

The State of Alberta's Environment:

**Our Review and Recommendations, for PCAA leadership
candidates and opposition party leaders**

Compiled and presented by

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Sustainable Energy Solutions

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About the Pembina Institute

The Pembina Institute is an independent, not-for-profit environmental policy research and education organization that envisions a world in which our immediate and future needs are met in a manner that protects the Earth's living systems; ensures clean air, land and water; prevents dangerous climate change; and provides for a safe and just global community. Pembina's major policy research and education programs are in the areas of sustainable energy, climate change, environmental governance, ecological fiscal reform, sustainability indicators, and the environmental impacts of the energy industry. Its mission is to advance sustainable energy solutions through innovative research, education, consulting and advocacy. More information about the Pembina Institute is available at <http://www.pembina.org> or by contacting info@pembina.org.

Preface

According to David Boyd, author, law professor and former federal Privy Council Office member, Canada can become “Sustainable Within A Generation”¹ through such actions as shifting to clean energy, reducing waste and pollution, investing in natural capital, and promoting global sustainability. To achieve this, Canada will need active and bold leadership from all provinces. With its blessing of abundant natural resources, debt-free economy and strong-willed people, Alberta is arguably better placed than any other province to assume a leadership role in the drive to sustainability.

With this opportunity facing our province, and given the scale and pace of growth in Alberta, the Pembina Institute thinks that it is an especially important time for bold provincial action and leadership on sustainable development. Other prominent Albertans, amongst them Peter Lougheed and Preston Manning, agree. As such, we also think it critical that key environmental and socio-economic issues be part of every provincial party’s platform.

This document is designed to inform leaders and leadership candidates about these issues, as viewed by researchers at the Pembina Institute. This summary is divided into five categories: land, water, air, climate change and people. Each category aims to present current physical, ecological or social states, political states, recent trends and projections, solutions to challenges, and those questions pertaining to the category that leadership candidates should be prepared to answer. Names and contact information for the Pembina researchers involved in compiling each section are also provided, as well as those for other organizations as an appendix. Finally, news releases on polling work that the Pembina Institute has recently commissioned are also provided as appendices to this document.

Thank you for your consideration of the points and recommendations we raise herein.

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¹ David Boyd, “Sustainability Within a Generation: A New Vision for Canada,” Vancouver: David Suzuki Foundation, 2004.

1.0 Land

Alberta's natural landscapes and the quality of life they provide are a central component of the "Alberta Advantage." The Pembina Institute thinks that adequate protection of this asset is not reflected in government decision-making. Alberta's natural landscapes are being eroded by piecemeal environmental decision-making, cumulative impacts from multiple types of development and a lack of vision about what a future Alberta landscape will look like. The multiple-use philosophy of having "everything at everywhere" is not tenable in Alberta. Rather, there are significant trade-offs that will need to be made to balance environmental protection with economic development in Alberta.

The state of land in Alberta

Alberta is blessed to contain some of the most intact natural ecosystems in North America, a wide variety of landscape types including prairie, boreal forests, foothills and mountains, and scenic landscapes that are an important part of Alberta's "brand." There are many indications, however, that many of the ecological values associated with land in Alberta are in decline. Our "natural capital" is being eroded and symptoms of this decline are becoming evident.

Albertans consider environmental protection an extremely high priority. There is increasing recognition that Albertans value their public lands for the environmental services and recreation opportunities they provide. In settled portions of Alberta there are concerns about urban sprawl and loss of agricultural lands, while on the eastern slopes of the Rocky Mountains there are growing conflicts between oil and gas development and industrial forestry, ranching and public recreation. Uncontrolled motorized recreation, largely facilitated by road and trail infrastructure created by industry, and lack of access management controls are impacting water, wildlife and other recreation potential. No plan to manage the projected impacts associated with oil sands development has been completed in northern Alberta and an area the size of Florida may be impacted by deep oil sands extraction.

Recent land-related trends and projections

- Conflict between different land users; representative examples include sour gas and Calgary residents, logging around Bragg Creek, ranchers and gas development on the Eastern Slopes, loss of productive forest land to oil and gas developments in northern Alberta, conversion of natural forest lands to agricultural lands in the Green Area.
- Populations of wildlife such as grizzly bear, caribou, and many sport fish are declining, while some ungulate species populations are dramatically increasing.
- The use of public lands for uncontrolled motorized recreation has recently increased dramatically.
- Despite massive increases in levels of industrial and recreational activity on public lands, land management budgets in Alberta Sustainable Resource Development and Alberta Environment have remained stagnant or have declined over the past 10 years. There is an obvious lack of regional planning and a lack of enforcement of existing regulations.

