



Annual Report 2008

# Sustainable Energy Solutions

safe climate · healthy environment · secure future

# At the Heart of the Issue



Photo: istock

One of the most effective ways to safeguard the health, economic prosperity and quality of life of our children is to build them a sustainable energy future. Perhaps that is why Canadians repeatedly rank the environment among our top national concerns, and why many of us are taking steps in our daily lives to make a difference. But personal responsibility is only a starting point.

To really tackle and solve Canada's environmental challenges, we need new policies and laws to set rules for industry and ensure the safety and well-being of Canadians. This is what the sustainable energy experts at the Pembina Institute are working so hard to achieve. We're doing this for children — ours and everyone else's.

## Vision

We envision 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.

## Mission

Our role within this vision is to advance sustainable energy solutions through innovative research, education, consulting and advocacy.

## National reach

In October 1982, Canada's largest industrial accident — the Lodgepole sour gas blowout near Drayton Valley, Alberta — inspired a small group of local residents to press for stronger safety standards in the oil and gas industry. This group went on to found the Pembina Institute in 1985. Today, with offices in Vancouver, Yellowknife, Edmonton, Drayton Valley, Calgary, Toronto and Ottawa-Gatineau, our focus has expanded to include sustainable energy challenges across the country.

The Pembina Institute is a national not-for-profit think tank working to shift our society away from a dependency on conventional fossil fuels to a more sustainable energy future that uses the vast energy potential of the sun, wind, earth and water. Our multidisciplinary team of staff and volunteers work collaboratively with communities, corporations and government to find practical solutions to the environmental challenges related to the way we produce and consume energy.

# Creating Sustainable Energy Solutions

## Some highlights of progress from 2008

### Energy Policy Solutions

#### Minimizing energy development impacts

Canada can protect the climate while adding more than a million new jobs to the economy, says an analysis by the Pembina Institute and the David Suzuki Foundation released at the 2008 UN climate negotiations in Poznan, Poland. **More on pages 4 to 7.**



Photo: David Dodge, The Pembina Institute



Photo: David Dodge, The Pembina Institute

### Sustainable Communities

#### Supporting community development in Canada and internationally

With the help of the Pembina Institute, the communities of Salt Spring Island, Delta and Abbotsford have created innovative programs to encourage green residential and commercial buildings. **More on pages 8 and 9.**

### Pembina Corporate Consulting

#### Sustainable energy solutions for leaders

Support and advice from the Pembina Institute is helping Canadian financial institutions find their way to "carbon neutral" operations. **More on pages 10 and 11.**



Photo: Roberta Franchuk, The Pembina Institute



Photo: Kathy Worobec, The Pembina Institute

### GreenLearning

#### Engaging today's youth in creating a sustainable future

GreenLearning continues to be a leader in environmental education in Canada, and has now begun an exciting transition to an independent non-profit organization. **More on page 12.**

Photo: David Dodge, The Pembina Institute



▲ *David Armour serves as the President of the Pembina Institute Board of Directors.*

In the field of sustainable energy, there is no shortage of challenges or opportunities that confront a think tank like the Pembina Institute. We face the perpetual challenge of maintaining both focus and resolve — attributes that have never been more important in these times of economic, environmental and social change.

## The fierce urgency of now

Without a doubt, 2008 will enter the history books as a year of remarkable change... yet much remains to be done.

Barack Obama was elected to the U.S. presidency. He has put an environmental stake in the ground with the promise of weaning the United States off "dirty, dwindling and dangerously expensive oil" while addressing a "planet in peril" from global warming. His commitment to address the most challenging environmental issues of our time affects us greatly here in Canada, and bolsters support for the work of the Pembina Institute.

In Canada, the year saw steps forward and steps back. In British Columbia, a carbon tax was implemented that put a price on almost three-quarters of the province's greenhouse gas pollution. In elections in Alberta, Ontario and federally, there were unprecedented discussions of energy, the environment and climate change. But when Canada arrived at the UN climate change meetings in Poznan, Poland, it was heavily criticized for standing in the way of progress towards an ambitious new global agreement on fighting climate change.

