avoid the risk of being marginalized and penalized in Canada's strategy to meet its Kyoto commitment.

The Alberta government should show it is serious about climate change by taking the following steps.

- It should aim to satisfy the province's growing demand for electricity by making energy conservation its top priority, followed by a focus on low-impact renewable sources, notably wind power. The policy measures needed to enforce these priorities are well known and are described in the relevant sections of Appendix A of this report. Only when Alberta's vast potential for conservation and renewable energy is exhausted should the province resort to the best available fossil fuel technologies.¹²
- The government should require that the developers of new oil sands projects offset 100% of the additional greenhouse emissions from those projects by purchasing genuine emission reductions elsewhere.
- The government should give effect to its recent supportive statements on greenhouse gas emissions trading by pursuing the implementation of a provincial or regional emissions trading system that would operate on an interim basis prior to the implementation of a national system. This emissions trading system should incorporate tough targets for emissions reductions and strict rules to ensure that any emission reduction offsets used by emitters to meet their targets are genuine.
- The government should provide a major increase in funds to Climate Change Central, the promising organization it has set up with industry partners, to enable it to support the implementation of a far greater number of innovative emissions-reducing projects than at present.

The Alberta government's current policies are incompatible with the greenhouse-gas-limited, "carbon-constrained" future towards which we are, without a doubt, headed. Alberta's place in that future will be as an energy economy, not a fossil fuel economy. The government must realize that the market will not bring about the necessary transformation on its own. Government policies in the shape of a mix of market-based instruments, other financial incentives and regulation are going to be necessary. Their implementation should begin now.

¹² In its paper entitled *A Smart Electricity Policy for Alberta* (available at <http://www.pembina.org>), the Pembina Institute estimated that 800 MW of electricity capacity expansion could be avoided through conservation and a further 800 MW derived from low-impact renewables. In combination, this is almost equal to the capacity of the three currently proposed new coal-fired electricity projects.

Alberta

31.5 / 100

Summary of Assessment

Element	Score Achieved	Possible Score
Transportation/Land Use Planning	5.5	15
Energy Utilities	0.5	15
Buildings	2.0	15
Industry	5.0	15
Greenhouse Gas Emissions Trading	2.0	10
Government House in Order	7.5	10
Other Sources of Greenhouse Gas Emissions	3.5	10
Technology Development	3.0	5
Enhancing Awareness and Understanding	2.5	5

Transportation / Land Use Planning

5.5 / 15

Providing Financial Incentives to Promote the Purchase and Use of Fuel Efficient Vehicles

1 / 4

The Alberta government has not directly created any such incentives. It believes that responsibility for improving the fuel economy of vehicles rests with the federal government, and it has urged the federal government to take action to strengthen fuel economy standards for new vehicles sold in Canada. Nonetheless, Climate Change Central is a partner in a voluntary car scrappage program that will remove 600 older, high-polluting vehicles from the roads in Calgary, giving their owners a free one-year transit pass or a \$500 credit towards a newer (or new) car in return. Climate Change Central is also a leading partner in the eMission Banff program, which will see more than 60 commercial vehicles that travel between Calgary and Banff converted to natural gas. A partial mark is given in view of the limited scale of these projects.

Changing the Taxation of Transportation Fuels to Promote Greenhouse Gas Emission Reduction

2 / 4

The Alberta government has not taken any initiatives since 1997 to alter the taxation of different transportation fuels. It is important to note, however, that the existing fuel tax structure does differentiate among transportation fuels. While gasoline and diesel are taxed at 9 cents/litre, propane is only taxed at 6.5 cents/litre, and natural gas and ethanol are not taxed at all.

Providing Funding for Public Transit

2 / 3

The Alberta government has adopted some innovative mechanisms in recent years to provide municipalities with more funding to direct to public transit and other alternatives to the car. For example, five cents of provincial tax revenue from each litre of gasoline sold in Edmonton and Calgary (\$150-million annually) is now transferred directly to those municipalities. In other cities, a portion of provincial gasoline tax revenue is transferred as a grant on a per capita basis. While there are no restrictions on where this money can be spent, much of it has gone to public transportation, particularly expansion of light rail transit systems and bus system renewal.

Promoting Energy Efficiency through Land Use Planning

0 / 3

The Alberta government has taken no action in this area as it feels that such activities fall exclusively under the mandate of municipal governments. The Alberta Government does support the City of Edmonton's Community-Wide Greenhouse Gas Emissions Reduction Program, which aims initially to

reduce greenhouse gas emissions by 6% from 1990 levels by 2010, but the program places little emphasis on land use planning.

Reducing Highway Transportation Speeds 0.5 / 1

The Alberta government has taken no action since 1997 to reduce speed limits. The use of photo radar has increased, however, improving enforcement.

Energy Utilities 0.5 / 15

Establishing a Low-Impact Renewable Portfolio Standard 0.5 / 4

The Alberta government has not established a low-impact renewable portfolio standard for electricity generators in the province. A partial mark is given in recognition of the fact that Alberta's *Small Power Development Act* (November 17, 1988) did mandate the installation of some new renewable energy electricity generation facilities in Alberta. It is also worth noting that the deregulation of Alberta's electric utility industry has given renewable energy suppliers an opportunity to enter directly into the market, and no longer requires such suppliers to work with existing utilities. Sixty-four megawatts of wind power are expected to be in place in the province by the end of 2001.

Mandating Demand Side Management Activities 0 / 4

The Alberta government's deregulation of the electric utility industry does not include any regulatory or fiscal mechanisms to promote demand side management activities. Natural gas utilities also face no requirements to implement demand side management programs. In addition, the Alberta government's multi-billion dollar rebates to consumers for high natural gas and electricity prices are not linked to any efforts to promote demand side management activities that would reduce consumer vulnerability to future increases in prices. In fact, the Alberta government shut down its own energy efficiency branch several years ago.

Incorporating Environmental Costs into Energy Prices 0 / 4

The Alberta government has taken no action to incorporate the environmental externalities associated with different forms of energy into the price of energy sold by energy utilities. Furthermore, the recent auctioning off of much of the previously regulated generation (primarily coal) to third party "marketers" has established a new barrier to the introduction of any environmental costs because generators now have signed contracts with various third parties to provide a specific amount of power at a specified price from each of their plants.

Promoting Net Metering 0 / 2

The Alberta government has not yet established a policy to promote net metering within its deregulated electricity market.

Disclosure of Generating Sources to Consumers 0 / 1

The Alberta government's deregulation of the electric utility industry does not require electricity retailers to inform customers about where their electricity is coming from.

Buildings 2 / 15

Mandated Energy Code for Buildings 1 / 4

The Alberta government has not adopted the National Energy Code for Buildings. This Code is more stringent than that which is currently in place in Alberta. The Alberta government does, however, require all buildings supported by provincial government funding to meet the National Energy Code for Buildings standard.

Mandated Energy Code for Houses	0 / 4
<p>The Alberta government has not adopted the National Energy Code for Houses. Alberta's existing residential building code does not match the energy performance requirements of these other codes and standards.</p>	
Incentives for Energy Efficiency Retrofits	1 / 3
<p>The Alberta government has not provided any financial incentives to support the energy efficiency retrofit of residential and commercial buildings. A partial mark is given because Alberta has provided a small number of municipalities with "revolving" funds; these funds offer loans to support energy efficiency investments that are subsequently repaid from energy bill savings. In 2001, the government also committed \$240-million to school retrofits and modernization; a portion of these funds will be aimed at incorporating new energy efficient technologies and materials into existing schools.</p>	
Promoting Community Based Energy Efficiency Initiatives	0 / 3
<p>The Alberta government has not supported any community-based energy efficiency residential retrofit initiatives since 1997.</p>	
Financial Incentives to Improve the Energy Efficiency of New Buildings	0 / 1
<p>The Alberta government has no financial incentives in place to encourage the adoption of more energy efficient designs in the construction of new buildings.</p>	
<hr/>	
Industry	5 / 15
<hr/>	
Tax Incentives for Energy Efficiency Investments	0 / 4
<p>The Alberta government has not established any tax incentives to promote investments in energy efficiency.</p>	
Project Approval Processes that Incorporate Greenhouse Gas Emission Considerations	1 / 3
<p>The Alberta government's environmental impact assessment process asks project proponents to identify the impact of their project on greenhouse gas emissions and to discuss their project and corporate greenhouse gas management plans, but has rarely insisted that any additional actions be taken to reduce greenhouse gas emissions as a condition of project approval.</p>	
Promotion of Co-Generation Facilities	3 / 3
<p>With the opening of Alberta's electricity market to increased competition, co-generation has become the main source of new electricity generating capacity in recent years. In addition, the Alberta government has taken steps to encourage the capture of flared methane for power generation using micro-turbines by removing royalty charges on captured flare gas and by exempting this electricity from restrictions within the <i>Electric Utilities Act</i>. In August 2001, the Department of Energy announced a new incentive for natural gas processing plants to increase their use of co-generation under the new Gas Plant Efficiency Assistance Regulation.</p>	
Reducing Support for Fossil Fuel Exploration and Development	0 / 3
<p>The Alberta government has not significantly changed the fiscal treatment for fossil fuel exploration and development since 1997. Nonetheless, no mark was awarded because of the significance of actions taken in 1997. In that year, the federal government made a number of important tax changes that levelled the playing field for capital investments within the mining, oil sands and petroleum sectors. These tax changes were mirrored in provincial tax legislation and have resulted in an aggressively generous tax regime for the oil sands industry. Also in 1997, the Alberta government announced a clear and understandable royalty framework intended to provide regulatory certainty with respect to oil sands investment decisions. (The new framework simply formalized the royalty policy that had been developed incrementally through company-specific Crown Agreements over the previous years.) This</p>	

package of changes has been a key factor in generating massive investments in new oil sands projects that have significantly exceeded the initial expectations of policy makers.

Binding Voluntary Covenants to Reduce Greenhouse Gas Emissions 1 / 2

The Alberta government has not entered into any formal binding voluntary covenants with industry to reduce greenhouse gas emissions. Nonetheless, a partial mark was awarded because the multi-stakeholder Clean Air Strategic Alliance (CASA) developed a framework for reducing emissions from flaring that was subsequently adopted as a commitment by both the petroleum industry and the Alberta Energy and Utilities Board. By the end of 1999, industry had successfully exceeded a 25% reduction target set initially for 2001.

Greenhouse Gas Emissions Trading 2 / 10

Government Position on National Emissions Trading 0 / 4

Despite expressing support for market-based instruments in meeting environmental objectives, the Alberta government has not yet taken a position on the role of a domestic emissions trading system in Canada's greenhouse gas mitigation strategy.

Mandatory Greenhouse Gas Emissions Reporting 0.5 / 3

There are no mandatory requirements to report greenhouse gas emissions in Alberta. While Alberta's industrial base (particularly fossil fuel producers) is well represented in Canada's Voluntary Challenge and Registry program, this program does not require a consistent or standardized format for the reporting of greenhouse gas emissions. However, the Alberta government has begun to request the inclusion of corporate greenhouse gas emissions as part of the Environmental Impact Assessment for various proposed projects with the expectation that a formal mandatory reporting system will follow. A partial mark has been awarded accordingly.

Action to Facilitate Emissions Trading 1.5 / 3

The Alberta government is an active participant in the Greenhouse Gas Emission Reduction Trading pilot (GERT) based in British Columbia, and has also maintained an ongoing dialogue with the private sector-led KEFI Exchange. The Alberta government has not, however, indicated that it will recognize credits generated through these pilot programs against any potential future regulatory requirements. Alberta continues to support private sector participation in the Clean Development Mechanism and Joint Implementation through the Alberta CDM/JI Initiative and has provided financial support to the national Pilot Emission Reduction and Removals Learning (PERRL) initiative. Speaking at Climate Change Central's emission trading simulation held in September 2001, Environment Minister Lorne Taylor announced that the government was immediately beginning work to establish a greenhouse gas emissions trading scheme for Alberta.

Government House in Order 7.5 / 10

Greenhouse Gas Emission Reduction Target 2 / 2

The Alberta government has established a goal to reduce greenhouse gas emissions from its own operations to 14% below 1990 levels by the year 2000. By 1999, emissions had already fallen to 19.8% below the 1990 level.

Participation in the Voluntary Challenge Program 2 / 2

Again in 2000, the Alberta government provided a comprehensive greenhouse gas emissions inventory and action plan to Canada's Voluntary Challenge and Registry (VCR) program. Alberta received a leadership award from the VCR in 2000 for having submitted the best action plan from a government.

Program to Improve Energy Efficiency in Buildings

2 / 2

The Alberta government has made a commitment to conduct energy efficiency audits and to implement retrofit measures in all of its buildings with more than 1,000 square metres of floor space. Energy Service Company (ESCO) contracts will have been completed on all major government complexes by 2003.

Program to Reduce Greenhouse Gas Emissions in Transportation Fleets 1.5 / 2

The Alberta government is putting in place measures to ensure that all vehicles leased by the government represent the best fuel efficiency within that vehicle class. The Alberta government also plans to undertake a program to identify and remove old and inefficient vehicles from the vehicle fleet. The mark was somewhat reduced because it is not clear what role alternative fuels play in procurement policy.

Green Power Procurement

0 / 2

The Alberta government does not have a green power procurement program in place at this time. The government has procured just 0.5% green power through ENMAX for government operations but is in discussions with ENMAX to purchase additional green power.

Other Sources of Greenhouse Gas Emissions

3.5 / 10

Landfill Gas Regulation

0 / 3

The Alberta government has no policies yet in place to mandate the capture of methane from landfills. Multi-stakeholder consultations are underway on draft landfill guidelines to address methane capture and combustion.

Promoting Greenhouse Gas Emission Reductions from Livestock

1 / 2

The Alberta government has produced some educational materials for farmers on actions that can be taken to reduce greenhouse gas emissions from livestock. The government and a range of partners are conducting demonstrations of an integrated manure utilization system with a view to future commercialization.

Support for Afforestation

0 / 2

The Alberta government provides no support for afforestation beyond some education work with private landowners.

Protection of Forested Land

1.5 / 2

According to the World Wide Fund for Nature, Alberta had placed 10% of its land mass in parks and protected areas as of September 2000—a relatively high proportion compared to other provinces. In July of 2001, the Alberta government added five new sites representing an additional 1% of the province to protected areas as a conclusion of the Special Places 2000 program.

Promoting Carbon Sequestration in Agricultural Soils

1 / 1

The Alberta government established the Alberta Reduced Tillage Initiative to encourage farmers to take actions to enhance carbon sequestration. It is supporting various education and demonstration activities through the \$5-million Alberta Environmentally Sustainable Agriculture Program (AESAP).

Technology Development 3 / 5

Support for Low-Impact Renewable Energy Technologies 1 / 2

The Alberta government has provided approximately \$1.5-million to the Alberta Research Council, Alberta Energy Research Institute and Climate Change Central for a number of projects for renewable and alternative energy including fuel cells, solar energy, integrated manure utilization systems, and biomass power production.

Support for Energy Efficiency Technologies 1 / 2

The Alberta government is supporting research into improving the efficiency of coal and flare gas combustion. The Alberta Research Council is supporting mini co-generation on pipelines. The government is also supporting the Alberta Energy Research Institute's development of lower energy intensity processes. Alberta Economic Development is a partner in an online greenhouse gas solutions showcase that helps buyers in industry locate suppliers whose products and services would match their greenhouse gas emission reduction needs. However, research initiatives to improve energy efficiency in end-use applications do not appear to be currently supported.