Possible solutions to land-related challenges in Alberta

- i. Establish additional protected areas to protect wildlife habitat and the tourism potential of some of Alberta's remaining wild areas. Recent designations such as the Bow Valley Ranch Provincial Park have been well received. Other proposals that deserve consideration include the Castle Wildland, and in the north, protected areas to balance oil sands development proposed by industry in northern Alberta.
- ii. Develop zoning rules to protect agricultural lands from urban sprawl.
- iii. Implement effective land use planning before allocation of surface and sub-surface resources. Ensure coordinated decision making between current government departments with competing mandates.
- iv. Set limits on levels of industrial land footprints in order to maintain wildlife populations.
- v. Require developers and industry to implement "conservation offsets," i.e. reforestation or acquiring conservation lands to balance areas impacted by development. Examples include the Suncor Boreal Habitat Conservation Initiative with the provincial government and the Alberta Conservation Association as partners, and more recently Shell Canada's commitment to offset land impacts associated with its recent oil sands project.
- vi. Invest in recreation and tourism infrastructure on the Eastern Slopes to manage recreation impacts. For example, the "Kananaskis North" concept has been touted for lands from Cochrane to Hinton. Currently millions of hectares of public lands are receiving hundreds of thousands of annual visitors with limited policing, services or infrastructure. Funding could be provided through an "Eastern Slopes Pass" or general revenues.
- vii. Recognize that earlier industrial allocations did not consider whether or not environmental values could be maintained. Buy out or retire some forestry dispositions or oil and gas leases in areas experiencing acute conflicts with environmental and recreational values, such as declining caribou herds or areas of important tourism and recreation potential.

Land-related questions for leadership candidates to expect

- What is your vision of what Alberta's landscapes will look like in 50 years?
- What resources do you believe are required for effective land management?
- How will your Government measure performance in protecting land and wildlife values?
- Are some areas of the province too important to be subjected to industrial development?
- What is an appropriate rate of development for the province?

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2.0 Water

Water in Alberta is under pressure from climate change, a growing population and increasing industrial and agricultural use. It needs strong measures to protect both surface water and groundwater, which includes fiscal measures, improving our knowledge on groundwater resources and better monitoring. While a strong start, there is a real concern that the key outcomes of the Water for Life Strategy (safe drinking water, healthy aquatic ecosystems, and reliable water supplies) will not be achieved. Water for Life should not be a surrogate for government leadership.

The state of water in Alberta

One of Alberta's own leading scientists, David Schindler is warning about an impending water crisis.² For example, while we do not know the exact instream flow needs of the Athabasca River, there are concerns that withdrawals during the low-flow period in winter could affect fish habitat.³ Meanwhile, oil sands mining has led to the creation of huge tailings ponds covering 50 sq km, which are toxic to birds, fish, and other species. Over 60% of the wetlands in the province have been drained, resulting in less ability to reduce run-off than in the past.⁴ Oil sands developments continue to reduce wetland area in Northern Alberta, and over 6,500 coalbed methane wells were drilled in Alberta *before* Alberta Environment introduced baseline water well testing in CBM well areas.

At the same time, water quality in many rivers has been improving, as 75% of Alberta's municipal populations now have tertiary sewage treatment and total nutrient loadings from pulp mills have declined.⁵ However, quality has declined in some watercourses due to runoff from agriculture and development, and the potential for water contamination has increased with increasing livestock operations. When it comes to groundwater resources we clearly do not have sufficient information, something acknowledged in the Water for Life Strategy.⁶

The Water for Life strategy (introduced by former Environment Minister Lorne Taylor) was a good start. The Alberta Water Council and watershed councils are also making a start. Water for Life, however, should not be assumed to mitigate all issues, nor has the government allocated

² Schindler, David W. and William F. Donahue. 2006. An impending water crisis in Canada's western prairie provinces. *Proceedings of the National Academy of Sciences*, April 10, 2006.10.1073/pnas.060156810,

<http://www.pnas.org/cgi/reprint/0601568103v1>

³ Dan Woynillowicz and Chris Severson-Baker. 2006. *Down to the Last Drop*, The Pembina Institute, <http://www.pembina.org/pubs/pub.php?id=211>

⁴ Amy Taylor. 2005. Alberta GPI The State of Wetlands, http://www.pembina.org/pdf/publications/45.Water_Quality.pdf Sara Wilson, Mary Griffiths, Mark Anielski. 2001. *The Alberta GPI Accounts: Wetland and Peatlands*, The Pembina Institute. http://www.pembina.org/pdf/publications/23_wetlands_and_peatlands.pdf

⁵ Amy Taylor. 2005. Alberta GPI: Water Quality, http://www.pembina.org/pdf/publications/45.Water_Quality.pdf For additional information see Sara Wilson, Mark Anielski, Mary Griffiths, 2001. *Water Resource and Quality*.