## Maintaining focus & resolve

In 2008 the Pembina Institute's staff and Board of Directors embraced the opportunity to reflect on over two decades of work that has included both success and disappointment, to consider the rapidly shifting landscape in the field of energy and the environment, and to assess the challenges and opportunities of fulfilling our vision of a sustainable future.

What emerged from this process of introspection, debate and discussion was the resolve to move the organization forward with a sharp focus on three key areas:

- ensuring that Canada implements strong policies that deliver its fair share of deep reductions in greenhouse gas pollution to combat global warming;

- addressing the impacts of oil sands development within ecological limits to ensure healthy air and water, wildlife and biodiversity while accelerating a transition towards sustainable mobility; and
- achieving a massive scale-up in energy efficiency while meeting our energy needs through low-impact renewable energy.

The Board of Directors is confident that the Pembina Institute's focus and the resolve, integrity and commitment of its staff will continue to deliver solutions that meet the energy and environmental challenges of our time.

David Armour, President, Board of Directors

Photo: David Dodge, The Pembina Institute



▲ *Marlo Reynolds is the Executive Director of the Pembina Institute.*

With a clear sense of purpose, urgency and resolve, the Pembina Institute will continue its efforts to overcome problems with practical solutions, often featuring cross-sectoral collaboration. We will continue to identify opportunities in the face of new challenges and to work to make Canada a sustainable energy leader. As always, we invite you to engage and support the Pembina Institute in these efforts.

Marlo Reynolds, PhD, Executive Director



# Outcomes and Objectives

## Our efforts are specifically aimed at achieving four long-term outcomes:

- A continual shift in the Canadian corporate sector toward sustainable energy production and consumption.
- Implementation by Canadian federal and provincial/territorial governments of policies and programs that result in sustainable energy production and consumption.
- An increased shift by communities in Canada and developing countries toward sustainable energy production and consumption.
- Empowerment of today's youth with the skills, knowledge and attitudes to accelerate the shift towards sustainable energy production and consumption.

## To achieve these long-term outcomes, we seek to:

- minimize negative environmental and human health impacts from conventional energy
- maximize energy conservation and efficiency
- maximize low-impact renewable energy
- minimize greenhouse gas emissions.

# Our Philosophy

## The Pembina Institute incorporates the principles of sustainability in our own policies and practices:

**COLLABORATION** We encourage collaboration across program areas and among staff, as well as through partnerships with other stakeholders.

**PARTICIPATORY DECISION MAKING** We practice this by applying a collaborative decision-making model and encouraging all staff to participate in major organizational decisions.

**EQUAL OPPORTUNITY** We are an equal opportunity employer, encouraging applicants from all ethnicities, genders, orientations and spiritual beliefs to join our team.

**DIVERSITY** We invite input from a range of external perspectives and by proposing sustainability solutions that respond to diverse interests.

**WORK/LIFE BALANCE** We regularly discuss personal sustainability and support each other through tough times. We also provide a high level of flexibility for staff in where they choose to work, the hours they keep and when they take leave.

**TRANSPARENCY** Our decision-making practices are transparent, enabling staff and partners to understand how and why decisions are made.

**BALANCED BUDGETING** We embrace balanced budgeting as a principle of sustainability by not taking on significant financial debt or risk. Our operational facilities are modest, allowing us to concentrate our resources on program activities.

**ZERO FOOTPRINT** The Pembina Institute strives to achieve the zero-footprint principle by teleconferencing, purchasing green power and carbon offsets, and promoting carpooling and alternative transportation.

**LONG-TERM THINKING** Among other activities, the Pembina Institute uses scenario-planning exercises to conceive the future and plan activities for maximum effectiveness.