Support for Other Greenhouse Gas Emissions Reducing Technologies 1 / 1

The Alberta government is providing support for a number of projects including geological sequestration of carbon dioxide in depleted oil wells and coal beds, the development of commercial uses for carbon dioxide, carbon sequestration in agricultural soils, landfill designs to control methane emissions, technologies addressing enhanced carbon dioxide recovery in power generation, and methane emissions reductions from livestock. It has also contributed \$50,000 to support the national BIOCAP initiative.

Enhancing Awareness and Understanding 2.5 / 5

Provincial Government Activities 1.5 / 3

Alberta Environment has a climate change website that provides a broad range of information. The government is educating its own employees about climate change and greenhouse gas emission reduction opportunities at work and at home through the CO₂ Diet program with follow-up activities to maintain the interest level (e.g., quizzes and commuter challenges). The government has also supported a small pilot climate change awareness project for grade 4-6 students and a project in the Kikino Metis settlement that has identified greenhouse gas emission reduction opportunities.

Provincial Government Support for Other Education and Awareness Activities 1 / 2

The Alberta government is supporting educational initiatives on climate change that are targeted at schools (e.g., Destination Conservation, Climate Changes), communities (e.g., Sustainable Communities Initiative), and industry sectors (e.g., small and mid-sized enterprises). Through the multi-stakeholder Clean Air Strategic Alliance, the Alberta government has supported "ClimateWise: Save Money, Save Energy, Save the Environment." This pilot project, which ran in four communities in Alberta, will produce an Internet-based implementation package for public use. The government is also supporting the Public Education and Outreach Hub and other educational initiatives of Climate Change Central.

BRITISH COLUMBIA

Current Greenhouse Gas Emissions Profile (1998)¹³

Total emissions (Mt CO ₂ E)	61.1
Per capita emissions (t CO ₂ E / person)	15.3
Per unit GDP emissions (kg CO ₂ E / \$ GDP)	0.54

Sources of Emissions (1998)

Electricity and steam generation (%)	3.0
Buildings (%)	12
Transportation (%)	40
Industry (%)	31
Other human activities (%)	13

Emission Trends

Emissions increase 1990-1998 (%)	20
Emissions increase 1997-1998 (%)	0.7
Projected increase ¹⁴ 1990-2010 (%)	38

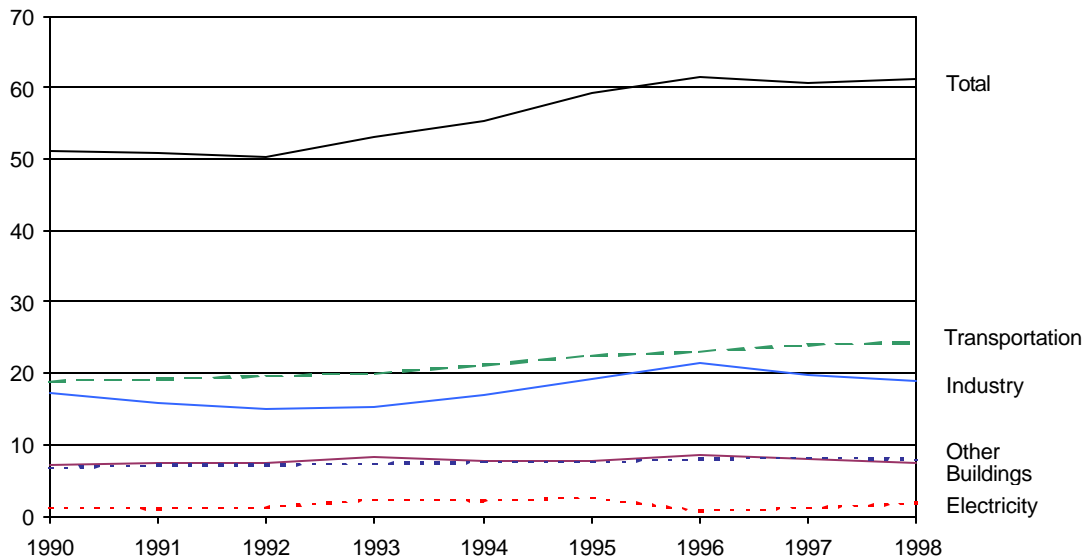
¹³ 1990-1998 emissions data here and in subsequent tables, chart and text from: Environment Canada (2000), *Trends in Canada's Greenhouse Gas Emissions 1990-1998, Draft*. Population data from: <http://www.statcan.ca/english/Pgdb/People/Population/demo02.htm>.

GDP data (at market prices) from: <http://www.statcan.ca/english/Pgdb/Economy/Economic/econ15.htm>.

Note: The buildings sector covers residential, commercial and institutional buildings; pipelines are included under industry; stationary sources in forestry and agriculture are included under "other human activities."

¹⁴ National Climate Change Process Analysis and Modelling Group (1999), *Canada's Emissions Outlook, An Update*. The projections made in this document are based on policies in place in late 1999 and do not take account of any emission reduction measures implemented since then. The projections were actually made for British Columbia plus the territories; projected emissions in 2010 for the province alone have therefore been calculated from projected emissions for the province plus the territories using the province's proportion of the total in 1997 (96.2%).

Greenhouse Gas Emission Trends: 1990-1998 (Mt CO₂E)



Leadership position seriously threatened by the new government

The government of British Columbia has received a significantly higher score this year in our quantitative assessment of its climate change performance than it did one year ago. But although its new score of 39 out of 100 is once again the highest among the provinces covered in this report, British Columbia clearly needs to go much, much further to begin adequately addressing climate change, especially considering the projected 38% increase in the province's greenhouse gas emissions between 1990 and 2010. Unfortunately, the limited progress that the province has made to date is now seriously threatened in light of positions taken by the new government that took office in June 2001.

At the last Joint Meeting of Energy and Environment Ministers in October 2000, British Columbia and Québec were the only jurisdictions apart from the federal government to produce climate change business plans announcing new measures capable of achieving significant emissions reductions; British Columbia's first steps in implementing its three-year plan largely account for its increased score in our quantitative assessment this year.

However, an important caveat is attached to this year's score. The new government appears to have abandoned British Columbia's climate change business plan after only one year, cutting funding to climate change activities and other environmental programs in its July economic and fiscal update. All government programs are now under review. Our quantitative assessment of British Columbia's climate change performance gives full credit for activities undertaken up until the new government took office. But if the abandonment of these activities is confirmed once program reviews are completed, then the province's score would likely fall substantially.

British Columbia's new government has taken the following additional positions that seriously undermine the province's previous reputation as a leader in addressing climate change in Canada:

- The new government has dropped strong hints that it would like to overturn the long-standing moratorium on offshore drilling for oil and gas, with the intention to "use our

- energy to re-ignite the BC economy.”¹⁵ If pursued, this approach will produce significant additional increases in greenhouse gas emissions.
- In its July economic and fiscal update, the government raised the vehicle cost threshold at which the passenger vehicle surtax is applied from \$32,000 to a new level of \$47,000. The government explicitly stated that this measure was intended to facilitate purchases of trucks and minivans¹⁶—a significant step backwards for vehicle fuel efficiency.
 - Premier Gordon Campbell declined to express support for the Kyoto Protocol when invited to do so in the Legislature.¹⁷

The new government has, however, also taken some positive initiatives:

- The newly appointed Chairman and Chief Executive Officer of BC Hydro has stated that energy conservation will be his “number one priority” and that the utility’s Power Smart program to encourage customer energy efficiency will be strengthened. The CEO’s second priority is reported to be to increase the use of low-impact renewable energy.¹⁸
- The government has launched an Energy Policy Task Force to develop a “comprehensive, long-term energy policy for British Columbia.”¹⁹ This gives the province the perfect opportunity to adopt an energy policy consistent with long-term reductions in greenhouse gas emissions. This opportunity must now be seized upon.

British Columbia’s greenhouse gas emissions rose 20% between 1990 and 1998,²⁰ with most of the increase coming from motor vehicles and oil and gas production. As mentioned above, these are two key areas where the new government is now actually weakening constraints on emissions, although the major \$1.2-billion investment in Vancouver’s SkyTrain network—an important step in addressing emissions from transportation—is not under threat. Electricity generation is set to become a further important area of emissions growth as a result of BC Hydro’s plans to meet future increased electricity demand largely from natural gas combustion. BC Hydro recently projected that this policy would increase its corporate greenhouse gas emissions by 85% between 1999 and 2004 (from an admittedly low base), even after taking the utility’s purchases of emission offsets into account.²¹ It remains to be seen whether the new CEO will adjust this policy.

British Columbia’s strong upward trend in greenhouse gas emissions demands major new policy initiatives in all sectors, as proposed in the criteria used in our qualitative assessment of government performance. British Columbia’s government must now move quickly to resolve the conflicting policy signals it has sent in its first few months and state clearly where it stands on climate change. The government must make clear (i) that it will not stand in the way of Canada’s ratification of the Kyoto Protocol, and (ii) that it will participate constructively in Canada’s effort to meet its Kyoto target.

¹⁵ Speaking Points of the Honourable Richard Neufeld, British Columbia Minister of Energy and Mines, PNWER-CSG West Conference, July 27, 2001.

¹⁶ Ministry of Finance (July 30, 2001), *Background — Tax Cuts and Fiscal Controls Detailed*, available at <http://www.fin.gov.bc.ca/01nr/nws17.htm>.

¹⁷ British Columbia *Hansard*, Volume 2, Number 8, August 1, 2001.

¹⁸ *The Province* (September 9, 2001), “Hydro sparkplug recharged.”

¹⁹ Office of the Premier / Ministry of Energy and Mines (August 21, 2001), *Government Launches Task Force, Extends Hydro Rate Freeze*, press release.

²⁰ This is the latest year for which data are available.

²¹ BC Hydro (June 2001), *Greenhouse Gas Report*. The calculation is a comparison of average projected emissions in 2003-2005, net of offsets, and actual emissions in 1998-2000. The three-year averages smooth out large year-on-year fluctuations.

British Columbia 39 / 100

Summary of Assessment

Element	Score Achieved	Possible Score
Transportation/Land Use Planning	7.0	15
Energy Utilities	3.0	15
Buildings	5.5	15
Industry	3.0	15
Greenhouse Gas Emissions Trading	3.0	10
Government House in Order	8.5	10
Other Sources of Greenhouse Gas Emissions	3.0	10
Technology Development	3.0	5
Enhancing Awareness and Understanding	3.0	5

Transportation / Land Use Planning 7 / 15

Providing Financial Incentives to Promote the Purchase and Use of Fuel Efficient Vehicles

1 / 4

In July 2001, the government doubled the existing maximum sales tax rebates for alternative fuel vehicles to \$1000 for vehicles and \$10,000 for buses. At the same time, the British Columbia government raised the vehicle cost threshold at which the passenger vehicle surtax is applied from \$32,000 to a new level of \$47,000—encouraging the purchase of large, inefficient vehicles. The government also provides a sales tax exemption for kits to convert conventional fuel vehicles to operate on propane. Finally, the government continues to run a mandatory vehicle inspection and maintenance program in major urban centres (AirCare) that can help improve the fuel economy of poorly maintained vehicles. The mark has been awarded on the basis of the balance of these various initiatives.

Changing the Taxation of Transportation Fuels to Promote Greenhouse Gas Emission Reduction

2 / 4

The British Columbia government has put in place a motor fuel tax exemption for natural gas, 85% ethanol, and methanol blends of fuel and also has a preferential tax rate for auto-propane of 7% of the price. The government has also implemented a long-term general preferential tax policy for all alternative motor fuels that will see tax rates on these fuels phased in, based on market share and environmental benefits, with the maximum tax rate below the gasoline tax rate.

Providing Funding for Public Transit

2.5 / 3

The British Columbia government transfers a portion of gasoline and diesel taxes collected in the Greater Vancouver Regional District (9 cents/litre, \$180-million/year) and the Capital Regional District (2.5 cents/ litre, \$7.25-million/year) to support public transit and other vehicle use reduction alternatives. It has also purchased over 60 transit buses for use throughout the province. Over the next three years the province will invest \$780-million in the \$1.2-billion Millennium Line for the Vancouver SkyTrain system.

Promoting Energy Efficiency through Land Use Planning

1.5 / 3

The British Columbia government provides technical support to local and regional governments in the main urban growth areas to help them design settlement patterns and transportation modes that decrease vehicle use and shorten travel distances. In fiscal 2000/01 the government also provided support of \$1.4-million to develop infrastructure for cycling and \$1.3-million to support the development of high occupancy vehicle and bus only lanes. A partial mark has been awarded for these initiatives.

Reducing Highway Transportation Speeds

0 / 1

No highway speed limits in British Columbia have been decreased in the past five years. In June 2001, the new government scrapped the province's extensive photo radar system.

Energy Utilities

3 / 15

Establishing a Low-Impact Renewable Portfolio Standard

0.5 / 4

While the British Columbia government has not mandated a renewable portfolio standard, BC Hydro (which generates 95% of BC's electricity) has committed to ensuring that 10% of new electricity generation capacity constructed in the province will come from "green" energy sources. The mark is low because this green energy commitment represents significantly less than 10% of BC Hydro's total generating capacity.

Mandating Demand Side Management Activities

1 / 4

The British Columbia government has not mandated energy utilities to undertake demand side management (DSM) programs. The BC Utilities Commission has often required electric utilities to pursue some DSM activities and although BC Hydro has historically been a leader in DSM programs, their own programs have declined in recent years. Natural gas utilities are not required to implement DSM programs, but many do have some programs in place.

Incorporating Environmental Costs into Energy Prices

1.5 / 4

The British Columbia government requires BC Hydro to use a resource acquisition process that assesses environmental factors (such as greenhouse gas emissions), and social and other economic factors, as well as financial costs, in a multiple-accounts evaluation framework. To the extent that this results in the selection of resources that are not "least financial cost," then energy prices will be higher than they would otherwise be. A provincial sales tax exemption is provided for some solar, wind, and micro-hydro equipment. The mark is limited in view of the indirect/small scale of these initiatives.

Promoting Net Metering

0 / 2

There is currently no real support for net metering in British Columbia. BC Hydro does not offer net metering to its customers at this time.

Disclosure of Generating Sources to Consumers

0 / 1

There is no regulatory requirement in place in British Columbia for power generators to report either their fuel mix for the generation of electricity, or the environmental impacts of that generation.

Buildings

5.5 / 15

Mandated Energy Code for Buildings

1.5 / 4

The British Columbia government has not adopted the National Energy Code for Buildings on a provincial basis, but it does require all new publicly funded buildings to meet or exceed the code. A slightly increased mark was awarded because it appears the market in the province has largely caught up to this code in most areas. Under its "Green Buildings" new buildings program, the government has undertaken pilot projects consisting of the construction of new academic facilities that exceed the National Energy Code by 40-50% to inform the development of a policy governing all new provincially funded buildings.

Mandated Energy Code for Houses

1 / 4

While the British Columbia government has not adopted the National Energy Code for Houses, a partial mark was awarded because the British Columbia Building Code adopted energy standards in the mid-1990s that are stronger than this code in some areas and weaker than the code in other areas.