<http://www.pembina.org/sustainability-measurement/doc.php?id=49>

⁶ Government of Alberta. 2003. *Water for Life*, p.12, 27 <http://www.waterforlife.gov.ab.ca/docs/strategyNov03.pdf>

sufficient funds for Alberta Environment to implement the strategy as quickly as required.⁷ While Pembina thinks that Alberta Environment has over-allocated surface water resources in Southern Alberta, it applauds the recent government moratorium on new water licenses for the Bow, Oldman, and South Saskatchewan sub-basins.

Water is an issue of tremendous significance to Albertans, and has gained federal interest. For example, Senator Tommy Banks has authored “Water in the West: Under Pressure,”⁸ while Natural Resources Canada is studying the Paskapoo Formation (Alberta’s most extensive aquifer) as part of its national program to understand major groundwater resources.⁹

Recent water-related trends and projections

- Summer flows in the rivers in Alberta have declined to about 60% of flows at the beginning of the 20th century.¹⁰
- The glaciers that supply the main rivers (Bow/S. Saskatchewan, N. Saskatchewan and Athabasca) are receding rapidly as a result of climate change.¹¹ This raises concerns about long-term water supply for cities like Calgary and Edmonton.
- Landowner complaints about water wells in central and southern Alberta (including some complaints of gas in water wells) are increasing. Alberta Environment investigations suggest that water well maintenance is often a problem, but landowners may suspect energy developments, which have occasionally been identified as the cause.¹²

Possible solutions to water-related challenges in Alberta¹³

- i. Establish a levy on water used for oil recovery, with revenue directed toward a dedicated fund for improved water management and research.
- ii. Improve and increase groundwater monitoring.

⁷ For example, it took over 1.5 years to implement the recommendations of the Advisory Committee on Water Use Practice and Policy, that are to promote water conservation for enhanced oil recovery. Alberta Environment. 2006. *Water Conservation and Allocation Policy for Oilfield Injection*, and associated Guideline, <http://www.waterforlife.gov.ab.ca/html/removed.html>

⁸ The Honourable Tommy Banks and the Honourable Ethel Cochrane. 2005. *Water in the West: Under Pressure*. Fourth Interim Report of the Standing Senate Committee on Energy, the Environment and Natural Resources, <http://www.parl.gc.ca/38/1/parlbus/commbus/senate/com-e/enrg-e/rep-e/rep13nov05-e.htm>

⁹ Natural Resources Canada. *Groundwater Program: Paskapoo Groundwater Study*, http://ess.nrcan.gc.ca/2002_2006/gwp/p3/a7/index_e.php

¹⁰ Schindler, David W. and William F. Donahue. 2006. An impending water crisis in Canada’s western prairie provinces. *Proceedings of the National Academy of Sciences*, April 10, 2006.10.1073/pnas.0601568103. See separate document (pre publication copy of this report).

¹¹ Schindler, David W. and William F. Donahue. 2006. An impending water crisis in Canada’s western prairie provinces.

¹² Alberta Environment investigates complaints about water wells.. In the 17 months from January 2004, the Central Region investigated 125 complaints. They found that over half (73) were related to water well maintenance and most of the others related to other factors. They determined that three of the cases were due to impacts from oil and gas activities. In the Southern region, during the same period, 23 of the 230 complaints received during that time-frame related to CBM. Of the 15 cases that have been closed, the investigation did not show any link with CBM; the remaining 8 cases are still being investigated.

¹³ Drawn from Griffiths, Mary, Dan Woynilowicz and Amy Taylor. 2006. *Troubled Waters, Troubling Trends*, p.143-153, <http://www.pembina.org/energy-watch/doc.php?id=612>

- iii. Rapid implementation of a provincial wetlands policy (Alberta Water Council is working on this).
- iv. Regionally manage cumulative effects in advance of further oil sands mining development.
- v. Establish watershed water budgets (including groundwater) and reporting on watershed management.

Water-related questions for leadership candidates to expect

- What will you do to protect groundwater from coalbed methane development?
- Will you stop production of coalbed methane in areas where the water in the seams is fresh (non-saline)?
- What will be done to reduce the risk of intensive livestock operations impacting groundwater?
- What will you do to limit the impacts of oil sands development on water quality and resources?

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3.0 Air

The current emission standards and regulatory approach to dealing with industrial emissions is no longer keeping Alberta's emissions in check. Pollution is rapidly rising resulting in stress on our air quality and the health of the environment. Increasingly, people will suffer from air pollution unless government recognizes that more stringent standards – standards that are consistent with standards in the US – are applied in Canada. This would compel companies to use the latest technology to control pollution.