**LAUGHTER** We promote a positive attitude by regularly socializing, sharing humour and enjoying the outdoors together.

# Minimizing energy development impacts

We encourage energy developers to use the best environmental practices possible, and we collaborate with policy makers in order to improve regulations and standards and to protect the environment. We also bring information to people to help them deal with the energy development issues they face — locally, regionally and globally.

## Climate Change

### Debating a Price on Pollution

2008 was “the year of carbon pricing” for climate policy in Canada. It started with the February 2008 announcement of a carbon tax in B.C., a decision that sparked a lively debate across Canada. The fall of 2008 saw a federal election that featured carbon pricing as a top issue, while the election of Barack Obama and a supportive Congress made implementation of a cap-and-trade system in the U.S. a certainty. With Prime Minister Harper’s government now pursuing a North American approach to climate policy, it remains to be seen whether Canada can match, or even lead, the U.S. — or whether 2009 will be the year that Canada becomes North America’s climate laggard.

The Pembina Institute further strengthened its cap-and-trade expertise to become perhaps Canada’s most prominent “go-to” organization on carbon pricing in 2008. Pembina Institute analysts published position papers and op-eds on the rationale for a price on pollution, and played an active role in government consultations. In October, the Pembina Institute produced a comprehensive overview

of policy options that makes the case for a strong price on greenhouse gas pollution.

◀ *More damage from pest infestation, droughts and severe storms are among the expected impacts of climate change. Some damage is already underway, as this devastation from pine beetles in B.C. shows.*

Photo: D&J Hubber via Flickr

### Reinforcing British Columbia’s Leadership

British Columbia cemented its position in 2008 as a leader on climate action with its carbon tax and ban on dirty coal-fired power plants. The province also passed legislation to enable a cap-and-trade system, and played a leading role in negotiating the rules for the Western Climate Initiative’s cap-and-trade system involving 11 states and provinces. The Pembina Institute is focused on helping British Columbia in its climate leadership by finding ways to strengthen the carbon tax and advancing other ideas to ensure that carbon pricing is equitable and fair. The Pembina Institute will also work to ensure that new activity in the gas sector aligns with the province’s climate objectives and environmental priorities.

### Tracking Canada’s G8 Performance

Climate change was at the top of the agenda during the 2008 G8 Summit in Hokkaido, Japan. As the only Canadian environmental organization represented at the meeting, the Pembina Institute helped hold the federal government to account when the summit failed to produce a climate breakthrough.



### Going Green at the Ballot Box

To prepare Canadians for the country’s first federal election to feature the environment as a top issue, the Pembina Institute published objective,

non-partisan assessments of parties’ climate and energy proposals. This timely analysis helped Canadians to compare the campaign commitments of the parties before Election Day.

### Deep Reductions, Strong Growth

Working in partnership with the David Suzuki Foundation, the Pembina Institute commissioned an economic modelling analysis to assess the feasibility and affordability of making cuts to Canada’s greenhouse gas pollution. Released at the December 2008 UN climate negotiations in Poznan, Poland, the analysis reveals that Canada can protect the climate while adding more than a million new jobs to the economy by 2020. This research was sponsored by TD Bank Financial Group.

▶ *At the December UN climate negotiations in Poznan, the Pembina Institute released a report showing that reductions in Canada’s greenhouse gas emissions are both feasible and affordable.*



## Debating Hot Topics: Carbon Capture and Storage

In November 2008, the Pembina Institute and the University of Calgary's Institute for Sustainable Energy, Environment, and Economy hosted a national, collaborative Carbon Capture and Storage (CCS) Thought Leader Forum in Calgary, Alberta. The forum brought together the public and private sectors, academics, and experts from environmental non-governmental organizations to discuss and debate critical CCS policy questions.