Incentives for Energy Efficiency Retrofits	1.5 / 3
<p>Through the British Columbia Buildings Corporation (BCBC), the BC government sponsors a “Green Buildings” retrofit program that services provincially funded facilities only. Capital invested in the retrofit is repaid to the commercial lender from savings realized due to the retrofit. The Ministry of Health also has some incentives for energy efficiency retrofits in hospitals. Finally, a provincial sales tax exemption is provided for certain energy conservation materials and equipment including insulation materials for buildings (e.g., various types of insulation material, double-paned windows, doors).</p>	
Promoting Community Based Energy Efficiency Initiatives	1.5 / 3
<p>In fiscal 2000/01, the BC government allocated approximately \$1.2-million for its Greening Communities Initiative (GCI), which partners with municipalities, the federal government, and the Federation of Canadian Municipalities. Examples of projects include community energy plans, renewable energy plans, land use planning, conferences, and workshops.</p>	
Financial Incentives to Improve the Energy Efficiency of New Buildings	0 / 1
<p>The British Columbia government does not provide financial incentives to encourage improved energy efficiency in new buildings although it does try to play a “match-making” role in support of the Federal government’s Commercial Building Incentive Program.</p>	
<hr/>	
Industry	3 / 15
<hr/>	
Tax Incentives for Energy Efficiency Investments	0.5 / 4
<p>The British Columbia government has no tax incentives in place to encourage investments by industry to improve energy efficiency. In fiscal 2000/01, the British Columbia government did provide limited funding (\$250,000) to public education and outreach, benchmarking, and demonstration projects on energy efficiency in the industrial sector. A limited partial mark has been awarded for this.</p>	
Project Approval Processes that Incorporate Greenhouse Gas Emission Considerations	1.5 / 3
<p>The British Columbia government is still considering the establishment of voluntary guidelines for greenhouse gas mitigation plans for projects reviewed under BC’s Environmental Assessment Process. Under the draft guidelines, plans would be submitted and approved as part of the overall project approval. Major projects going through this process are already required to have greenhouse gas mitigation plans in place and to examine the most technologically feasible and cost-effective means to control emissions. A slightly increased mark was provided in recognition of the existing requirement for larger projects.</p>	
Promotion of Co-generation Facilities	1 / 3
<p>Historically, there has not been significant support for co-generation from independent power producers (IPPs) in the province. However, BC Hydro is working to simplify the interconnection process by establishing a Generator Interconnection Office that will offer workshops for IPPs. Recently, a 250-MW Island Co-generation Project in Campbell River was brought on line.</p>	
Reducing Support for Fossil Fuel Exploration and Development	0 / 3
<p>The British Columbia government has changed the royalty structure for oil and natural gas over the last few years, tying royalty levels to market prices and eliminating “floor pricing.” These changes will likely provide a stronger incentive for oil and gas exploration and development in British Columbia when market prices are low. The new government has also dropped strong hints that it would like to overturn the long-standing moratorium on offshore oil and gas drilling.</p>	
Binding Voluntary Covenants to Reduce Greenhouse Gas Emissions	0 / 2
<p>The British Columbia government has not established any binding voluntary covenants with industry to reduce greenhouse gas emissions.</p>	

Greenhouse Gas Emissions Trading 3 / 10

Government Position on National Emissions Trading 1.5 / 4

The British Columbia government has not made any official statements on the potential role of a domestic emissions trading system in Canada's greenhouse gas emission reduction strategy. However, provincial officials express support for nationwide domestic emissions trading and British Columbia co-chairs the Domestic Emissions Trading Working Group under the National Air Issues Coordinating Committee on Climate Change. A partial mark has been awarded accordingly.

Mandatory Greenhouse Gas Emissions Reporting 0 / 3

The government of British Columbia does not require the reporting of greenhouse gas emissions by large commercial and industrial emitters.

Action to Facilitate Emissions Trading 1.5 / 3

The British Columbia government is spearheading and hosting the national Greenhouse Gas Emissions Reduction Trading (GERT) pilot project to assess the potential effectiveness of greenhouse gas emission reduction credit trading as a policy tool. A slightly higher mark was awarded in recognition of their central role in GERT. The government committed to recognize greenhouse gas emission reduction credits against potential future regulatory requirements if a credit for early action program was introduced, but credit for early action now appears to have been ruled out by the federal government.

Government House in Order 8.5 / 10

Greenhouse Gas Emission Reduction Target 2 / 2

In its 2000 submission to the Voluntary Challenge and Registry (VCR) program, the British Columbia government committed to an overall reduction of 16% of greenhouse gas emissions from the 2000 level by 2005. (It is unclear whether the new government endorses this target.)

Participation in the Voluntary Challenge Program 2 / 2

The British Columbia government submitted an action plan incorporating a greenhouse gas inventory from government operations to the VCR in November 2000.

Program to Improve Energy Efficiency in Buildings 2 / 2

The British Columbia government has retrofitted provincial government buildings since the 1970s. These efforts have reduced energy consumption of targeted buildings by over 55%. In addition, the British Columbia Building Corporation, which is responsible for most government buildings, is committed to implement energy efficiency measures in buildings it owns by 2005, with an average 10% gain in efficiency expected to result. Under its "Green Buildings" new buildings program, the government has undertaken pilot projects consisting of the construction of new academic facilities that exceed the National Energy Code by 40-50%.

Program to Reduce Greenhouse Gas Emissions in Transportation Fleets 2 / 2

The British Columbia government has set a target of a 16% reduction in greenhouse gases from 2000 to 2005 through changes to the vehicle fleet. In 2001, 40% of government lease orders for vehicles were for alternative fuel or hybrid vehicles. This resulted in the procurement of 60 hybrid vehicles, 28 natural gas vehicles, and 105 propane vehicles. In addition, 25% of the conventionally fuelled vehicles ordered were fuel-efficient subcompacts and compacts.

Green Power Procurement 0.5 / 2

Although the British Columbia government has not established a green power procurement target, it has increased the use of photovoltaics and other renewable energy sources to replace diesel generation in provincial parks. The province is also in the preliminary stages of developing plans to acquire green power for selected government facilities on a pilot basis. A partial mark was given for these initiatives.

Other Sources of Greenhouse Gas Emissions 3 / 10

Landfill Gas Regulation 1 / 3

The BC government requires that landfill gas recovery and management systems be evaluated for new landfills for which total capacity exceeds 100,000 tonnes. If it is determined that emissions of non-methane organic compounds are expected to exceed 150 tonnes/year, the installation and operation of landfill gas recovery and management systems are mandatory. Venting of the collected gas must be avoided, using it instead as an energy supply or in a combustion process. The mark has been reduced, however, because there appears to be some variation in how this approach is being applied.

Promoting Greenhouse Gas Emission Reductions from Livestock 0 / 2

The British Columbia government is working to prepare greenhouse gas reduction workshops for farmers but these have not yet taken place.

Support for Afforestation 0 / 2

There are currently no British Columbia government programs to support afforestation, although there is a program to restore previously harvested areas.

Protection of Forested Land 1.5 / 2

According to the World Wide Fund for Nature, 11.4% of British Columbia's land mass was designated as parks or protected areas in September 2000. This was the highest percentage of any jurisdiction in Canada and represents a significant increase over the past decade. The British Columbia government now states that it has protected almost 13% of BC through the approval of completed land use plans, which now cover 73% of the province. However, it is important to note that there remains a great deal of public debate on the extent to which BC forests are protected.

Promoting Carbon Sequestration in Agricultural Soils 0.5 / 1

No program is in place to encourage carbon sequestration in agricultural soils, but a partial mark was awarded in recognition of the fact that the government of British Columbia has initiated an Agricultural Soil Carbon Sequestration Potential program to assess the ability of farmers to sequester carbon.

Technology Development 3 / 5

Support for Low-Impact Renewable Energy Technologies 1 / 2

In its 2000 budget, the British Columbia government provided \$300,000 for an Ethanol Development program for research and development on ethanol production from wood waste. In fiscal 2000/01, approximately \$200,000 was allocated to public education and demonstration projects in solar and biomass applications. In addition, the government increased the use of renewable energy sources in its parks. The Green Venture Capital Program, designed to support the development of new environmental technologies and services, and the Green Economy Development program to support green technology demonstration projects have been suspended under the new government.

Support for Energy Efficiency Technologies 1.5 / 2

The British Columbia government continues to invest in the development of the province's fuel cell manufacturing industry, in the areas of technology, fuelling infrastructure and consumer product application. Under the federal-provincial Western Economic Partnership Agreement, the British Columbia government has committed \$6.5-million for projects related to fuel cells.

Support for Other Greenhouse Gas Emissions Reducing Technologies 0.5 / 1

In 1999, the British Columbia government implemented a 10% Scientific Research and Experimental Development tax credit for eligible research and development including greenhouse gas emission reduction technology. In fiscal 2000/01 this credit amounted to a total of \$28-million, but it is unclear what proportion was associated with greenhouse gas reduction. Some other small projects have also been funded.

Enhancing Awareness and Understanding

3 / 5

Provincial Government Activities

2 / 3

The British Columbia government is involved in several initiatives aimed at educating the public about climate change, including public education materials, curriculum materials and websites. However, the total government contribution for these initiatives in 2000 was only \$60,000. It has also contributed \$150,000 to the production of three one-hour television episodes, to be aired in October 2001, and provided a total of \$115,000 for awareness activities related to Clean Air Day 2001.

Provincial Government Support for Other Education and Awareness Activities

1 / 2

The British Columbia government has contributed \$270,000 as well as technical advice and support to awareness projects undertaken by BC-based organizations. Examples include: the Canadian Climate Change Calculator, the Energy Aware Committee, and Better Environmentally Sound Transportation's Off Ramp! Program.

ONTARIO

Current Greenhouse Gas Emissions Profile (1998)²²

Total emissions (Mt CO ₂ E)	197
Per capita emissions (t CO ₂ E / person)	17.3
Per unit GDP emissions (kg CO ₂ E / \$ GDP)	0.53

Sources of Emissions (1998)

Emissions from electricity and steam generation (%)	18
Emissions from buildings (%)	14
Emissions from transportation (%)	28
Emissions from industry (%)	28
Emissions from other human activities (%)	11

Emission Trends

Emissions increase 1990-1998 (%)	7.7
Emissions increase 1997-1998 (%)	0.0
Projected increase ²³ 1990-2010 (%)	17

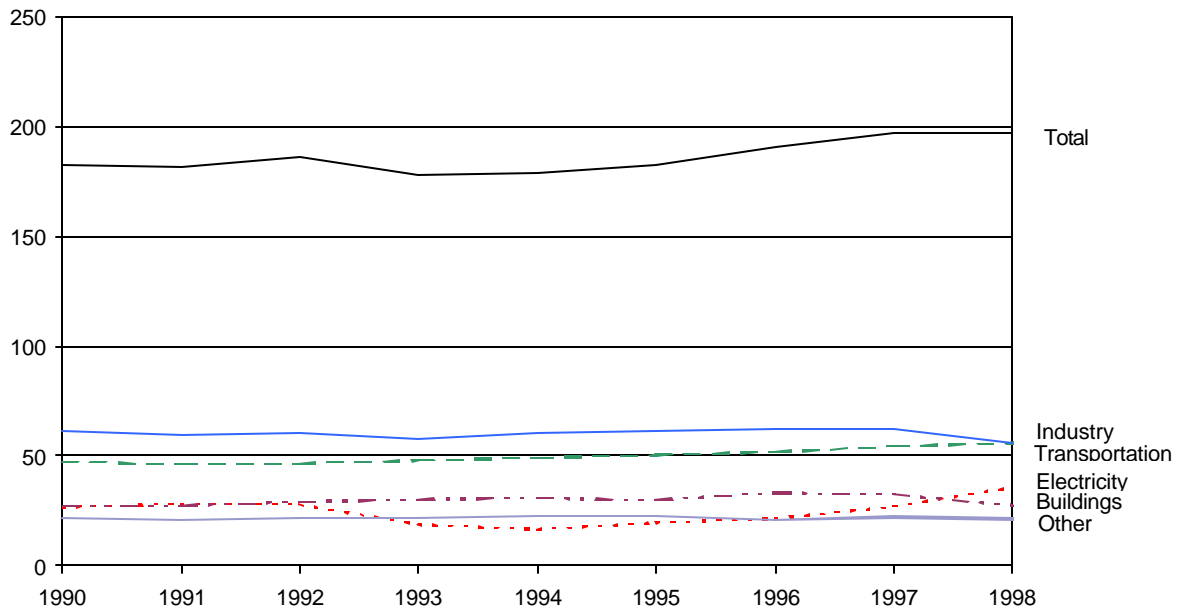
²² 1990-1998 emissions data here and in subsequent tables, chart and text from: Environment Canada (2000), *Trends in Canada's Greenhouse Gas Emissions 1990-1998, Draft*. Population data from: <http://www.statcan.ca/english/Pgdb/People/Population/demo02.htm>.

GDP data (at market prices) from: <http://www.statcan.ca/english/Pgdb/Economy/Economic/econ15.htm>.

Note: The buildings sector covers residential, commercial and institutional buildings; pipelines are included under industry; stationary sources in forestry and agriculture are included under "other human activities."

²³ National Climate Change Process Analysis and Modelling Group (1999), *Canada's Emissions Outlook, An Update*. The projections made in this document are based on policies in place in late 1999 and do not take account of any emission reduction measures implemented since then.

Greenhouse Gas Emission Trends, 1990-1998 (Mt CO₂E)



The Kyoto Protocol meets the “Common Sense Revolution”

As Canada’s largest province, responsible for 29% of Canada’s greenhouse gas emissions, Ontario needs to play a leadership role in implementing Canada’s Kyoto Protocol commitment.

Unfortunately such leadership has been sadly lacking. Indeed, the Ontario government’s approach to implementing Canada’s Kyoto commitment might best be described as “negative” leadership. Our quantitative assessment of its climate change performance illustrates the weakness of the province’s actions. Its most significant steps have been limited to a promising, but incomplete emission reporting requirement for industry, a handful of standards under the *Energy Efficiency Act*, and a few symbolic actions, such as the construction of a wind-powered generator on the site of the Pickering Nuclear Power plant. At the same time, Ontario’s greenhouse gas emissions rose dramatically—by 10%—between 1994 and 1998,²⁴ reaching an all time high of the equivalent of 197 megatonnes of carbon dioxide.

In fact, the defining feature of the Ontario government’s record on greenhouse gas reduction over the past six years has been a series of measures virtually guaranteed to increase the province’s emissions. Two key areas deserve attention in this context: the province’s approach to land use planning and transportation; and its policies regarding Ontario Hydro and its successor, Ontario Power Generation (OPG).

²⁴ This is the latest year for which data are available.

Transportation and Land-Use

The transportation sector is the leading source of greenhouse gases in Ontario, accounting for 28% of the province's 1998 emissions. It is also where the largest growth in emissions is expected to occur in the next two decades.²⁵

However, transportation is an area where there is enormous potential for greenhouse gas reduction strategies to deliver multiple benefits. Transportation and land use policies designed to reduce reliance on automobiles and trucks can not only reduce greenhouse gas emissions, but also curb urban sprawl, cut emissions of smog precursors, reduce infrastructure costs, and protect ecologically significant areas and prime agricultural land.²⁶

Unhappily, the Ontario government's policies in this area have been characterized by a series of decisions that encourage and subsidize urban sprawl, and by increased reliance on automobiles and trucks for both personal and commercial transportation. One of the government's earliest decisions after its election in 1995 was to repeal reforms to the land use planning system, adopted by the previous government to limit urban sprawl, improve energy efficiency and reduce automobile dependency.²⁷

This was followed in January 1997 with the "mega-week" announcements of the restructuring of the relationship between the province and its municipalities. A central feature of the new arrangements was the withdrawal of all provincial funding for public transit services.²⁸

In the spring of 2001, the government announced a "Smart Growth" strategy. This was in response to growing public concern regarding urban sprawl, particularly in the Greater Toronto Area. Unfortunately, the central feature of the government's "strategy" is a massive highway expansion program. The government's May 2001 budget included proposed expenditures of more than \$900-million on highway expansions in the current fiscal year alone.²⁹

These expansions are concentrated in the Greater Toronto Area, Niagara Peninsula and Southwestern Ontario—the areas of the province most heavily affected by smog—and will facilitate and encourage more urban sprawl, increased reliance on automobile travel, and further increases in emissions of greenhouse gases and smog precursors.