Economic growth, and particularly the rapid development of a massive resource such as the oil sands, can result in serious negative environmental consequences unless these issues are carefully managed. Albertans expect government to take air pollution very seriously and demonstrate that it is taking every effort to improve air quality. They expect government to impose stringent limits on industrial sources – limits that require industry to use the very latest pollution control technology to comply with those limits. A new leader of Alberta will recognize that significant economic opportunity and growth come with the equally significant responsibility of managing environmental issues and acting accordingly.

The state of air in Alberta

Air pollution is rising in Alberta – bucking national downward trends. Alberta has become the most polluting province, accounting for 25% of Canada's total air pollutants reported to Environment Canada's National Pollution Release Inventory 2003, and home to the fastest growing sources. The main source of growth in emissions is conventional oil and gas and oil sands.¹⁴

Rising air pollution at a regional scale is a significant public concern in many areas of Alberta, including the Lake Wabamun coal plants, east of Edmonton and the Fort McMurray region. Local air pollution is also a concern in proximity to industrial sources and intensive agricultural operations.¹⁵

Much of Alberta's air pollutants are under "guidelines," not limits or regulations. In a number of heavy industrial areas the cumulative emissions from facilities exceed Alberta guidelines. A bold leadership move would be to put limits on air pollutants based on desired environmental performance. This would drive corporate innovation to meet these limits.

Albertans expect government to expand the comprehensive air quality monitoring system to areas of the province that currently are not adequately covered. Ten years after the plan was released, the Government of Alberta has not completed the comprehensive air quality monitoring

¹⁴ Pollution Watch *Fact Sheet – Data based on Environment Canada's National Pollutant Release Inventory for 2003*. www.pollutionwatch.org

¹⁵ The Pembina Institute for Appropriate Development *Oil Sands Fever- The Environmental Implications of Canada's Oil Sands Rush* pp.44-47 <http://www.pembina.org/pubs/pub.php?id=203> Accessed 6 September 2006.

network for Alberta.¹⁶ Good data and information is a prerequisite for making good decisions. An opportunity exists to put in place this monitoring system quickly.

Recent air-related trends and projections

- In Alberta emissions of SO₂, NO_x, and PM_{2.5} are all projected to significantly increase by 2015 with respect to 2002 levels. In all categories the primary activity responsible for this increase is oil sands development.¹⁷
- Projections indicate that Canada as a whole will experience a decrease in total emissions of SO₂, NO_x and PM_{2.5}.
- Total SO₂ emissions are expected to increase by 50,858 tonnes, or 10%, above 2002 levels by 2015. Oil sands developments are expected to be the single largest contributor to this rise with an expected increase of 60,228, or an increase of 58%, over 2002 levels.
- Total NO_x emissions are expected to increase by 110,163 tonnes (14%) above 2002 levels by 2015. Oil sands developments are expected to be the single largest contributor to this rise with an expected increase of 174,886, or an increase of 900% over 2002 levels.
- Total PM_{2.5} emissions are expected to increase by 11,414 tonnes (23%) increase over 2002 levels by 2015. Oil sands developments are expected to be the single largest contributor to this rise with an expected increase of 12,160 tonnes (660%) over 2002 levels.
- Emissions of ammonia and VOCs are expected to increase in Alberta due in large part to an increase in intensive agricultural activity. Emissions of ammonia are projected to increase by 87,424 tonnes (60%) over 2002 levels, with increasing agricultural emissions responsible for 50% of this increase. Emissions of VOCs are expected to increase in Alberta by 300,000 tonnes (45%) over 2002 levels, with increasing agricultural emissions responsible for 7% of this increase.

Possible solutions to air-related challenges in Alberta

- Adopt more stringent standards for industrial pollution sources to de-link economic growth with air pollution growth. More stringent standards and better technologies are commonplace in the USA. Companies can afford the relatively small premium required to meet more stringent standards.
- Establish air emission caps on areas experiencing rapid emission growth.
- Implement a province wide air monitoring system.
- Regulate air pollution from intensive agriculture in a similar manner as industrial facilities. Require comparable pollution control.

¹⁶ Clean Air Strategic Alliance *A Strategic Plan for Air Quality Monitoring in Alberta Presented to the Board of the Clean Air Strategic Alliance* November 24, 1995 www.casahome.org/uploads/IM-AmbientAir_StrategicPlanAirQualityMonitoring-Nov-1995.pdf Accessed 6 September 2006.

¹⁷ All values as per Environment Canada *1990-2015 CAC Emissions Summaries* July, 2006. http://www.ec.gc.ca/pdb/cac/Emissions1990-2015/emissions1990-2015_e.cfm Accessed 15 September 2006.