Photo: David Dodge, The Pembina Institute

◀ *Preston Manning discusses CCS with Ed Whittingham of the Pembina Institute. The Pembina Institute sees CCS as part of the portfolio of solutions that also includes more sustainable, low-impact measures such as ramping up on renewable energy and energy efficiency.*

## Oil Sands

### Northern Leaders Tell Their Side of the Oil Sands Story

A four-day Northern Leaders Oil Sands Tour was held in Fort McMurray and Fort Chipewyan, Alberta in June 2008. The tour provided northern leaders with the opportunity to learn about the oil sands industry, and to interact with the First Nations leaders and others who are directly affected by it. Topics of discussion during the tour included the environmental and social impacts of the oil sands industry, with a focus on the downstream impacts.



Photo: Peggy Holroyd, The Pembina Institute

◀ *First Nations are directly impacted by oil sands development and climate change. Their concerns, voices and influence are gaining momentum.*

### Under-Mining the Environment: The Oil Sands Report Card

In January 2008, the Pembina Institute and WWF-Canada released *Under-Mining the Environment: The Oil Sands Report Card*, which assessed the environmental performance of 10 proposed and active oil sands projects in 20 areas of environmental management. The average score in the survey was 33%. As the first comprehensive assessment of comparative environmental performance in the oil sands, the study attracted significant media attention. The report continues to be cited as evidence of the weak regulatory framework governing oil sands development and poor voluntary environmental performance by companies. The quantitative data collected for the report are used to inform in media interviews, to support the campaigns of environmental NGOs, and to educate investors about oil sands environmental risks.

## Northerners Speak Up on Climate Change

The Pembina Institute is working in partnership with the Arctic Athabaskan Council, the Gwich'in Council International, Climate Action Network Canada, and Ecology North to strengthen northern voices in national and international climate change policy. In December 2008, these organizations released the *Inuvik Declaration* calling for greater action from the Canadian government on climate change.

### Upgrader Alley: Oil Sands Fever Strikes Edmonton

The report *Upgrader Alley: Oil Sands Fever Strikes Edmonton* was released in June 2008 to widespread public and media interest. The report examines the cumulative impacts of the nine current and proposed upgraders in the Industrial Heartland northeast of Edmonton and demonstrates that the proposed growth would result in a ten-fold growth in bitumen upgrading in the region and have major impacts on air, land and water. The Pembina Institute requested a pause in new approvals for oil sand production and upgrading to allow time for the development of plans to address and minimize cumulative impacts. Local landowners made use of data in the report when they presented at a public hearing on Petro-Canada's proposed Sturgeon Upgrader.

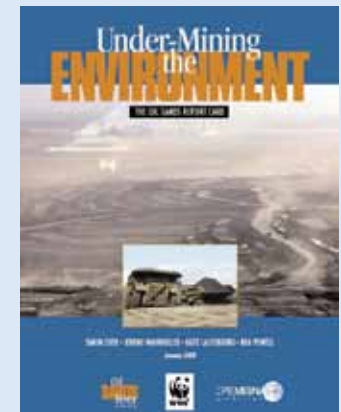
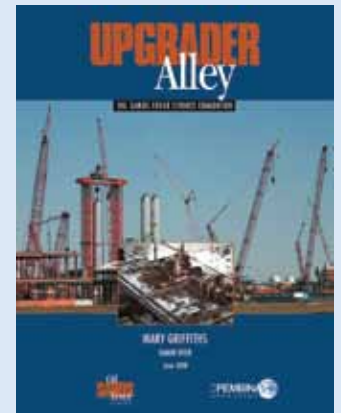


Photo: David Dodge, The Pembina Institute



## Fact or Fiction: Oil Sands Reclamation

The report *Fact or Fiction: Oil Sands Reclamation*, released in May 2008, presented the regulatory, biological and financial aspects of oil sands reclamation, uncovered an alarming range of challenges, uncertainties and risks, and made recommendations to address these issues. The report generated high interest and a positive reaction from the media, government, NGOs, academics and the general public. The lead author was invited to represent the ENGO perspective on oil sands reclamation at the annual Canadian Land Reclamation Association conference, public open houses, and an Alberta Opposition Caucus meeting, among other events. More presentations are scheduled in 2009. The report helped establish the Pembina Institute's role as an expert on issues related to oil sands reclamation. Reclamation resonates with Albertans as one of the most significant liabilities of the oil sands industry.