In contrast, the government has committed a mere \$50-million per year over the next five years to transit improvements and has limited that investment to the 905 and Golden Horseshoe regions.³⁰

²⁵ Analysis and Modeling Group (December 1999), *Canada's Emissions Outlook: An Update*, National Climate Change Process, table Ont-17.

²⁶ See Transport Canada (2001), *Canada Transportation Act Review Panel Final Report*, Chapter 17. See also M. O'Meara Sheehan (June 2001), *City Limits: Putting the Brakes on Sprawl*, Worldwatch Institute.

²⁷ See Bill 20, *The Land Use Planning and Protection Act, 1996*.

²⁸ These had totaled \$718-million in 1996/97. See M. Winfield and G. Jenish (1999), *Ontario's Environment and the "Common Sense Revolution": A Four Year Report*, Canadian Institute for Environmental Law and Policy, pp.5-9.

²⁹ Ministry of Finance (2001), *Ontario Budget 2001, Budget Paper E*, pp.170-171.

³⁰ Ministry of Finance (2001), *Ontario Budget 2001, Budget Paper E*, pp.168-169. A one-time payment was also provided to the City of Toronto for subway improvements in 2001 (Ontario Ministry of Finance, *Ontario Budget 2001, Budget Paper B*, p.42). A \$250-million Superbuild Millennium Partnerships Initiative for strategic infrastructure projects in Ottawa, Waterloo, London, Windsor, Niagara, Hamilton, Sudbury and Thunder Bay was also announced in the 2001 Budget. However, this program is not limited to public transit investments, and the most significant investments announced in the budget were for highway

The North American Commission for Environmental Cooperation estimates that emissions of greenhouse gases and certain other pollutants associated with increased truck transportation in the Windsor-Toronto corridor will triple over the next 15 years.³¹ The province's strategy not only fails to address this problem but is actually intended to facilitate its growth, as the Ministry of Transportation identifies this increased traffic as a major driver for its highway expansion program.³²

Ontario Power Generation

Electricity generation is the province's second largest source of greenhouse gas emissions. The defining event of the Ontario government's policies towards the electricity sector in the 1990's was the approval of Ontario Hydro's August 1997 Nuclear Asset Optimization Plan (NAOP).

The NAOP was a response to the identification of serious safety and maintenance problems with the utility's nuclear-powered generating facilities. Its central features were the closure of seven nuclear units and an \$8-billion investment in refurbishment of the remaining twelve. The resulting electricity supply shortfall of an estimated 4000 megawatts was to be met through increased generation from the utility's five³³ aging coal-fired plants.³⁴

The results have been little short of a public health and environmental disaster. By 1999, the most recent year for which data are available, emissions of carbon dioxide, the acid rain and smog precursors sulphur dioxide and nitrogen oxides, heavy metals and carcinogens from OPG coal-fired facilities had nearly doubled relative to 1995.³⁵ Two of the plants, Nanticoke and Lakeview, are within the areas of the province most heavily affected by smog problems.

These increases occurred at a time when the Ontario Medical Association estimated there are 1,900 premature deaths, 9,800 hospital admissions, 13,000 emergency room visits and 47 million minor illness days that can be attributed to poor air quality in the province each year.³⁶ The economic costs of the health effects of air pollution have been estimated to be between \$10- and 12-billion per year.³⁷ In environmental terms, the growth in OPG's emissions began at the same time that it was concluded that a 75% **reduction** in current releases of sulphur dioxide was needed to halt the damage caused by acid rain in Eastern Canada.³⁸

Implicit in the approval of the NAOP was a decision to continue the province's long-term reliance on nuclear power as its leading source of electricity. This was despite the fact that Ontario's investment in nuclear power has been a long-acknowledged economic failure,

expansions in the Ottawa area (Ontario Ministry of Finance, *Ontario Budget 2001, Budget Paper E*, p.165). The "905 region refers to the area around Toronto with the 905 area code.

³¹ Commission for Environmental Cooperation (February 2001), *North American Trade and Transportation Corridors: Environmental Impacts and Mitigation Strategies*.

³² See Ontario Ministry of Transportation, *2001-2002 Business Plan*.

³³ The plants are: Lambton, Lakeview (Mississauga), Nanticoke, Thunder Bay and Atikokan.

³⁴ For a good summary of the NAOP and its implications see Toronto Public Health (March 1999), *Report to Board of Health Re: Changes in Ontario's Electrical Sector and Air Quality*.

³⁵ Ontario Clean Air Alliance (January 2001), *Countdown Coal*.

³⁶ Ontario Medical Association (June 2000), *The Illness Costs of Air Pollution in Ontario: A Summary of Findings*.

³⁷ Ontario Medical Association (June 2000), *The Illness Costs of Air Pollution in Ontario: A Summary of Findings*.

³⁸ Acidifying Emissions Task Group (October 1997), *Towards a National Acid Rain Strategy*, submitted to the National Air Issues Coordinating Committee.

accounting for a large portion of the \$22-billion “stranded” debt left in the aftermath of the break-up of Ontario Hydro,³⁹ and the unresolved safety and waste disposal problems associated with nuclear facilities. No serious consideration has been given to the possibility of making investments in the more economically and environmentally sustainable options of increased energy efficiency and renewable energy sources, such as wind power.

In effect, the province chose to commit its energy strategy to an already failed path. Indeed, the government’s direction appears to be to continue to permit Ontario Power Generation to run its coal-fired plants at full capacity even after the laid-up nuclear facilities come back on line. This is intended to maximize revenues and the potential market value of facilities.⁴⁰

New air pollution control regulations for these facilities, proposed in July 2001, fail to set any standards for greenhouse gas emissions.⁴¹ At the same time, the emission-trading scheme for other pollutants, including precursors to smog and acid rain, has been criticized by the federal government,⁴² environmental groups,⁴³ and even industrial associations⁴⁴ as permitting Ontario Power Generation to increase its emissions even further.

Other steps have made it clear that the province intends to permit OPG to run its coal-fired plants at full capacity, even if there is not enough demand in Ontario for their power. In 1998, the government directed Ontario Hydro to expand its electricity transmission capacity to neighbouring jurisdictions by 2,000 megawatts. Subsequently, Ontario Energy Board decisions permitted Hydro One, the successor company to Ontario Hydro’s transmission and distribution operations, to subsidize exports of electricity to the U.S. Other Energy Board decisions directed municipal utilities and Hydro One to purchase all their electricity supplies on the coal-dominated spot market, making market entry for new, cleaner natural gas or wind-powered electricity suppliers extremely difficult, if not impossible.⁴⁵

As a fossil fuel consuming province, Ontario is uniquely positioned to be a major economic and environmental beneficiary of a greenhouse gas reduction strategy to implement Canada’s Kyoto Protocol commitment. The present government has failed to recognize this opportunity. Instead it continues to pursue strategies intended to shield the province’s largest greenhouse gas generators from having to reduce their emissions. At the same time, it has adopted a series of policies that, if fully implemented, will lock the province into an energy and pollution intensive future for decades to come, making it extremely difficult to fulfill Canada’s international commitments.

As Ontario reaches the end of one of the worse smog seasons it has ever seen, the need for a different path—one that reduces the province’s dependence on fossil fuels and nuclear energy—is clear. Key features of such a strategy would include:

- a shift in the province’s capital investments from highways to public transit;

³⁹ See David Martin, “Harris has it wrong on energy plan for Ontario,” *Toronto Star*, May 21, 2001. See also Ontario Ministry of Finance (2001), *Ontario Budget 2001, Budget Paper D*, pp.117-118. The \$22-billion stranded debt estimate was reduced by \$1-billion in the Ontario 2001 Budget (*Budget Paper B*, p. 61).

⁴⁰ Toronto Public Health (March 30, 1999) *Report to Board of Health: Changes in Ontario’s Electrical Sector and Air Quality*, p.8.

⁴¹ See Environmental Bill of Rights Registry Posting RA01E0020, July 31, 2001.

⁴² See V. Lawton, “Minister slams smog plan,” *The Toronto Star*, September 4, 2001.

⁴³ See J. Gibbons (May 2001), *Weak Emission Limits: An Assessment of Ontario’s 2001 Proposals for Air Pollution Control in the Electricity Sector*, Ontario Clean Air Alliance.

⁴⁴ See M. Mittlestaedt, “Clean air rules too lax, firms say,” *The Globe and Mail*, August 23, 2001.

⁴⁵ Ontario Clean Air Alliance (January 2001), *Countdown Coal*. pp.13-14.

- the adoption of land-use policies intended to reduce urban sprawl and provide alternatives to automobile use;
- imposition of a legally enforceable and declining cap on emissions of greenhouse gases, smog and acid rain precursors, and heavy metals from the electricity sector;
- rapid conversion of Ontario Power Generation's coal-fired facilities to high efficiency natural gas; and
- direction to the Ontario Energy Board to structure the electricity market in a manner that encourages investment in renewable energy sources such as wind power, and facilitates their entry into the marketplace.

The September 2001 Joint Energy and Environment Ministers' meeting (JMM) offers Ontario—the only jurisdiction to refuse to sign on to Canada's National Implementation Strategy on Climate Change at the October 2000 JMM—an opportunity to show that it is serious about reducing greenhouse gas emissions and protecting the health of all Canadians.

Ontario

30.5 / 100

Summary of Assessment

Element	Score Achieved	Possible Score
Transportation/Land Use Planning	5.5	15
Energy Utilities	3.5	15
Buildings	4.0	15
Industry	3.0	15
Greenhouse Gas Emissions Trading	4.0	10
Government House in Order	3.5	10
Other Sources of Greenhouse Gas Emissions	4.5	10
Technology Development	1.0	5
Enhancing Awareness and Understanding	1.5	5

Transportation / Land Use Planning**5.5 / 15****Providing Financial Incentives to Promote the Purchase and Use of Fuel Efficient Vehicles****1.5 / 4**

The Ontario government provides a sales tax rebate of up to \$1000 for alternative fuel powered and hybrid gasoline/diesel-electric automobiles and light trucks, but the program is not well advertised. In addition, most of the vehicles that are included in the program are charged the same basic tax rate, providing no incentive for new car buyers to choose a vehicle based on fuel efficiency. The mark has been reduced accordingly. Ontario's mandatory vehicle inspection and maintenance program, Drive Clean, can also help to improve the fuel economy of poorly maintained vehicles in some of Ontario's larger urban centres.

Changing the Taxation of Transportation Fuels to Promote Greenhouse Gas Emission Reduction**2 / 4**

The Ontario government does impose different levels of tax on different types of transportation fuels. Current rates are: gasoline: 14.7 cents/litre; diesel: 14.3 cents/litre; propane: 4.3 cents/litre; natural gas and ethanol fuels are not taxed. There has been no change in this taxation regime since 1997.

Providing Funding for Public Transit**1 / 3**

The Ontario government provides no ongoing funding of public transit operating expenses. However, the 2001 budget's Smart Growth/Superbuild initiative provides \$250-million over five years for transit improvements under the Golden Horseshoe Transit Investment Project. Ontario also provided a one-time payment of \$50-million to the Toronto Transit Commission in 2001 for subway improvements. The \$250-million allocated for public-private infrastructure projects province-wide is not limited to transit. The mark has been reduced in light of the \$906-million being provided under Smart Growth/Superbuild to highway expansion in fiscal 2001/02 alone.

Promoting Energy Efficiency through Land Use Planning**0.5 / 3**

The Ontario government's Ministry of Municipal Affairs and Housing has developed transit-supportive land use planning guidelines as well as a provincial policy statement that promotes compact urban form, mixed use development and transit-supportive densities. But there are no mandatory elements to these guidelines and no incentives are provided to encourage their application. On the contrary, the Smart Growth initiative is, overall, likely to encourage urban sprawl and car and truck use for private and commercial transportation. The mark has been reduced in light of this.

 Reducing Highway Transportation Speeds 0.5 / 1

The Ontario government has not made any changes to speed limits since 1997. A partial mark was given in recognition of the fact that Ontario has accelerated its use of driver behaviour and enforcement blitzes, particularly on major highways.

 Energy Utilities 3.5 / 15

Establishing a Low-Impact Renewable Portfolio Standard 0 / 4

The Ontario government has not established any requirements for electricity generators or distributors to ensure that a specific percentage of their product is generated from renewable energy sources. The opening of the Ontario electricity market to competition (now proposed for May 2002) could in principle facilitate the entry of renewable energy technologies into the marketplace, but Energy Board decisions will make this difficult in practice. Legislation reducing taxes on hydro-electricity is expected to encourage investment in small hydro facilities.

Mandating Demand Side Management Activities 2 / 4

The Ontario Energy Board has made it mandatory for natural gas utilities to undertake demand side management programs, but not for electric utilities.

Incorporating Environmental Costs into Energy Prices 0.5 / 4

The Ontario Energy Board has made no effort to reflect the environmental impact of different forms of electricity generation in transmission rates, while electricity destined for export (primarily from coal and nuclear power) actually pays a lower transmission charge. It does not appear that the environmental impacts of different forms of electricity generation will be reflected in differential distribution rates in Ontario's open electricity market. Renewable energy projects will be eligible sources of credits under Ontario's soon-to-be implemented emissions trading system for nitrogen oxides and sulphur dioxide. The partial mark awarded reflects this provision.

Promoting Net Metering 0.5 / 2

No provisions for net metering are now in place, although the province is examining options for net metering. A partial mark was awarded because Toronto Hydro does operate a pilot net metering program and this issue is being considered by the Ontario Energy Board.

Disclosure of Generating Sources to Consumers 0.5 / 1

Under Ontario's Environmental Labelling Program, all electricity retailers must provide labels to their customers showing Ontario's system-wide electricity supply mix. Electricity retailers making an environmental claim for their product are required to provide a label comparing their offer to the system mix, enabling these retailers to differentiate their products. Under the proposed Phase II of the program, to begin after market opening, additional information, including information on emissions, will have to be provided. Points were reduced, however, as market opening has been delayed until 2002.

 Buildings 4 / 15

Mandated Energy Code for Buildings 1.5 / 4

The Ontario Building Code requires buildings to meet the standards of the National Energy Code for Buildings or a similar, somewhat less stringent standard.

Mandated Energy Code for Houses 1.5 / 4

The Ontario government has not adopted the National Energy Code for Houses. However, partial marks were awarded because Ontario's own Building Code includes requirements for energy efficiency in houses, which largely meet the requirements of the National Energy Code.

Incentives for Energy Efficiency Retrofits

0.5 / 3

The Ontario government has not provided any substantial direct financial support or incentives for energy efficiency retrofits. The government is currently funding a pilot project that supports renovation of 25 homes to assess the renovation industry's ability to implement energy efficiency improvements. Other stakeholders have, in contrast, developed some large-scale financing mechanisms, notably the Toronto Better Buildings Partnership, which originally secured provincial funds under the Canada-Ontario Infrastructure Works Program.