Air-related questions for leadership candidates to expect

- Are you aware that in spite of its relatively small population Alberta has become the most polluting province in Canada? What will you do about this?
- What would you do to ensure that growth of industry in Alberta does not translate into degradation of air quality?
- Should industry be required to use best available technology to control emissions in Alberta? Would your government institute emission standards that would ensure that the best technology is used by companies?

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4.0 Climate Change

Alberta politicians especially prefer to lead the parade rather than follow it. Deep reductions to GHG pollution are planned around the world; Alberta can choose to embrace this shift to a greener economy or to catch up to it. Globally, science has shown that reductions on the order of 80% below 1990 levels are required by the year 2050 to avert serious global shifts in the climate system. With the level of growth in Alberta, we carry both an opportunity and a responsibility to take action.

The state of greenhouse gas pollution in Alberta

Canada is among the world's top 10 producers of greenhouse gases, ranking 8th in the world in absolute GHG pollution and 7th in per-capita emissions.¹⁸ Within Canada, Alberta emits more greenhouse gases (GHGs) than any other province, again in both absolute and per capita terms.¹⁹ In 2004, Alberta was responsible for 39% of Canada's total GHGs, compared to Ontario, the second most carbon polluting province, which accounts for 28%. In terms of per capita emissions, Albertans emit 34.2 tonnes of CO₂ per person, while Ontarians emit 6.2 tonnes - less than 18% of what Albertans emit.²⁰

Alberta's disproportionate share of GHG emissions compared to other provinces can largely be attributed to its oil and gas production and its coal-fired electricity generation. Nationally, oil and gas production account for 20% of Canada's total GHG emissions,²¹ with the majority of those emissions occurring in Alberta. In 2004, for example, 7 of the 10 biggest industrial GHG polluters in Canada were located in Alberta.²²

In 2002, the government released Alberta's climate change plan, *Albertans and Climate Change: Taking Action*. The plan's overall target is to "reduce greenhouse gas emission intensity, or emissions relative to GDP, by 50% by the year 2020." While this target may sound ambitious, it is in fact only a small deviation from business as usual: GHG emissions decline naturally as technologies improve and industrial processes become more efficient. Alberta's commitment sought to speed that "natural" rate of GHG intensity improvement from about 1.5% a year to between 2 and 2.3% annually. If Alberta's GDP continues to grow at a rate of 4 per cent per year, as it did during the 1990s, the 50% intensity target could be met even while Alberta's absolute emissions rise to 66-84% above their 1990 level.²³ Internationally this scale of increase in GHG pollution would be an embarrassment.

¹⁸ World Resources Institute (cait.wri.org), Climate Analysis Indicators Tool, 2005.

¹⁹ *National Inventory Report 1990-2004: Greenhouse Gas Sources and Sinks in Canada* (Submission to the United Nations Framework Convention on Climate Change, April 2006, Environment Canada). p. 16, Table 1-2.

²⁰ Calculated using provincial population data available from Statistics Canada at <http://www40.statcan.ca/101/cst01/demo02.htm>.

²¹ *National Inventory Report 1990-2004: Greenhouse Gas Sources and Sinks in Canada* (Submission to the United Nations Framework Convention on Climate Change, April 2006, Environment Canada). p. xxii, Table S-3.

²² Environment Canada facility GHG reporting, 2004 data: http://www.ec.gc.ca/pdb/ghg/onlineData/Table2_e.cfm

²³ Bramley, Matthew. An Assessment of Alberta's Climate Change Action Plan. (The Pembina Institute, September 2002).p. 1.

Alberta's climate change plan also committed to a regulated limit on GHG pollution from large industrial emitters. In May 2006, Alberta Environment Minister Guy Boutilier stated his desire to adopt "tough" regulated GHG targets for the oil sector and other industries, and his intention to announce details in September.²⁴ The Government of Alberta also recently stated in writing: "The *Climate Change and Emissions Management Act* and associated regulations will be used to implement greenhouse gas emission management in Alberta."²⁵ Despite these statements (and despite several years of multi-stakeholder consultations on regulations) the Alberta government has yet to adopt any regulations to limit GHG pollution.