## Helping Albertans Make Informed Decisions

In the Alberta provincial election of March 2008, the Pembina Institute participated in a non-partisan initiative to inform Albertans about their candidates' views on oil sands development. We commissioned McAllister Opinion Research to conduct an online survey of the candidates in all 83 provincial ridings, then compared the perspectives of candidates running for elected office with the results of polls of the general public taken in 2006 and 2007. In total more than 180 candidates participated in the survey, and the results received widespread media attention. The project helped ensure that oil sands development featured prominently as an election issue, and reminded Ed Stelmach's re-elected Progressive Conservative Party that a majority of Albertans are unhappy with oil sands mismanagement.

◀ *The Pembina Institute helped voters understand their candidates' views on the oil sands in advance of the Alberta provincial elections.*

Photo: Roberta Franchuk, The Pembina Institute



◀ *The boreal forest is completely cleared to access the oil sands underneath. In the last 41 years, only 0.2% of the mined land has been reclaimed.*

## Imperial Kearl Project Legal Victory

In 2008, the Pembina Institute, in partnership with Ecojustice, Sierra Club of Canada, the Toxics Watch Society of Alberta and the Prairie Acid Rain Coalition, successfully halted the Imperial Oil Kearl Project. The Federal Court of Canada agreed with our argument that the joint panel that reviewed the project had failed to do its job, and that a proper environmental review must take place before the federal government could decide whether to allow the project to proceed. The precedent-setting victory marked the first time an oil sands joint panel assessment was successfully appealed. Although the joint panel eventually re-approved the project, the successful lawsuit delayed the Kearl project and demonstrated the significant flaws in the current environmental assessment process. The ruling will also ensure that climate impacts of oil sands projects will need to be considered in future project assessments.

▶ *A successful lawsuit delayed the Kearl project and demonstrated significant flaws in the current environmental assessment process.*



Photo: David Dodge, The Pembina Institute

## Boreal birds under threat

In December 2008, the Pembina Institute released *Danger in the Nursery: Impact on Birds of Tar Sands Oil Development in Canada's Boreal Forest* in partnership with the Boreal Songbird Initiative and the Natural Resources Defense Council. The report highlighted the loss of up to 160 million boreal birds over the next 50 years as a result of oil sands development, and identified the cross-border implications of oil sands impacts on birds. The report was launched at concurrent press conferences in Edmonton and at the Museum of Natural History in Chicago. The report and outreach brought the issue of oil sands development to the attention of the fastest-growing segment of outdoor recreation participants: birdwatchers.



# Renewable Energy / Energy Efficiency

## Meeting world energy ministers at WIREC 2008

The Pembina Institute was invited to attend the Washington International Renewable Energy Conference (WIREC 2008), the third global ministerial-level conference on renewable energy. In preparation, The Pembina Institute released *Catching up on Renewable Energy in Canada*, a report that examines Canada's international competitiveness in attracting renewable energy investment. This document was adapted to *First Steps Towards a Massive Scale-Up of Renewable Energy and Energy Efficiency in Canada*, which was circulated to all federal parties prior to the 2008 election. Many of the recommendations were listed in party platforms.