Promoting Community Based Energy Efficiency Initiatives

0.5 / 3

The Ontario Government stopped providing funding to its Green Communities program in the 1995/96 fiscal year. Recently, the province funded a campaign to reduce the use of polluting lawnmowers and provided funding in fiscal 2000/01 to the Green Communities Association to implement a small pilot project that offers homeowners rewards for improving home energy efficiency. In addition, the government has bought and renovated two houses to serve as energy efficient models for public education purposes. The mark awarded reflects the small scale of these initiatives.

Financial Incentives to Improve the Energy Efficiency of New Buildings

0 / 1

The Ontario government provides no financial incentives to encourage the energy efficient design of new buildings.

Industry

3 / 15

Tax Incentives for Energy Efficiency Investments

0 / 4

The Ontario government does provide an information service for industrial facilities that identifies energy efficiency opportunities through utility bill analysis and on-site evaluation of equipment and processes, but there is no financial incentive. It should be noted that Ontario used to provide a number of grant programs to support energy efficiency retrofits in industry, but these programs were discontinued in 1995/96.

Project Approval Processes that Incorporate Greenhouse Gas Emission Considerations

0 / 3

Project approval processes in Ontario do not incorporate greenhouse gas emissions considerations under any applicable legislation. To our knowledge, no proponent has ever been required to change their proposal before approval in response to a concern about greenhouse gas emissions.

Promotion of Co-generation Facilities

2 / 3

The number of co-generation facilities in Ontario is growing, and access to the grid is expected to be facilitated by the opening of the province's electricity market to competition. The mark has been reduced in light of the repeated delays in market opening (now proposed for May 2002).

Reducing Support for Fossil Fuel Exploration and Development

1 / 3

The Ontario government has not taken any steps that will facilitate new fossil fuel development in the province.

Binding Voluntary Covenants to Reduce Greenhouse Gas Emissions

0 / 2

The Ontario government has not established any binding voluntary covenants with industry to reduce greenhouse gas emissions. Ontario Power Generation's commitment to stabilize its greenhouse gas emissions (net of offsets) at their 1990 level in 2000 and beyond is not binding.

Greenhouse Gas Emissions Trading 4 / 10

Government Position on National Emissions Trading 0.5 / 4

The Ontario government strongly supports emissions trading as a policy instrument, as seen by Ontario's proposed trading system for sulphur dioxide and nitrogen oxides; a partial mark has been awarded for this. However, the government has not taken a position on whether a domestic emissions trading system should be part of Canada's response to climate change.

Mandatory Greenhouse Gas Emissions Reporting 2 / 3

The Ontario government requires the electricity sector and large industrial facilities to monitor and publicly report 358 different air pollutants, including the three most important greenhouse gases. A range of other industrial, commercial and municipal facilities will be added to the system in January 2002. There is no standardized methodology or requirement for third party verification.

Action to Facilitate Emissions Trading 1.5 / 3

The Ontario government has played a key role in the Pilot Emission Reduction Trading project (PERT) to assess the potential effectiveness of emission reduction credit trading as a policy tool. While PERT's initial focus was targeted at other air pollutants, greenhouse gas emissions have become an important component of PERT's work. The Letter of Understanding between the Ministry of the Environment and PERT participants states that "if [PERT] leads to a trading program, all emission reductions... will be subject to the rules of that program." This does not appear to be a clear commitment to recognize reduction credits against any potential future regulatory requirements. Ontario is now close to putting in place Canada's first major regulated emissions trading system. The system is limited to nitrogen oxides and sulphur dioxide but the government has suggested that greenhouse gases could be added in the future. Although the system design in the draft regulation has been severely criticized by the federal government, industry and environmental groups, a slightly higher mark was awarded in recognition of this initiative.

Government House in Order 3.5 / 10

Greenhouse Gas Emission Reduction Target 1.5 / 2

In its 1995 submission to the Voluntary Challenge and Registry Program, the Ontario government indicated that it had established a goal to reduce greenhouse gas emissions in government operations to 40% below their 1990 level by the year 2000. In 2000, the government stated that this goal had been reached. However, it appears that most of the reductions have come from downsizing, meaning that emissions from buildings will have been transferred to other entities rather than eliminated. The mark has therefore been reduced slightly.

Participation in the Voluntary Challenge Program 0 / 2

Although the government of Ontario sits on the board of Canada's Voluntary Challenge and Registry (VCR) and provides financial support, the government has not made a submission to the VCR for almost four years.

Program to Improve Energy Efficiency in Buildings 1 / 2

The Ontario government has taken action to improve the energy efficiency of provincial government buildings by strengthening its Green Workplace Initiative. A Government Energy Management program is available to all building operators seeking to reduce energy costs; these costs are now part of individual Ministry budgets. Retrofits have been done in a number of buildings, but the mark was reduced because it is unclear if all buildings will actually be assessed and retrofitted.

Program to Reduce Greenhouse Gas Emissions in Transportation Fleets 1 / 2

The Ontario government has reduced greenhouse gas emissions from vehicles through downsizing and procurement initiatives such as the purchase of 25 hybrid vehicles. It has also created a carpool website and ride-matching program for government staff. The extent to which these actions have been successful is unclear and therefore only a partial mark was awarded.

Green Power Procurement

0 / 2

The Ontario government has not established a green power procurement target.

Other Sources of Greenhouse Gas Emissions

4.5 / 10

Landfill Gas Regulation

2 / 3

The Ontario government has passed a regulation mandating the capture and combustion of methane from all landfills that have more than 250 million tonnes of waste capacity. Such requirements may also be imposed on smaller sites on a case-by-case basis.

Promoting Greenhouse Gas Emission Reductions from Livestock

0.5 / 2

The Ontario government has developed a Best Management Practice booklet in the area of manure management.

Support for Afforestation

0.5 / 2

The Ontario government does not have a comprehensive afforestation strategy in place, although it is actively exploring the potential for such a policy. The government does, however, donate pine seedlings for voluntary afforestation on private lands.

Protection of Forested Land

1 / 2

According to the World Wide Fund for Nature, Ontario had designated 8.8% of its land mass as parks or protected areas as of September 2000. This represented a significant increase over September 1989. In addition, the Forest Resource Assessment Policy commits the government of Ontario to programs that will not result in a reduction of the size of the provincial forest.

Promoting Carbon Sequestration in Agricultural Soils

0.5 / 1

The Ontario government actively promotes soil conservation practices through its Environmental Farm Plan and has established a Soil Carbon Sequestration Steering Committee to identify ways Ontario could initiate a more aggressive program to enhance carbon sequestration in soils. The government has also produced a Best Management Practice booklet on no-till cultivation.

Technology Development

1 / 5

Support for Low-Impact Renewable Energy Technologies

0 / 2

Although Ontario does not specifically support renewable energy technologies, the government does support technology development through various programs. Projects related to renewable energy technologies can be considered for funding as long as they meet program criteria.

Support for Energy Efficiency Technologies

1 / 2

The Ontario government has established minimum efficiency levels for 51 residential, commercial and industrial products and appliances under the Energy Efficiency Act, with additional products under consideration. The government also supports technology development through various programs. Projects related to energy efficiency technologies can be considered for funding as long as they meet program criteria.

Support for Other Greenhouse Gas Emissions Reducing Technologies

0 / 1

Ontario does not specifically support greenhouse gas reducing technologies, but the government does support technology development through various programs. Projects related to greenhouse gas reduction can be considered for funding as long as they meet program criteria.

Enhancing Awareness and Understanding

1.5 / 5

Provincial Government Activities

1 / 3

The Ontario government's \$10-million Climate Change Fund appears to be largely directed to supporting a range of education, outreach and awareness projects. The government has bought and renovated two houses to serve as energy efficient models for public education purposes. However, Ontario government materials consistently obscure the distinction between the climate change and clean air issues, and the Energy and Environment Ministry websites barely mention climate change. The mark has been reduced accordingly.

Provincial Government Support for Other Education and Awareness Activities

0.5 / 2

The Ontario government provided modest funding for the Canadian Energy Efficiency Centre under the Climate Change Fund, to provide information on how to improve energy efficiency to facility designers and energy users. It also provided a limited amount for education, information services and materials developed and delivered by the Kortright Centre.

QUÉBEC

Current Greenhouse Gas Emissions Profile (1998) ⁴⁶

Total emissions (Mt CO ₂ E)	89.7
Per capita emissions (t CO ₂ E / person)	12.2
Per unit GDP emissions (kg CO ₂ E / \$ GDP)	0.46

Sources of Emissions (1998)

Emissions from electricity and steam generation (%)	1.7
Emissions from buildings (%)	13
Emissions from transportation (%)	37
Emissions from industry (%)	31
Emissions from other human activities (%)	17

Emission Trends

Emissions increase 1990-1998 (%)	1.0	
Emissions increase 1997-1998 (%)	0.7	
Projected increase ⁴⁷ 1990-2010 (%)	10	or* 13

*This alternative projection was published in May 2001 by the Ministry of Natural Resources. It is for 2011 rather than 2010. ⁴⁸

⁴⁶ 1990-1998 emissions data here and in subsequent tables, chart and text from: Environment Canada (2000), *Trends in Canada's Greenhouse Gas Emissions 1990-1998, Draft*. Population data from: <http://www.statcan.ca/english/Pgdb/People/Population/demo02.htm>.

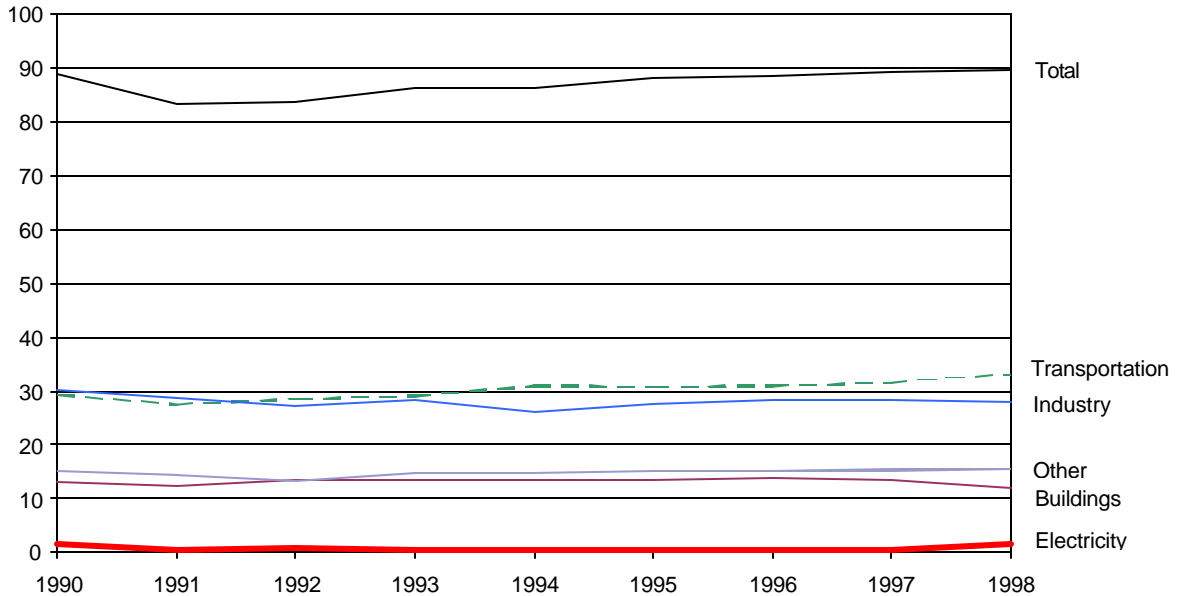
GDP data (at market prices) from: <http://www.statcan.ca/english/Pgdb/Economy/Economic/econ15.htm>.

Note: The buildings sector covers residential, commercial and institutional buildings; pipelines are included under industry; stationary sources in forestry and agriculture are included under "other human activities."

⁴⁷ National Climate Change Process Analysis and Modelling Group (1999), *Canada's Emissions Outlook, An Update*. The projections made in this document are based on policies in place in late 1999 and do not take account of any emission reduction measures implemented since then.

⁴⁸ Ministère des Ressources naturelles (May 2001), *Évolution de la demande d'énergie et des émissions de gaz à effet de serre au Québec : scénario de référence 1996-2021*.

Greenhouse Gas Emission Trends, 1990-1998 (Mt CO₂E)



Strong political leadership but weak implementation

The government of Québec received a considerably higher score this year in our quantitative assessment of its climate change performance than it did a year ago. But even its new score of 34.5 out of 100 shows how large a gap still exists between Québec’s strong political leadership on climate change and actual implementation by the government of policy measures capable of achieving significant emissions reductions.

The government of Québec deserves praise as the first provincial government in Canada to clearly state its support for the Kyoto Protocol. In April 2001, shortly after George W. Bush’s withdrawal from the Kyoto Protocol, the Québec government called on the government of Canada to ratify the Protocol. The call was backed by a unanimous motion in the National Assembly, pressing the federal government to renew its commitment to meet Canada’s Kyoto emission reduction target.⁴⁹

Earlier, at the last Joint Meeting of Energy and Environment Ministers, in October 2000, Québec and British Columbia were the only jurisdictions apart from the federal government to produce climate change action plans announcing new measures that could achieve significant emissions reductions; Québec’s first steps in implementing its action plan over the past year helped it garner the biggest score increase of the provinces in our quantitative assessment. More recently, by endorsing the climate change action plan of the New England Governors/Eastern Canadian Premiers, Québec became the first of the provinces covered in this report⁵⁰ to commit to greenhouse gas emission targets—stabilization of emissions in the North-East region at their 1990 level by 2010, with a further 10% reduction by 2020.

⁴⁹ Ministère de l’Environnement (April 10, 2001), *L’Assemblée nationale du Québec appuie à l’unanimité le Protocole de Kyoto*, press release.

⁵⁰ Other provinces, not covered in this report, that are party to the action plan are: New Brunswick, Newfoundland, Nova Scotia and Prince Edward Island.

In the area of policy implementation, the government of Québec has also made an impressive start towards curbing greenhouse gas emissions from transportation in Montréal. In April 2000, at the launch of its transportation plan for the Montréal area, the government committed \$1.56-billion to new public transit infrastructure. This was followed in September 2001 by a legally-binding 20-year urban planning framework for the Montréal area. The framework directs the regional government to adopt targets for decreasing the use of cars and increasing the use of public transit, and to prioritize urban development that makes the most of the public transit infrastructure.⁵¹

Unfortunately, however, these positive efforts are far from adequate. While Québec's greenhouse gas emissions rose by only 1% between 1990 and 1998,⁵² the most recent projection by the Natural Resources Ministry shows Québec's emissions exceeding their 1990 level by 13% by 2011. Major new policy initiatives in all sectors—as proposed in the criteria used in our qualitative assessment of government performance—will be needed to bend this rising curve downwards. Heavy industry and trucking are the two sectors most responsible for the projected emissions growth in Québec,⁵³ yet the government's current climate change action plan contains no measures that appear capable of significantly affecting emissions in these areas.

Another serious problem with Québec's position on climate change is posed by the increasingly glaring inconsistencies between the province's overall energy policy and the need for a long-term downward trend in greenhouse gas emissions. The province has overwhelmingly relied on large hydro facilities to produce electricity—facilities that the government claims are a clean energy source. However, while greenhouse gas emissions from reservoirs are not yet counted in official emissions inventories, it is becoming clear that hydro reservoirs can emit considerable quantities of greenhouse gases.⁵⁴ After a promising initial foray into genuinely low-impact renewable energy, with the establishment of the Nordais wind energy facility, which is still Canada's largest, the Québec government has no clear policy to further promote this promising zero-emission energy source. Parts of the government are even trying to increase Québec's involvement in fossil fuel production⁵⁵—in total contradiction to its climate change objectives.