Recent GHG pollution related trends and projections

- The total volume of greenhouse gases attributed to oil and gas production has already increased by 50% since 1990.²⁶ This rapid growth is projected to increase as the oil sands becomes a larger share of Canada's oil and gas production, since the tar-like bitumen found in the oil sands requires a particularly GHG-intensive process of extraction. Pembina's calculations show that oil sands production will account for close to 50% of the growth in Canada's GHG emissions between 2003 and 2010.²⁷
- Several industrialized nations and U.S. states have concluded that the risks of climate change are serious enough to necessitate deep cuts in their emissions of carbon dioxide. California has committed to an 80 per cent reduction in GHG emissions by 2050, as has France. Germany plans to reduce its emissions by 40% by 2020, while a group of New England states has committed to a 75-85% reduction by 2050.²⁸
- This fall, the federal government is expected to release its "Made in Canada" climate change plan, which may include a regulated limit on GHGs for heavy industry (as the previous government's plan did).
- The cost to completely *eliminate* GHG pollution from the production of oil sands is on the order of \$3 dollars per barrel of oil. Given the current price of crude oil and profitability of the sector, there is no financial reason why the sector can not make deep reductions in emissions.

²⁴ Jason Fekete, "Alberta vows to make oilpatch greener: 'We'll have the toughest regulation in all of Canada'," Calgary Herald, May 26, 2006.

²⁵ Alberta Justice. 2006. *Submission of Her Majesty the Queen in right of Alberta as represented by the Minister of Environment, the Minister of Sustainable Resource Development and the Minister of Health and Wellness in relation to Suncor Energy Inc. Proposed Voyageur Project, EUB Application Nos. 1391211 and 1391212, before the Alberta Energy and Utilities Board*, p.41.

²⁶ Ibid, p. xxii, Table S-3.

²⁷ Bramley, Matthew et al. *The Climate Implications of Canada's Oil Sands Development*. (The Pembina Institute, November 29, 2005).p. 5.

²⁸ Bramley, Matthew. *The Case for Deep Reductions: Canada's Role in Preventing Dangerous Climate Change*. (The Pembina Institute and the David Suzuki Foundation, 2005). p. 3.

Possible solutions to greenhouse gas pollution in Alberta²⁹

- i. Set clear targets for absolute reductions in GHG pollution in line with Alberta's portion of emissions.
- ii. Create fiscal incentives for reducing emissions across the economy.
- iii. Regulate large polluters with a performance based regulation allowing companies to invest in and select their own solutions.
- iv. Present a vision of a "sustainable energy future" for Alberta where we become the most energy efficient economy in Canada, and the most carbon-neutral economy with the strongest renewable energy industry.

GHG-related questions for leadership candidates to expect

- When will you regulate limits on GHG emissions?
- What target will you set? Will you set targets to get Alberta on a path to deep cuts in GHG pollution?
- Will those targets be set in terms of absolute emissions, not emissions intensity?
- Do you accept the scientific consensus that human-made global warming is happening, and that dangerous changes to the climate can only be avoided by deep reductions in GHG pollution?
- How will you measure your progress in reducing GHG pollution?
- How will you ensure oil sands growth does not result in massive increases in GHG pollution? Will you push oil sands companies to become "carbon neutral"?

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²⁹ Drawn from Griffiths, Mary, Dan Woynillowicz and Amy Taylor. 2006. *Troubled Waters, Troubling Trends*, p.143-153, <http://www.pembina.org/energy-watch/doc.php?id=612>

5.0 People

The Pembina Institute thinks that a laissez faire approach to fiscal policy has led to a pace of resource developments that is causing negative social and economic impacts. Instead, Albertans need to ensure maximum compensation for the development of our resources; we need to alleviate public infrastructure debt by investing in schools and hospitals; we need to address poverty concerns and provide adequate welfare services to the poor. We need a vision for the province that ensures the best deal for Albertans, takes a long term approach to resource developments, and spreads benefits out over time.

Current state of social and economic issues in Alberta

There is a perception that Alberta is a wealthy and booming province, yet economic benefits are not evenly distributed across the population, and some of the economic growth is coming at the cost of social fabrics. While unemployment in the province has greatly declined, many companies have been forced to close their doors due to labour shortages, with not enough skilled laborers to keep up with tasks like building play ground equipment in city and town parks. The turn over rate for employees is very high as employees can always find another job to go to. And a shortage of seats in post-secondary institutions in the province means that the labour shortage will likely continue.

While Alberta may be the only debt-free province, that is true only of financial debt. We have an infrastructure debt evidenced by leaking schools, failing roads and waiting lists at hospitals. We have increasing poverty and a shortage of skilled workers. The gap between the rich and the poor is greater in Alberta than any other province. The Genuine Progress Indicator, a framework for measuring the economic, social and environmental well-being of a region declined in Alberta by almost 20% between 1961 and 2003. Over the same time period, the Gross Domestic Product, a measure of the economic transaction in a region increased by 400%. The economic growth has come at the expense of social and environmental conditions. The so-called Alberta boom is benefiting some but not all.