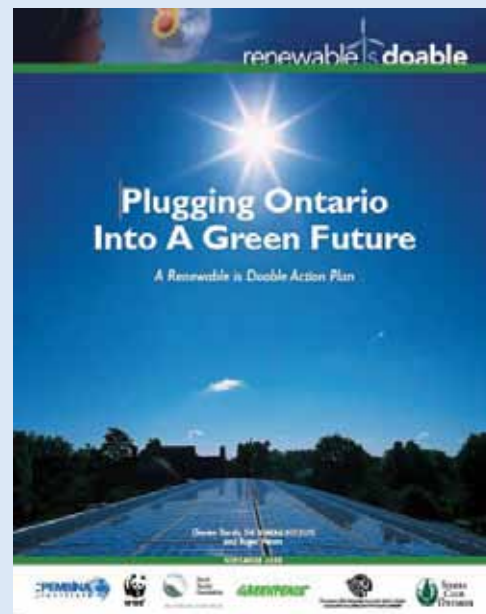
## Feeding the Grid Renewably

Close to two-thirds of the wind energy and half of the solar photovoltaic systems in the world have been installed as a result of the innovative feed-in tariff policies found in Europe. While feed-in tariffs have been demonstrated to be the most effective policy mechanism that a country can use to foster the rapid development of renewable energy systems, they have not been implemented in North America in more than 20 years. In February 2008, as part of a run-up to the foundation of the Ontario Green Energy Act Alliance, the Pembina Institute released a primer to introduce readers to the key elements of feed-in tariffs and the ways in which they function to achieve rapid renewable energy deployment.

◀ *Policies such as a feed-in tariff, which sets a guaranteed price and gives access to the grid for renewable energy, are the most effective mechanism to foster rapid development of renewable energy.*



Photo: David Dodge, The Pembina Institute



## Plugging Ontario into a Green Future: A Renewable is Doable Action Plan

*Plugging Ontario into a Green Future*, the most recent report in the "Renewable is Doable" series, was prepared on behalf of the Pembina Institute, WWF-Canada, the David Suzuki Foundation, Greenpeace Canada, the Canadian Environmental Law Association, and the Sierra Club's Ontario chapter. In September 2008, Ontario launched a green energy review of its long-term electricity plan, directing the Ontario Power Authority to find ways to enhance the contributions of renewable energy, conservation and distributed generation. *Plugging Ontario into a Green Future* lays out an action plan for achieving this goal and shows how doing so will assist Ontario in meeting its climate targets and create new green jobs. The report demonstrates that the best opportunity to develop a green energy economy in Ontario is to allow these sustainable sources of power to replace aging nuclear reactors when they are scheduled to shut down beginning in 2013.

## Storing Renewable Power

The ability to store large quantities of electricity is key to allowing renewable power sources to meet our power needs, ultimately replacing coal and nuclear power plants. *Storing Renewable Power*, released in the summer of 2008, compiles many examples of different technologies that are being implemented worldwide as the demand for clean, renewable energy increases. The primer illustrates the breadth of opportunities that exist to shape the power output of renewable resources.

# Supporting community development in Canada and internationally

We support ongoing community development efforts in Canada and around the world through the introduction of sustainable energy policies and practices.

## Canada's First Arctic Wind Farm in Over a Decade

In February 2009, the government of the Northwest Territories committed to developing the first wind farm in the Canadian Arctic in over a decade. The Pembina Institute has been working for several years with northern partners to advance wind systems in the North as a way to displace expensive and polluting diesel generation, and to create local economic development opportunities. The government's announcement is a significant milestone for this work, and a commendable achievement for the Northwest Territories.



Photo: J.P. Pinard

▲ *Replacing polluting diesel electricity generators with wind energy systems in Canada's north has been a project of the Pembina Institute and its northern partners.*

## Aboriginal Energy Alternatives

The Pembina Institute has worked with more than 50 First Nations and Aboriginal communities across Canada to examine energy use and renewable and efficiency alternatives. Common themes, opportunities and challenges were compiled in 2008 into a document, *Aboriginal Energy Alternatives*, that highlights the work that has been done to date and the growing level of interest by many communities in looking for sustainable local solutions.

## B.C. Municipalities Introduce Green Building Policies

Municipalities in British Columbia are introducing innovative programs to encourage green buildings in their communities. Three local governments contracted the Pembina Institute and our partners to provide research, evaluation and recommendations on policies to overcome barriers and provide incentives for energy efficiency and renewable energy in residential and commercial buildings. Recommendations for Salt Spring Island, Delta and Abbotsford included immediately developing sustainability checklists to help educate builders and developers about green buildings. The checklists provide information on the materials, appliances, equipment and construction practices that help protect the local and global environment. Other recommendations for the municipalities include conducting further research on regulations for stronger energy performance standards, using variable development cost charges to encourage energy efficiency or renewable energy technologies, and removing barriers to green building technologies from existing bylaws.