If it is to keep its reputation as a leader in addressing climate change in Canada, the government of Québec will have to move quickly to resolve these contradictions, adopt a strengthened climate change action plan that addresses the serious weaknesses in its current plan, and achieve a much more convincing level of implementation of climate change policy than it has currently managed.

⁵¹ Ministère des Affaires municipales et de la Métropole (June 2001), *Cadre d'aménagement et orientations gouvernementales, Région métropolitaine de Montréal 2001-2021*.

⁵² This is the latest year for which data are available.

⁵³ Ministère de l'Environnement et Ministère des Ressources naturelles (2000), *Québec Action Plan on Climate Change 2000-2002*, p.15.

⁵⁴ See, for example, World Commission on Dams (November 2000), *Dams and Development, a New Framework for Decision-Making*, chapter 3, available at <http://www.dams.org>.

⁵⁵ Québec's current official energy policy document seeks to “make Québec a hub for North American hydrocarbon commerce”; the Natural Resources Ministry's website carries brochures promoting Québec as a destination for oil and gas exploration; and the ministry is currently spending a \$1.8-million, two-year budget on surveying the oil and gas potential of various regions of the province. See, respectively, Ministère des Ressources naturelles (1996), *L'énergie au service du Québec, Une perspective de développement durable*, p.83; <http://www.mrn.gouv.qc.ca/2/24/intro.asp>; and Ministère des Ressources naturelles (September 5, 2001), *Évaluation du potentiel gazier et pétrolier du Bas-Saint-Laurent et de la Gaspésie*, press release.

Québec

34.5 / 100

Summary of Assessment

Element	Score Achieved	Possible Score
Transportation/Land Use Planning	7.5	15
Energy Utilities	2.5	15
Buildings	5.5	15
Industry	2.5	15
Greenhouse Gas Emissions Trading	3.5	10
Government House in Order	4.5	10
Other Sources of Greenhouse Gas Emissions	2.5	10
Technology Development	2.5	5
Enhancing Awareness and Understanding	3.5	5

Transportation / Land Use Planning 7.5 / 15

Providing Financial Incentives to Promote the Purchase and Use of Fuel Efficient Vehicles 0.5 / 4

The government of Québec presently has no such incentives in place. However, the Ministry of Transport has implemented a program to support the development of local railways, which aimed to take 55,000 trucks off the road in 2000. A partial mark has been awarded for this effort in the area of freight transport.

Changing the Taxation of Transportation Fuels to Promote Greenhouse Gas Emission Reduction 2 / 4

The government of Québec taxes transportation fuel according to the following schedule: diesel at 16.2 cents/litre, and gasoline and ethanol-blended gasoline (any percentage of ethanol) at 15.2 cents/litre, while propane and natural gas are not taxed. In addition, there is a rebate of 19.2 cents/litre (pure ethanol basis) to ethanol producers for sales of ethanol-blended gasoline. No changes in tax rates have been implemented since 1997.

Providing Funding for Public Transit 2.5 / 3

The government of Québec committed \$236-million in 2000-2002 for public transit upgrades in Montréal and Québec City, as part of a total commitment of more than \$1.5-billion over ten years. In addition, the province transfers 1.5 cents/litre from gasoline taxes collected in the Montréal area to support public transit in the Montréal metropolitan region; the province also uses \$30 from each annual licence plate renewal in the Montréal metropolitan area to support public transit.

Promoting Energy Efficiency through Land Use Planning 2.5 / 3

In September 2001, the government of Québec announced a mandatory 20-year urban planning framework for the Montréal area. The framework directs the Montréal Metropolitan Community to adopt targets for decreasing the use of cars and increasing the use of public transit, and to prioritize urban development that makes the most of the public transit infrastructure. However, the mark has been reduced somewhat in light of the fact that the city's Plan de gestion des déplacements gives significantly more funding to road improvements (which will encourage car use) than to public transit.

Reducing Highway Transportation Speeds 0 / 1

No action has been taken to reduce highway speed limits in Québec. The government intends to install photo radar in a few strategic locations in the near future to improve enforcement of speed limits.

Energy Utilities	2.5 / 15
Establishing a Low-Impact Renewable Portfolio Standard	1.5 / 4
<p>The government of Québec has not established a low impact renewable energy portfolio standard. Nonetheless, the mark has been increased somewhat to reflect the government's \$160-million investment in "Le Nordais"—Canada's largest wind energy project—for subsidies towards additional wind turbines in the Gaspésie region, and for ongoing work to map the province's wind potential.</p>	
Mandating Demand Side Management Activities	1 / 4
<p>The government of Québec does not require any energy utilities to pursue demand side management (DSM) policies on a consistent basis. However, the Régie de l'Énergie [energy board] will only allow a natural gas utility to increase its prices if it has implemented a DSM program.</p>	
Incorporating Environmental Costs into Energy Prices	0 / 4
<p>The government of Québec has taken no steps to incorporate environmental costs into energy prices in Québec. The Pembina Institute's position is that significant environmental costs are associated with large hydro facilities.</p>	
Promoting Net Metering	0 / 2
<p>The government of Québec is in favour of net metering, but no regulatory framework for it is in place at this time. All independent power producers sign a contract with Hydro-Québec, requiring them to sell all power produced to the utility, which provides it to the independent power producer as if they were regular customers.</p>	
Disclosure of Generating Sources to Consumers	0 / 1
<p>The government of Québec does not require electricity producers and retailers to disclose to customers either the fuel mix used to generate electricity or the resulting greenhouse gas emission impacts. Although there is high awareness in Québec that the dominant source of electricity is large hydro, the government's assumption that there are no greenhouse gas impacts from this source is being challenged by findings that hydro reservoirs can emit considerable quantities of greenhouse gases.</p>	
Buildings	5.5 / 15
Mandated Energy Code for Buildings	0.5 / 4
<p>The government of Québec has not adopted the National Energy Code for Buildings but uses it as a guide in construction. Québec's own code for buildings is not nearly as stringent as the National Energy Code.</p>	
Mandated Energy Code for Houses	1 / 4
<p>The government of Québec has not yet adopted the National Energy Code for Houses. The energy efficiency requirements in Québec's own code for houses are relatively close to the requirements of the National Energy Code.</p>	
Incentives for Energy Efficiency Retrofits	2 / 3
<p>The Agence de l'efficacité énergétique [Energy Efficiency Agency] offers a program to provide grants to institutional building owners to support energy analysis and feasibility studies for retrofits, with a budget of \$2-million over three years. The Agence also delivers subsidized home energy inspections under Natural Resources Canada's Energuide for Houses program.</p>	
Promoting Community Based Energy Efficiency Initiatives	1.5 / 3
<p>The Agence de l'efficacité énergétique funds a program delivered by community organizations to provide free advice and minor repairs to low-income residents. The annual budget is currently \$500,000.</p>	

Financial Incentives to Improve the Energy Efficiency of New Buildings 0.5 / 1

No incentives are presently offered by the government of Québec to support energy efficient design in the construction of new buildings. Funding is potentially available for demonstration projects related to new buildings under the Programme de promotion de l'efficacité énergétique, which has an annual budget of approximately \$1-million. The Novoclimat program, with an annual budget of \$1.5-million, educates construction workers about the National Energy Code for Houses. A partial mark has been awarded for these initiatives.

Industry 2.5 / 15

Tax Incentives for Energy Efficiency Investments 0.5 / 4

The government of Québec currently has no tax incentives in place to encourage investments by industry to improve energy efficiency. However, funding is available for energy efficiency demonstration projects under the Programme de promotion de l'efficacité énergétique. In 2000, 25 projects were undertaken, mainly in the industrial sector, with a total budget of \$825,000. The budget has now been increased and 50 projects are being supported. A limited partial mark has been awarded for this initiative.

Project Approval Processes that Incorporate Greenhouse Gas Emission Considerations 1 / 3

When projects are being considered for approval in Québec, proponents are encouraged to provide information on their greenhouse gas emissions. Proponents are sometimes asked to make adjustments to projects in response to their potential greenhouse gas emissions implications.

Promotion of Co-Generation Facilities 0 / 3

Many barriers still prevent co-generation projects from obtaining access to the grid. However, there is an agreement between Hydro-Québec and large industry to sell surplus energy back to the grid without transportation costs.

Reducing Support for Fossil Fuel Exploration and Development 0.5 / 3

The government of Québec has made no significant changes to its tax structure to influence the level of activity of fossil fuel exploration and development in Québec. However, while Québec does not have a high level of such activity, the Ministry of Natural Resources promotes oil and gas exploration in the province on its website, and the ministry is currently spending a one-time \$1.8-million, two-year budget on surveying the oil and gas potential of various regions of the province. A partial mark has been awarded in light of the low level and indirect nature of this support.

Binding Voluntary Covenants to Reduce Greenhouse Gas Emissions 0.5 / 2

The government of Québec is negotiating with a range of sectors, including aluminum and cement, with a view to concluding covenant agreements targeted at greenhouse gas emissions reduction. A partial mark has been awarded for this activity.

Greenhouse Gas Emissions Trading 3.5 / 10

Government Position on National Emissions Trading 1.5 / 4

The government of Québec has not made any official statements on the potential role of a domestic emissions trading system in Canada's greenhouse gas emission reduction strategy. However, the government recently introduced in the National Assembly an amendment to the *Environmental Quality Act* to give the Minister of the Environment authority to implement a trading permits regime. In a regional context, the August 2001 Climate Change Action Plan adopted by the New England Governors and Eastern Canadian Premiers, including the Premier of Québec, provided some support for emissions trading by recommending that a Trading Registry and methods for credit generation be developed. A partial mark has been awarded accordingly.

Mandatory Greenhouse Gas Emissions Reporting

0.5 / 3

Since the early 1970s, the Ministry of the Environment has compiled an inventory of atmospheric pollutants. This inventory collects data on the sources of gaseous or particulate substances generated by combustion processes, industrial processes and the transportation sector. Included in the inventory are greenhouse gases targeted by the Kyoto Protocol, namely carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). Some 400 Québec enterprises, representing 100% of large industrial facilities, report their greenhouse gas emissions to the database on a voluntary basis under the ÉcoGES_{te} program. A partial mark was awarded in recognition of this initiative. However, it has been reduced because corporate submissions to ÉcoGES_{te} are confidential.

Action to Facilitate Emissions Trading

1.5 / 3

The government of Québec is a partner in the national Greenhouse Gas Emissions Reduction Trading (GERT) pilot project to assess the potential effectiveness of greenhouse gas emission reduction credit trading as a policy tool. The government has, however, made no commitment to recognize any greenhouse gas emission reduction credits against any potential future regulatory requirements. The government is also looking at establishing a Québec-based emissions trading pilot and recently introduced in the National Assembly an amendment to the *Environmental Quality Act* to give the Minister of the Environment authority to implement a trading permits regime.

 Government House in Order

4.5 / 10

Greenhouse Gas Emission Reduction Target

2 / 2

In its *Action Plan on Climate Change 2000-2002*, the government of Québec established targets to reduce greenhouse gas emissions (i) from public buildings to 20% below the 1990 level by 2008, and (ii) from its fleet to 20% below the 2000 level by 2005. Since these two sources constitute the bulk of emissions from government operations, full marks have been awarded.

Participation in the Voluntary Challenge Program

0.5 / 2

The government of Québec runs its own program, ÉcoGES_{te}, to report voluntary action to reduce greenhouse gas emissions. ÉcoGES_{te} is similar to the Canada-wide Voluntary Challenge and Registry program. Although the Québec government does not make consolidated submissions to ÉcoGES_{te}, a few ministries and agencies make their own submissions, which are publicly available on demand. The Société immobilière du Québec, which manages government buildings accounting for a major part of total government emissions, has not joined ÉcoGES_{te}. A partial mark has been awarded accordingly.

Program to Improve Energy Efficiency in Buildings

1 / 2

The government of Québec has made a commitment to improve energy efficiency in public buildings by 20% over the 1990 level by 2008. But only one program has been implemented to date, with a budget of \$2-million over three years, and it is limited to educational and health facilities.

Program to Reduce Greenhouse Gas Emissions in Transportation Fleets

1 / 2

The government of Québec has committed to improve the energy efficiency of its vehicle fleet by 20% over the 2000 level by 2005. However, implementation to date has been limited to taking a fleet inventory, and it is not clear how the necessary changes will be achieved. The Ministry of Transport encourages employees to use public transit by subsidizing bus passes.

Green Power Procurement

0 / 2

The government of Québec has not made a commitment to procure low impact green power for government operations. The Pembina Institute does not consider large hydro facilities to be a form of low impact green power.

Other Sources of Greenhouse Gas Emissions 2.5 / 10

Landfill Gas Regulation 1 / 3

The government of Québec expects to adopt in fall 2001 a new regulation requiring that all new landfill sites capture and burn 100% of their emissions. Capture and burning of landfill gas from existing landfills is not mandatory, but approximately 30% of such gas is already being captured and burned, and the government is considering incentives to increase this proportion.

Promoting Greenhouse Gas Emission Reductions from Livestock 1 / 2

The government of Québec has in place some research and educational programs to improve manure management practices and animal diet, as well as some demonstration projects. These initiatives are being undertaken to promote better farming practices and do not yet draw a strong link to greenhouse gas emissions and climate change. The mark has been reduced because the education materials are not supported by incentives or regulation.

Support for Afforestation 0 / 2

The government of Québec does not currently appear to be supporting afforestation. An Increased Yield Policy has been developed to establish commercial plantations on wild lands unsuitable for agriculture; however, this initiative has not yet been funded.

Protection of Forested Land 0.5 / 2

According to the World Wide Fund for Nature, Québec had designated 4.3% of its land mass as a park or protected area as of September 2000. This represented one of the lowest percentages in the country, and most of the area was only under interim protection. The government is considering a Stratégie des aires protégées, which would increase the area of the province under protection to 8%.

Promoting Carbon Sequestration in Agricultural Soils 0 / 1

The government of Québec does not appear to be actively promoting the sequestration of carbon in agricultural soils.

Technology Development 2.5 / 5

Support for Low-Impact Renewable Energy Technologies 1 / 2

The government of Québec is undertaking solar and wind mapping projects to assess the potential of these forms of energy in the province. The Programme d'aide au développement des technologies de l'énergie, which has an annual budget of \$1.2-million, is also supporting research and demonstration projects for wind, solar, biomass and hydrogen energy technologies.

Support for Energy Efficiency Technologies 1 / 2

The Government of Québec created the Agence de l'efficacité énergétique [Energy Efficiency Agency] in 1997. The agency funds energy efficiency demonstration projects under the Programme de promotion de l'efficacité énergétique. In 2000, 25 projects were undertaken, mainly in the industrial sector, with a total budget of \$825,000. The budget has now been increased and 50 projects are being supported.

Support for Other Greenhouse Gas Emissions Reducing Technologies 0.5 / 1

The government of Québec is involved in other areas of research and development that result in the overall reduction of greenhouse gas emissions. These include improvements to transportation technology in the development of efficient electricity storage for electric cars, improved fertilization techniques in agriculture, livestock handling and feeding, and forestry management. \$600,000 was recently provided for climate change-related technology projects by the Fonds d'action québécoise en développement durable.