The Pembina Institute sees the ‘hot button’ issues to be:

- Shortage of post secondary school seats.
- A public infrastructure debt due to a focus on paying off the provinces debt at the expense of investments in public infrastructure (schools, roads and hospitals).
- Increasing concerns about the pace of oil sands developments and the associated stresses on infrastructure and labour.
- The need to review and revise the oil and gas royalty regime.

Recent social and economic issues-related trends and projections

- Increasing stress levels of Albertans due to work demands and financial challenges are evidenced by increasing rates of obesity, problem gambling and suicide. According to the Calgary Regional Health Authority, suicide is the leading cause of death among Calgary

males aged 10 to 49 years. Alberta's suicide rate has averaged 122% of the Canadian average rate over 40 years.

- The gap between the rich and poor is greater in Alberta than any other province. In Alberta, the income for a single employable person on welfare has fallen by \$4,800 — or almost 50 per cent — since 1986. Alberta ranks last of all provinces in providing support through welfare payments.³⁰
- While over the last 40 years, disposable income and weekly wages have increased, savings has declined and debt has sky-rocketed. The rate of increase of expenditure has outstripped that of disposable income and weekly wages. Thus, Albertans are paying for consumption with debt.
- Through the 1990s there was a growing gap between growth in GDP and growth in disposable income. Real personal consumption expenditures per capita increased by 112% between 1961 and 2002. In 1982, the savings rate had climbed to 16.2% or \$3,454 (1998\$) per Albertan. Since then, savings have declined and in 2003, the savings rate was 4.7% or \$1,033 per person (1998\$). Real household debt per capita grew by an average of 3.6% per annum from 1961 to 2003, surpassing the 2.1% per annum growth in real disposable income and the 2.2% per annum growth in real GDP per capita.
- Notably, sixty-three percent of Albertans feel they are not getting maximum revenue from oil sands developments, while 84% of Albertans support a public review of the oil sands royalty.

Possible solutions to social and economic challenges in Alberta

- i. The government needs to develop a vision for resource developments in the province. That vision needs to adjust the pace of development to limit social, economic and environmental costs and spread the benefits out over a longer period of time.
- ii. The government needs to make sure it is getting maximum revenue from the development of Alberta's non-renewable resources. Royalty regimes should be designed to capture more money when more is available. For example, the North Sea has a profits tax explicitly designed to capture more revenue when more is available and ensure high returns for citizens.
- iii. Money from the development on Alberta's resources should be invested in a long-term fund that will grow over time. The fund can be used to transition to sustainable energy, to compensate future generations that will not have the benefit of today's oil and gas resources and as a source of revenue when resources are depleted or costs fall. Alaska and Norway both have long-term funds. Alaska's permanent fund receives no less than 25% of resource revenues every year. And each Alaskan receives a dividend cheque from the interest earned on the fund. The fund is currently worth over \$34 billion. Norway places all resource revenues into a long-term fund and only draws on the fund to balance the budget. The Norway Pension fund, as it is called, is worth over \$200 billion.

³⁰ Kerry Williamson, "Alberta ranked last for welfare payments" *Calgary Herald*, 24 August 2006, page A10.

- iv. The focus of late on eliminating the provincial debt has left Albertans with a high debt in terms of public infrastructure. The government now needs to focus on catching up by establishing and implementing an investment strategy for schools and hospitals.
- v. Critical to implementing solutions is to ensure a rigorous performance measurement system is in place. An opportunity to do this exists by enhancing Alberta's "Measuring Up" system to incorporate a number of additional indicators put forward in the Genuine Progress Indicator system. This provides an opportunity for a new leader to have a baseline to measure progress against.

Social and economic issues-related questions for leadership candidates to expect

- Eighty-four percent of Albertans support a public review of the oil sands royalty regime. Do you plan to respond to this by conducting such a review?
- Are you prepared to revise the energy royalties in Alberta to ensure maximum compensation for the development of non-renewable resources?
- What will you do to eliminate the public infrastructure debts that exist in Alberta?
- How will you spread the benefits of resource developments out over time?
- How will you address the increasing gap between the rich and the poor, increasing poverty and an inadequate welfare system in the province?
- How will you measure Alberta's environmental, social and economic performance?

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Appendices

Other contacts

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Pembina Media Release: Albertans' Vision at Odds with Government Plans for Oil Sands

May 30, 2006

Media Contacts: Simon Dyer, Chris Severson-Baker

An overwhelming majority of Albertans believe the government and industry should do more to protect the environment in the face of oil sands developments in northeastern Alberta. These are the findings of a recent poll commissioned by the Pembina Institute.

"The results of the survey show Albertans' vision is very different than current plans for oil sands development. A striking 86 per cent of Albertans feel that oil sands operations should be required to reduce greenhouse gas emissions associated with their development," said Simon Dyer, Senior Policy Analyst for the Pembina Institute.