*The Pembina Institute worked with British Columbia municipalities to overcome barriers and provide incentives for energy efficiency and renewable energy in residential and commercial buildings. ▼*



Photo: David Dodge, The Pembina Institute

Photo: Peace photoGraphics



## Unique Partnership Leads to Solar Hot Water

With the support of the Pembina Institute, the City of Dawson Creek and the West Moberly First Nations are working together to advance solar hot water heating in their communities. This unique partnership, funded under the SolarBC's Solar Communities Program, involves training both municipal and band staff on solar hot water installation. Dawson Creek is already recognized as a municipal leader in this area. This partnership can act as a model for mentorship and knowledge-sharing for other communities, helping to spread solar water heating and other renewable energy technologies into other regions.

◀ *With support of the Pembina Institute, the City of Dawson Creek and West Moberly First Nations are partnering to find solar solutions.*

## Building International Coalitions to Fight Global Warming

In an effort to bring a human perspective to the climate change dialogue in Canada, and a climate perspective to international development efforts, the Pembina Institute continues its work with leading Canadian environmental, international development and humanitarian organizations as part of the Canadian Coalition on Climate Change and Development (C4D).

In 2008, C4D members learned to assess vulnerability to climate change at the community level and to use tools to integrate climate risk reduction in development projects. C4D also actively engaged policymakers, civil society groups and individuals in discussions about climate change as a social justice issue that requires not only urgent emission reductions, but a commitment to supporting climate change adaptation for the most vulnerable.

*“Climate change is worsening the plight of those hundreds of millions men, women and children who already live in extreme poverty — and it threatens to push hundreds of millions more people into similar destitution.”*

— Dr. Robert Glasser, Secretary General,  
CARE International



Photo: iStock

▲ *Climate change hits the poorest and most vulnerable populations and countries — those least responsible for the problem — hardest.*

## Communities Making a Difference

**The Pembina Institute worked with the following communities in 2008.**

### **British Columbia**

Dawson Creek  
Delta  
District of North Vancouver  
Hesquiaht First Nations  
Hudson's Hope  
Salt Spring Island  
Stellat'en First Nation  
West Moberly First Nations

### **Alberta**

Calgary

### **Ontario**

Eabametoong First Nations  
Kingfisher Lake First Nations  
North Spirit Lake First Nations  
Poplar Hill First Nations  
Wawakapewin First Nations  
Weenusk First Nations  
Wunnumin Lake First Nations

# Sustainable energy solutions for leaders

Pembina Corporate Consulting Services supports leading businesses and government with innovative and progressive sustainability and climate change-related advice.

## Financial Institutions Going Carbon Neutral

In its most extensive inventory work to date, Pembina Corporate Consulting calculated the carbon footprint of TD Financial Group's Canadian and U.S. operations, and provided strategic advice and recommendations on what a leading greenhouse gas reduction commitment would look like. TD pledged that its Canadian operations would be "carbon-neutral" by 2010, the first Big Five Canadian bank to do so. Further, in 2008 the Pembina Institute and Bullfrog Power partnered to provide green power to all of TD's automated banking machines across Canada, making them truly "green machines."



Photo: Roberta Franchuk, The Pembina Institute

In 2008, the Pembina Institute also helped Vancity Credit Union to become the first financial institution in Canada to actually achieve carbon neutrality, through advice on carbon reduction strategies and by helping it to source alternative-energy-based carbon offsets.

◀ *Corporations like TD Financial Group and Vancity Credit Union are taking the lead in becoming carbon neutral.*

## Corporations Take Action

Oxford Properties committed to reduce its emissions by 20% by 2012 after engaging Pembina Corporate Consulting as its sustainability advisor. Pembina Corporate Consulting also provided carbon management advice to companies such as TELUS, Envision, First Calgary and Environics, proving that 2008 was a big year for corporate action on climate change.