Enhancing Awareness and Understanding

3.5 / 5

Provincial Government Activities

2 / 3

The government of Québec has undertaken a number of initiatives to inform the public about climate change. Materials include the Québec Action Plan on Climate Change and a folder entitled “Québec and the Climate Change Challenge.” The website of the Ministère de l’Environnement provides a broad range of information on climate change. The Québec Department of Transportation has also developed a number of public education materials to promote public transit and ride-sharing. The mark has been increased somewhat in recognition of the positive contribution to public awareness in 2001 from the high profile activities of the Minister of the Environment following the United States’ withdrawal from the Kyoto Protocol and at the international climate change negotiations in Bonn.

Provincial Government Support for Other Education and Awareness Activities

1.5 / 2

The Ministère de l’Environnement du Québec and the Fonds d’action québécoise en développement durable provided about \$1,300,000 to 19 organizations to help them produce education materials (or activities including public education materials) on climate change in 2000-01. Organizations funded included environmental, scientific and community organizations. Other ministries (Natural Resources, Transport) and the Agence de l’efficacité énergétique also provide for educational initiatives on climate change.

SASKATCHEWAN

Current Greenhouse Gas Emissions Profile (1998)⁵⁶

Total emissions (Mt CO ₂ E)	59.5
Per capita emissions (t CO ₂ E / person)	58.1
Per unit GDP emissions (kg CO ₂ E / \$ GDP)	2.06

Sources of Emissions (1998)

Electricity and steam generation (%)	24
Buildings (%)	5.3
Transportation (%)	15
Industry (%)	35
Other human activities (%)	22

Emission Trends

Emissions increase 1990-1998 (%)	28
Emissions increase 1997-1998 (%)	-0.2
Projected increase ⁵⁷ 1990-2010 (%)	40

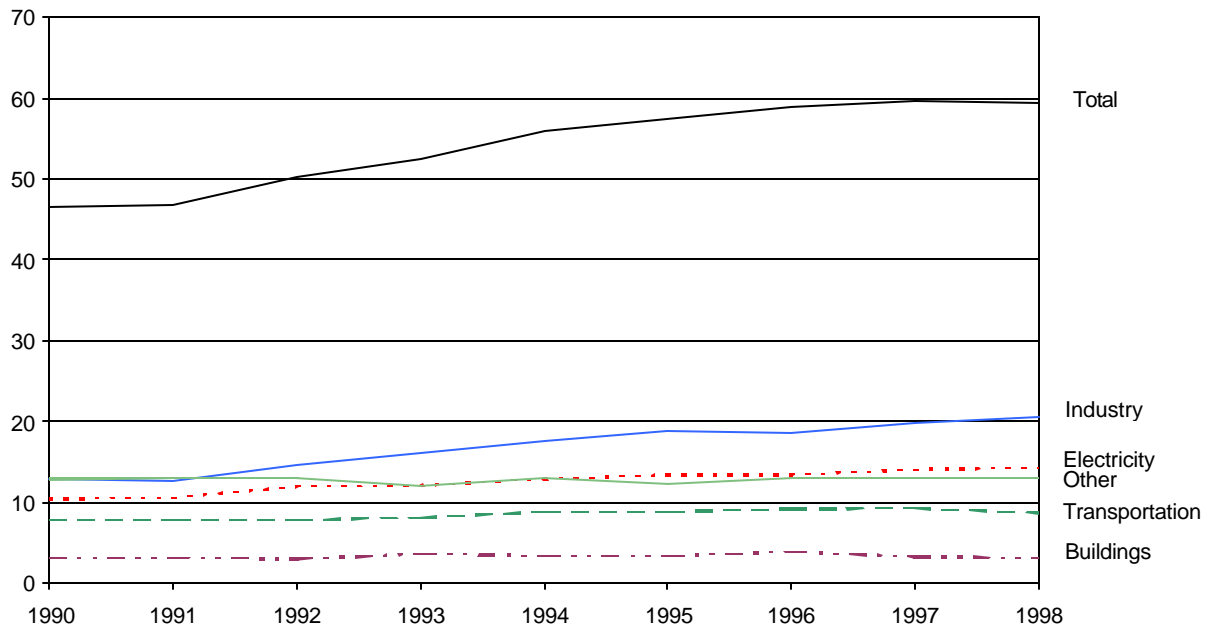
⁵⁶ 1990-1998 emissions data here and in subsequent tables, chart and text from: Environment Canada (2000), *Trends in Canada's Greenhouse Gas Emissions 1990-1998, Draft*. Population data from: <http://www.statcan.ca/english/Pgdb/People/Population/demo02.htm>.

GDP data (at market prices) from: <http://www.statcan.ca/english/Pgdb/Economy/Economic/econ15.htm>.

Note: The buildings sector covers residential, commercial and institutional buildings; pipelines are included under industry; stationary sources in forestry and agriculture are included under "other human activities."

⁵⁷ National Climate Change Process Analysis and Modelling Group (1999), *Canada's Emissions Outlook, An Update*. The projections made in this document are based on policies in place in late 1999 and do not take account of any emission reduction measures implemented since then.

Greenhouse Gas Emission Trends, 1990-1998 (Mt CO₂E)



Only one bright spot in a dismal performance

Despite having only 3.4% of Canada's population, Saskatchewan emits nearly 9% of Canada's greenhouse gas emissions. Along with Alberta, British Columbia, Ontario and Québec, Saskatchewan is therefore one of Canada's leading contributors to global climate change. Once again this year, Saskatchewan has come last in our quantitative assessment of how these five provinces' governments are addressing climate change.

The only strong bright spot in Saskatchewan's otherwise dismal performance is the development of wind power in the province. Construction has already begun on the province's first wind power project—an 11-MW facility to supply federal government buildings. The provincial government has committed \$5-million to support an additional 5.3-MW facility that will supply about 15% of its power needs. The government should now take the further step of adopting a province-wide target for the proportion of electricity generated from low impact renewable sources.

While the two new wind power projects are welcome, they will have little impact on the rapid rate of growth in the province's greenhouse gas emissions, which rose 28% between 1990 and 1998.⁵⁸ The burgeoning oil and gas industry accounted for approximately half of this increase and additional production of coal-fired electricity was responsible for most of the rest. Saskatchewan will not be able to do its part to combat climate change without addressing emissions from its fossil fuel industries.

⁵⁸ This is the latest year for which data are available.

Two “Greenprint” consultative processes are currently developing recommendations for government measures to promote energy conservation and ethanol industry development. These are a positive step, but the government must follow through with implementation.

The argument is made that Saskatchewan is a small province whose government lacks the resources to implement the kinds of policy measures that the more populous provinces can put in place. This cannot, however, justify the fact that the government of Saskatchewan is at present failing almost completely to address climate change. Saskatchewan should be doing more internally as well as pursuing federal-provincial partnerships that could produce significant reductions in greenhouse gas emissions.

The government should make a start on redeeming itself by providing clear support for Canada’s ratification of the Kyoto Protocol. After all, as this year’s severe drought conditions have shown, Saskatchewan is vulnerable to the long-term shift to drier conditions on the Prairies projected under climate change scenarios. The generous credits for Canadian forestry and agricultural activities that remove greenhouse gases from the atmosphere, which were recently agreed to under the Protocol, provide an additional reason for Saskatchewan to support it.

Saskatchewan

26 / 100

Summary of Assessment

Element	Score Achieved	Possible Score
Transportation/Land Use Planning	3.5	15
Energy Utilities	1.0	15
Buildings	3.5	15
Industry	3.5	15
Greenhouse Gas Emissions Trading	2.0	10
Government House in Order	6.0	10
Other Sources of Greenhouse Gas Emissions	3.0	10
Technology Development	2.0	5
Enhancing Awareness and Understanding	1.5	5

Transportation / Land Use Planning 3.5 / 15

Providing Financial Incentives to Promote the Purchase and Use of Fuel Efficient Vehicles

0.5 / 4

The government of Saskatchewan has not put in place any financial incentives to promote the purchase or use of fuel efficient passenger vehicles. With regard to freight transportation, however, the government has dedicated resources to providing marketing and legal advice to groups seeking to establish short-line railways in the province. In the last 11 years, more than 1,100 km of short-line track have been developed, providing an alternative to more greenhouse gas-intensive truck transport. A partial mark has been awarded for these efforts in the area of freight transport.

Changing the Taxation of Transportation Fuels to Promote Greenhouse Gas Emission Reduction

2 / 4

The Saskatchewan government taxes different transportation fuels at different levels. Gasoline and diesel are taxed at a rate of 15 cents/litre, propane is taxed at 9 cents/litre, and ethanol and natural gas are not taxed at all. In 2000, the government implemented a rebate to the fuel wholesaler on a portion of the tax on ethanol-blended gasoline produced and consumed in Saskatchewan.

Providing Funding for Public Transit

0.5 / 3

The government of Saskatchewan does not fund any municipal public transit infrastructure development. Funds are available, however, to support the provision of transit services for the disabled in 78 municipalities throughout Saskatchewan, and the government does provide a subsidy for inter-city bus service.

Promoting Energy Efficiency through Land Use Planning

0.5 / 3

The *Planning and Development Act* (1983) mentions, among other things, that policies for the management and preservation of agricultural land and activities, forested areas, natural and wildlife areas, water storage areas, and the use and conservation of energy, may be part of a Development Plan adopted by municipal council. The mark was reduced because this guidance is very general. In addition, there is no incentive in place or provincial requirement to incorporate these aspects in a Plan.

Reducing Highway Transportation Speeds

0 / 1

No changes have been made to major highway speed limits in the province of Saskatchewan in recent years, and no significant new resources have been provided to support speed limit enforcement.

Energy Utilities	1 / 15
Establishing a Renewable Portfolio Standard	1 / 4
<p>The government of Saskatchewan has not established a renewable portfolio standard for electricity generation. However, the government and SaskPower have allocated \$750,000 per year (two-thirds from the government and one-third from SaskPower) for the next ten years to develop Saskatchewan's wind power, which will be available to the public for a premium. The mark reflects this significant investment.</p>	
Mandating Demand Side Management Activities	0 / 4
<p>There is no requirement for energy utilities in Saskatchewan to undertake demand side management programs. Any initiatives that are undertaken are pursued on a voluntary basis.</p>	
Incorporating Environmental Costs into Energy Prices	0 / 4
<p>The government of Saskatchewan has not taken any steps to incorporate environmental costs associated with different forms of energy into the price of energy sold by utilities.</p>	
Promoting Net Metering	0 / 2
<p>The Saskatchewan government has taken no action to promote net metering within its power generation system, but SaskPower is open to independent power producers tying into the grid.</p>	
Disclosure of Generating Sources to Consumers	0 / 1
<p>Electric power generators are required to report the fuel mix used to generate their power in Saskatchewan when seeking permits for their facilities, but it is not mandatory to provide this information directly to customers.</p>	
Buildings	3.5 / 15
Mandated Energy Code for Buildings	1.5 / 4
<p>The government of Saskatchewan has not adopted the National Energy Code for Buildings, but a partial mark was given because it has been argued that most current construction practice in Saskatchewan already exceeds this code. The energy efficiency of all five buildings constructed in recent years by the Saskatchewan Opportunities Corporation exceeds the National Energy Code by at least 25%. A recent government-funded research facility has been built to C-2000 standards. Partial points have been awarded for these efforts.</p>	
Mandated Energy Code for Houses	0 / 4
<p>The government of Saskatchewan has not adopted the National Energy Code for Houses. While the provincial government does support education and training related to the more advanced R-2000 standard, very few new homes built in Saskatchewan meet this standard.</p>	
Incentives for Energy Efficiency Retrofits	1.5 / 3
<p>The government of Saskatchewan provides 25% of the funding for the Residential Rehabilitation Assistance Program (RRAP) that provides forgivable loans to low-income homeowners and renters to rehabilitate their property to a minimum standard of health and safety. In about 40% of these projects, work is undertaken that will improve the energy efficiency of the building. SaskPower recently started the "Energy Solutions Program," which provides audit and financing options for commercial buildings through an energy service company. SaskEnergy has a successful program that facilitates loans for individuals wishing to install more efficient furnaces. Finally, the provincial government offers an ice rink and commercial building energy audit service through the Saskatchewan Research Council.</p>	

Promoting Community Based Energy Efficiency Initiatives 0.5 / 3

The Saskatchewan government does provide some support for the delivery of Natural Resources Canada's Energuide for Houses program in Saskatchewan. This program identifies energy efficiency retrofit opportunities, but provides no financial assistance to proceed with the retrofits.

Financial Incentives to Improve the Energy Efficiency of New Buildings 0 / 1

The Saskatchewan government offers no incentives to support the incorporation of energy efficiency design features in new buildings. The provincial government does support education and training related to the R-2000 standard.

Industry 3.5 / 15

Tax Incentives for Energy Efficiency Investments 1 / 4

The government of Saskatchewan provides royalty relief to gas companies to examine the technological and ecological feasibility of the use of micro-turbines to generate electricity. A partial mark has been awarded for this limited effort.

Project Approval Processes that Incorporate Greenhouse Gas Emission Considerations 1 / 3

The government of Saskatchewan asks proponents to provide estimates of greenhouse gas emissions associated with projects seeking approval. There are efforts to encourage energy efficiency and the use of best available technologies, but it is not clear that many proponents have actually been required to take actions in pursuit of those ends.

Promotion of Co-Generation Facilities 1.5 / 3

SaskPower has issued an Open Access Transmission Tariff to allow access to the grid through purchase agreements. A co-generation plant has been recently opened at the Husky Upgrader in Lloydminster and another is under construction at a Potash Corporation of Saskatchewan facility. Co-generation capacity is expected to increase steadily in the years to come.

Reducing Support for Fossil Fuel Exploration and Development 0 / 3

To better compete for the market share of oil and gas companies flooding into Alberta to explore for and develop fossil fuels, the Saskatchewan government has adjusted some of its tax and royalty provisions for the oil and gas sector. The last changes in this area were made in 1998 and have encouraged new developments in Saskatchewan by increasing deductions from royalties and lowering the tax rate. As well, new provisions to encourage enhanced oil recovery using carbon dioxide are now being evaluated.

Binding Voluntary Covenants to Reduce Greenhouse Gas Emissions 0 / 2

The Saskatchewan government has not entered into any formal binding voluntary covenants with industry to reduce greenhouse gas emissions.

Greenhouse Gas Emissions Trading 2 / 10

Government Position on National Emissions Trading 0.5 / 4

The government of Saskatchewan has not taken a position in favour of or against adopting a domestic emissions trading system as an instrument to be used as a part of Canada's response to climate change. A partial mark was awarded, however, because the government has indicated some interest in emissions trading, and has become directly involved in a greenhouse gas offset project with SaskPower (see "Action to Facilitate Emissions Trading" below).

Mandatory Greenhouse Gas Emissions Reporting

0.5 / 3

While a number of large industries have been required to report on their greenhouse gas emissions as a permitting requirement, there is no regulation mandating greenhouse gas emissions reporting. A partial mark has been awarded accordingly.

Action to Facilitate Emissions Trading

1 / 3

Saskatchewan Environment and Resource Management (SERM) has entered into a Carbon Offset Agreement with SaskPower. Under this agreement, SaskPower will pay for the planting of five million trees in the provincial forest and SERM has agreed to transfer any credits generated through this action (potentially 22 megatonnes of carbon dioxide) to SaskPower. The Saskatchewan government also now co-chairs the national Greenhouse Gas Emissions Reduction Trading (GERT) pilot project to assess the potential effectiveness of greenhouse gas emission reduction credit trading as a policy tool. It has made no commitment to recognize any greenhouse gas emission reduction credits against any potential future regulatory requirements.