Albertans were asked about their perceptions of oil sands development, and their expectations in terms of balancing economic development with environmental protection. Environmental considerations included the potential impacts on climate, water use, wildlife habitat and forests.

"These results reveal that Albertans expect a much higher level of environmental protection associated with oil sands development than is being offered," said Mr. Dyer.

The Alberta Government's current 'develop-at-all-cost' mentality, as evidenced by soaring greenhouse gas emissions and water use, and proposals to write off almost 3,000 square kilometres of forest as a huge oil sands mine, are clearly out of step with the desires of the vast majority of Albertans.

The survey results also send a clear message to the federal government that Albertans expect greenhouse gas emissions by industry to be reduced through regulation.

"As the Alberta Government starts its consultation process on how to develop the oil sands, it is important and appropriate that the views of Albertans be reflected in development decisions," says Chris Severson-Baker, Director of the Pembina Institute's Energy Watch Program.

The Minister of Energy should slow down the rate of oil sands lease sales and the Minister of Sustainable Resource Development should implement land use planning that protects forests and threatened species such as woodland caribou.

The Pembina Institute commissioned Probe Research, a professional polling firm based in

Key findings from the poll.

91% of Albertans believe that protecting the environment is important, even if this means oil sands development occurs more slowly.

82% of Albertans believe that wildlife, such as woodland caribou, should be protected, even if this reduces oil sands development opportunities.

57% of Albertans think that too much of Alberta's forest is open to industrial development.

88% of Albertans believe that the provincial government should require reductions in the use of river water by oil sands operators during low flow periods, including a striking 33 per cent that believe that oil sands plants should not be allowed to use Athabasca river water at all when the river is at risk due to low water flows.

Winnipeg, Manitoba, for the study. The findings are based on a national phone survey of 500 Albertans between April 7 and 13, 2006, with a margin of error of 4.4 per cent, 19 times out of 20.

This is Part 2 of a two-part survey commissioned by the Pembina Institute about Albertans' perceptions of oil sands development. A backgrounder summarizing the poll results, which focused on Albertans' perceptions of the environmental issues related to oil sands development, can be downloaded from [here](#) or from oilsandswatch.org.

Pembina Media Release: Albertans Want a Public Review of Oil Sands Royalties

May 23, 2006

Media Contact: Amy Taylor, Chris Severson-Baker

A large majority (84 per cent) of Albertans believe there should be a public review of oil sands royalty rates to ensure Alberta is getting the maximum benefit from this non-renewable resource. In Alberta, companies pay 1 per cent royalty to the provincial government until their project costs are paid out and then only a 25 per cent royalty.

Albertans believe they are not receiving maximum benefits from the development of the province's oil sands, according to a major new opinion poll commissioned by the Pembina Institute.

Albertans were asked about their perceptions of oil sands development, and their opinions on the current royalty regime and how to invest oil sands revenues. The results show that Albertans believe the government should capture a greater portion of oil sands wealth for Albertans, and invest revenues to assist the transition to an economy that supports more sustainable forms of energy.

The Pembina Institute agrees. According to Chris Severson-Baker of the Pembina Institute, "As conditions change, royalty rates should also change. It's been done before in Alberta and elsewhere." In the early 1970s, the Lougheed government boosted royalties and used some of the increased revenue to establish the Heritage Fund.

"Alberta's strategy to liquidate its resources as fast as it can is not in the best interest of Albertans, especially in the long term," says Amy Taylor, lead economist with the Pembina Institute.

The Pembina Institute believes oil sands royalties should be reviewed and revised upward to provide maximum compensation to Albertans for the development of these non-renewable and publicly owned resources. Windfall profits should not be left with companies; they should be transferred back to Albertans.

"When we asked Albertans about royalty rates, more than 80 per cent supported calls for a public review of royalty rates. More than 60 per cent believe they are not getting maximum revenue for oil sands. They want to make sure they're getting their fair share of this non-renewable resource,"

says Taylor.

"Not only do they want a fair share, they also want to invest in more sustainable energy options. More than 90 per cent of Albertans believe the government should use a proportion of the revenues from oil sands to fund development of alternative energies," says Taylor.

These are some of the findings of the opinion research conducted recently for the Pembina Institute by Probe Research, a professional polling firm based in Winnipeg, Manitoba. The findings are based on a phone survey of 500 Albertans between April 7 and 13, 2006, with a margin of error of 4.4 per cent, 19 times out of 20.

This is Part 1 of a two-part survey commissioned by the Pembina Institute about Albertans' perceptions of oil sands development. Part 2, which focuses on Albertans' opinions about environmental issues associated with oil sands development, will be released next week.