 Government House in Order

6 / 10

Greenhouse Gas Emission Reduction Target

1 / 2

The government of Saskatchewan has not adopted a greenhouse gas emission reduction target for government operations. It has, however, made a commitment to reduce energy consumption in government operations by 20%. In 1997, the government indicated to the Voluntary Challenge and Registry (VCR) that it hoped to meet this goal by 2005; it is not clear if this target date still stands.

Participation in the Voluntary Challenge Program

0 / 2

The government of Saskatchewan last made a submission to the VCR in 1997. It has not provided a greenhouse gas emissions inventory to the VCR, but the 1997 submission did describe some actions the government planned to take to reduce greenhouse gas emissions.

Program to Improve Energy Efficiency in Buildings

2 / 2

The Saskatchewan Property Management Corporation, managing 1,300 provincial office buildings, health-care facilities, schools and other public buildings, has embarked on an initiative to achieve a 20% increase in overall energy efficiency via building system upgrades.

Program to Reduce Greenhouse Gas Emissions in Transportation Fleets

1 / 2

The government of Saskatchewan began testing special prototype trucks for sanding and snowplow operations in 1999 that will reduce the number of vehicles needed to provide the same level of service. Speed governors are installed on engines, the fleet is being converted to tandem trucks as opposed to single axle where applicable, and a fleet management fuel tracking system is in place that helps indicate when tune-ups are needed. In addition, SaskEnergy has a fleet of natural gas vehicles and has constructed a public natural gas refuelling station.

Green Power Procurement

2 / 2

The government of Saskatchewan and SaskPower have jointly committed \$750,000 per year over the next ten years to support the establishment of a 5.3-MW wind power project. The power produced will supply SaskPower's head office as well as approximately 15% of the government's energy needs.

Other Sources of Greenhouse Gas Emissions 3 / 10

Landfill Gas Regulation 0 / 3

The government of Saskatchewan does not mandate the capture of methane gas from landfill sites. This partly reflects the fact that there are few large landfills in Saskatchewan. Steps have been taken, however, to regionalize the landfill system, creating a smaller number of larger landfills and increasing the potential to pursue such policies in the future.

Promoting Greenhouse Gas Emission Reductions from Livestock 1 / 2

The Department of Agriculture has undertaken pilot projects to examine the efficacy of the capture and generation of biogas originating from hog barns. The Saskatchewan government also runs a genetics and breeding (plant and livestock) program to improve yields, crop health, and nutrient uptake (feed efficiencies in livestock). It also sponsors a manure management program that aims to encourage the use of manure as a resource to improve crop production and soil quality. These programs promote actions that will help reduce fertilizer use and energy inputs while also improving the carbon sequestration capacity of the soil. The mark was reduced to reflect the fact that the educational effort is not supported by regulatory or fiscal policies; furthermore, the provincial government is actively supporting rapid expansion of the hog industry in the province.

Support for Afforestation 0.5 / 2

The government of Saskatchewan supports afforestation in shelterbelts but only via educational products. SaskPower has implemented the Saskatchewan Carbon Sequestration Agreement, which includes the planting of approximately five million trees in previously logged areas. This does not, however, fall under the definition of afforestation, and it could be argued that the areas in question should have been replanted as part of responsible forest management.

Protection of Forested Land 0.5 / 2

According to the World Wide Fund for Nature, Saskatchewan had designated 6% of its land mass as parks or protected areas as of September 2000. This is less than most other jurisdictions in Canada. In addition, the Saskatchewan government recently announced a plan to double the size of the forest industry in the province.

Promoting Carbon Sequestration in Agricultural Soils 1 / 1

The government of Saskatchewan has initiated a major four-year, \$26-million Conservation Cover Program to encourage the conversion of cropland to perennial cover (grasses or legumes) via grants to farmers. Another program is aimed at adjusting agricultural practices to reduce the loss and enhance the productivity of valuable topsoil by practicing reduced tillage, zero till, field shelterbelts, grass strips, and strip cropping.

Technology Development 2 / 5

Support for Low-Impact Renewable Energy Technologies 0.5 / 2

The government of Saskatchewan's support for wind power through procurement has been recognized in the "Government House in Order" section above. SaskPower also offers a grant for the purchase and installation of solar or wind-powered water pumping systems for farm livestock watering facilities. The government has recently introduced a \$1.2-million fund under which renewable energy technology projects are eligible.

Support for Energy Efficiency Technologies 0.5 / 2

The government of Saskatchewan does little more than support some voluntary and education programs (e.g., R-2000, energy hotline) related to end-use energy efficiency. It does, however, provide royalty and tax credits to oil and gas producers for research aimed at minimizing the environmental

impact (including greenhouse gas emissions reduction) of the oil and gas industry. The government recently introduced a \$1.2-million fund under which energy conservation technology projects are eligible.

Support for Other Greenhouse Gas Emissions Reducing Technologies 1 / 1

The government of Saskatchewan, jointly with the federal government, supports the International Test Centre for Carbon Dioxide Capture, which aims to develop technologies to capture carbon dioxide produced by the energy sector. It is also financially supporting the Weyburn monitoring project to assess the integrity of the geological sequestration of carbon dioxide.

Enhancing Awareness and Understanding 1.5 / 5

Provincial Government Activities 1 / 3

The government of Saskatchewan is a co-funder of a climate change public outreach and education hub with the federal government. It has also established a toll-free energy conservation information line and plans to launch a climate change website in October 2001. SaskPower and SaskEnergy have used the ABC program to promote awareness of climate change among their employees.

Provincial Government Support for Other Education and Awareness Activities 0.5 / 2

The government of Saskatchewan has given some financial support to the Saskatchewan Environmental Society and the Solar Energy Society of Canada. The government has also provided small grants to the City of Regina's "Cool Down the City" campaign, aimed at educating the public and encouraging action on climate change.

Appendix A: The Framework Used to Assess Provincial Government Performance on Climate Change

Transportation / Land Use Planning (15 points)

1. Has the provincial government established any financial incentive that is tied to the fuel efficiency of vehicles sold or owned in the province? (4 points)
 - 0 points: no incentive established
 - 1 point: significant non-fiscal incentive established
 - 2 points: a fiscal incentive established for new vehicles or existing vehicles
 - 4 points: fiscal incentives established for both new and existing vehicles

2. Has the provincial government taken any steps to differentiate the relative prices of transportation fuels with different carbon intensities? (4 points)
 - 0 points: no relative pricing of fuels
 - 1 point: relative pricing, but no preferential treatment for ethanol fuels
 - 2 points: relative pricing with preferential treatment for ethanol fuels
 - 4 points: changes made since 1997 to increase taxes on gasoline and diesel fuels

3. How much funding does the provincial government provide for public transit service and infrastructure expansion and upgrades? (3 points)
 - score determined qualitatively on the basis of information obtained in the course of the review

4. Has the provincial government developed any land use planning guidelines that seek to maximize energy efficiency and minimize environmental impact? (3 points)
 - 0 points: no guidelines developed
 - 1 point: guidelines in place
 - 2 points: an incentive structure established to promote use of the guidelines
 - 3 points: mandatory requirements in place

5. Has the provincial government taken any steps to decrease highway speed limits or significantly increase enforcement of highway speed limits in the last five years? (1 point)
 - 0 points: no changes
 - 1 point: some change

Energy Utilities (15 points)

1. Has the provincial government established a low-impact renewable portfolio standard for electricity generation in the province? (4 points)
 - 0 points: no standard
 - 1 point: non-legislated standard in place
 - 3 points: standard of 5% to 10%
 - 4 points: standard of more than 10%

2. Has the provincial government established policies mandating energy utilities to consider and pursue demand side management policies? (4 points)
 - 0 points: no requirement
 - 1 point: requirements sometimes imposed
 - 2 points: a mandated requirement for electric utilities or natural gas utilities
 - 4 points: a mandated requirement for both electric utilities and natural gas utilities

3. Has the provincial government established policies (taxes on fossil fuels or credits for renewable energy) that incorporate environmental externalities into the pricing of electricity? (4 points)
 - 0 points: no policies in place
 - 1 point: considering or studying such policies
 - 4 points: policies in place

4. Has the provincial government established a regulatory framework in support of net metering? (2 points)
 - 0 points: no policies in place
 - 2 points: support for net metering

5. Has the provincial government required electricity retailers to disclose to customers the fuel mix used to generate electricity and the resulting greenhouse gas emission impacts? (1 point)
 - 0 points: no action taken
 - 1 point: requirement in place

Buildings (15 points)

1. Has the provincial government adopted an energy code for buildings? (4 points)
 - 0 points: no code adopted
 - 1 point: National Energy Code for Buildings adopted for provincial government facilities
 - 2 points: National Energy Code for Buildings adopted
 - 4 points: C-2000 code adopted

2. Has the provincial government adopted an energy code for houses? (4 points)
 - 0 points: no code adopted
 - 2 points: National Energy Code for Houses adopted
 - 4 points: R-2000 code adopted

3. Has the provincial government created any regulatory requirements or does it provide any financial incentives for energy efficiency retrofits of buildings? (3 points)
 - score determined qualitatively on the basis of information obtained in the review

4. Does the provincial government provide financial support for the establishment of community based energy efficiency initiatives (e.g., Green Communities)? (3 points)
 - score determined qualitatively on the basis of information obtained in the review

5. Does the provincial government provide any financial incentives to encourage improved energy efficiency in new buildings being constructed? (1 point)
 - 0 points: no incentives
 - 1 point: some incentive

Industry (15 points)

1. Has the provincial government put in place any tax incentives to encourage industry to invest in energy efficiency? (4 points)
 - 0 points: no incentives provided
 - 1 point: incentives tied to a limited number of products
 - 2 points: incentives tied to a limited number of investments
 - 4 points: incentives tied to a broad range of investments and products

2. Does the provincial government assess, and establish requirements around greenhouse gas emissions reduction when environmental approvals of industrial projects are provided? (3 points)
 - 0 points: never
 - 1 point: rarely
 - 2 points: commonly
 - 3 points: always

3. Has the provincial government established a framework that allows easy access to the grid for electricity produced from industrial co-generation facilities? (3 points)
 - score determined qualitatively on the basis of information obtained in the review
4. How has provincial government support (subsidies, grants, structure of tax incentives) for fossil fuel exploration and development changed since 1997? (3 points)
 - 0 points: provincial government support increased since 1997
 - 1 point: provincial government support has remained the same
 - 3 points: provincial government support decreased since 1997
5. Has the province entered into any binding voluntary covenants with industry to reduce greenhouse gas emissions? (2 points)
 - 0 points: no covenants in place
 - 1 point: one covenant in place
 - 2 points: more than one covenant in place

Greenhouse Gas Emissions Trading (10 points)

1. Has the provincial government made any statements supporting the use of domestic emissions trading in Canada's action plan to implement the Kyoto Protocol? (4 points)
 - 0 points: no statements made
 - 2 points: statements made supporting the use of greenhouse gas emission reduction credit trading in Canada's greenhouse gas management strategy
 - 4 points: statements made supporting the use of greenhouse gas emissions allowance trading in Canada's greenhouse gas management strategy
2. Has the provincial government mandated greenhouse gas emission reporting from large emitters? (3 points)
 - 0 points: no requirement in place
 - 1 point: reporting of some greenhouse gas emissions is required
 - 2 points: reporting of all greenhouse gas emissions is required
 - 3 points: reporting of all greenhouse gas emissions is required under a standardized methodology and third party verification
3. Has the provincial government acted to facilitate greenhouse gas emissions trading in the province? (3 points)
 - 0 points: no action taken
 - 1 point: support for pilot greenhouse gas emission trading initiatives (e.g., GERT / PERT)
 - 3 points: commitment to recognize greenhouse gas emission reduction credits against any potential future regulatory requirements

Government House in Order (10 points)

1. Has the provincial government established a greenhouse gas emission reduction target for government operations? (2 points)
 - 0 points: no target established
 - 1 point: a target of 6% below 1990 levels has been established
 - 2 points: a target more stringent than the Kyoto target has been established

2. Did the provincial government make a submission to the Voluntary Challenge and Registry Program in 2000? (2 points)
 - 0 points: no submission
 - 1 point: only a greenhouse emissions inventory or an action plan provided
 - 2 points: a greenhouse emission reduction action plan and a greenhouse emissions inventory provided

3. Does the provincial government have a program in place to improve the energy efficiency of provincially owned buildings? (2 points)
 - 0 points: no program
 - 1 point: program to retrofit some buildings
 - 2 points: program to retrofit most buildings

4. Does the provincial government have a program in place to reduce greenhouse gas emissions from provincial transportation fleets? (2 points)
 - 0 points: no program
 - 1 point: program to improve fleet management (e.g., downsize / rightsize) or procurement requirements in the areas of fuel efficiency and alternative energy
 - 2 points: program to improve fleet management and procurement requirements in the areas of fuel efficiency and alternative fuels

5. Does the provincial government have a green power procurement program? (2 points)
 - 0 points: no program
 - 1 point: commitment to purchase 10% of power from low-impact renewable sources
 - 2 points: commitment to purchase more than 10% of power from low-impact renewable sources

Other Sources of Greenhouse Gas Emissions (10 points)

1. Does the provincial government have any policies in place to require the capture and combustion of methane gas from landfills? (3 points)
 - 0 points: no policies in place
 - 1 point: regulated landfill gas capture and flaring for new landfills
 - 2 points: regulated landfill gas capture and flaring for new and existing landfills
 - 3 points: regulated landfill gas capture and flaring for new and existing landfills and regulations banning compostables from landfills

2. Does the provincial government have any programs in place to encourage farmers to reduce greenhouse gas emissions from livestock? (2 points)
 - 0 points: no programs in place
 - 1 point: a program is in place related to either manure management and animal diet
 - 2 points: programs in place for both manure management and animal diet

3. Does the provincial government support afforestation? (2 points)
 - score determined qualitatively on the basis of information obtained in the review

4. What percentage of forested land was in protected areas in 2000? (2 points)
 - score determined qualitatively with the assistance of data from the World Wide Fund for Nature

5. Does the provincial government have any programs in place to encourage farmers to adopt practices that would enhance carbon sequestration in agricultural soils? (1 point)
 - 0 points: no programs in place
 - 1 points: programs in place

Technology Development (5 points)

1. How much support did the provincial government provide for research, development and demonstration of low-impact renewable energy technologies in 2000? (2 points)
 - scoring to be determined qualitatively based on the data received; programs targeted specifically at renewable energy technologies are required for points to be awarded
2. How much support did the provincial government provide for research, development and demonstration of energy efficiency technologies in 2000? (2 points)
 - scoring to be determined qualitatively based on the data received; programs targeted specifically at energy efficiency technologies are required for points to be awarded
3. How much support did the provincial government provide for research, development and demonstration of other greenhouse gas emission reducing technologies in 2000? (1 point)
 - scoring to be determined qualitatively based on the data received

Enhancing Awareness and Understanding (5 points)

1. Did the provincial government produce and distribute any public education materials on climate change in 2000? (3 points)
 - scoring to be determined qualitatively based on the data received – factors to be considered include the range of media used, as well as the distribution and potential audience
2. How much support did the provincial government provide to other organizations to help them produce education materials on climate change in 2000? (2 points)