## Renewable Solution in the Oilfields

Global Energy, an oilfield services company, developed a renewable energy system to provide electrical power to its hydraulic submersible pumps. In 2008, Pembina Corporate Consulting's engineers used renewable energy modeling software to determine the system's viability at different locations, based on the solar and wind power available at each site. Global is a leading example of oil and gas producers looking for innovative ways to lessen the carbon footprint of their upstream operations. Small-scale, immediate renewable energy applications like this play a role in the transition to a low-carbon economy.



Photo: Global Energy

▲ *The Pembina Institute helped analyze this solar system's viability to provide power to Global Energy's submersible pumps.*

*"Pembina Corporate Consultancy services has helped Global Energy Services continue to provide innovative environmental solutions. Most recently, the Pembina group was instrumental in helping us validate our renewable energy downhole pump, which is now being used by major gas producers in Canada."*

— Farhan Farshori, Vice President, Corporate Development, Global Energy Services

## Integrated Solutions for the Oil and Gas Sector

Pembina Corporate Consulting's solutions-oriented approach allowed the group to collaborate with the oil and gas sector in a variety of ways in 2008. Pembina Corporate Consulting facilitated a number of life-cycle value assessment training workshops for both Suncor Energy and Cameco to help build internal capacity in these companies to make the best decisions possible. We also trained approximately 1,000 employees at Suncor on sustainability, generating robust dialogue on key issues, what Suncor has done and what more it could be doing.

Another critical area of focus for Pembina Corporate Consulting is innovation. In 2008, Pembina Corporate Consulting engineers evaluated the net environmental benefits of a number of leading energy technologies, including an oil sands tailings technology, gasification, and an in-depth study of water technologies for the oil sands on behalf of Environment Canada. Pembina Corporate Consulting also researched the Low Carbon Fuel Standard pioneered by California and its implications for the Canadian energy sector.

*The Pembina Institute works with oil and gas companies to find ways to minimize their environmental footprint. ▼*

## Allies for the Environment

The Pembina Institute provided sustainability advice to a variety of clients in 2008, including:

- Association of International Automobile Manufacturers of Canada
- Cameco
- Canola Council of Canada
- ConocoPhillips Canada
- David Suzuki Foundation
- EcoTrust
- Environics
- First Calgary Savings
- Oxford Properties
- National Energy Board
- TD Financial Group
- TELUS
- Sustainable Development Technology Canada
- Suncor Energy



# Engaging today's youth in creating a sustainable future

With the considerable momentum it has gained over the last five years, GreenLearning is now working to become an independent non-profit organization with a full complement of professional staff. In this new capacity, GreenLearning will continue to advance its position as a leader in environmental education in Canada.

## Teacher Training in Energy and Sustainability

GreenLearning expanded its outreach in 2008 through professional development workshops for teachers in British Columbia, Alberta and Ontario. At Head of the Lake School in Skatin, British Columbia, GreenLearning facilitated a community discussion on supporting youth energy and sustainability initiatives. In workshops sponsored by CloudWorks Energy Inc., students participated in EnerAction and eCards activities, and built small-scale working wind and water turbines as well as solar-powered cars. With support from the Bow Valley Clean Air Society, GreenLearning worked with the grade 5, 7 and 8 classes at Lawrence Grassi Middle School in Canmore, Alberta. By the end of 2008, more than 2,400 teachers had registered to use GreenLearning resources — representing potential outreach to more than 70,000 students.

## Red Fish SCHOOL OF CHANGE

### A New Field School for Youth

In 2008, GreenLearning officially launched the Redfish School of Change, an experiential field school for youth that was created in collaboration with Pearson College and the University of Victoria School of Environmental Studies. In this unique program, participants ages 19 to 29 travel from the Slokan Valley of southern British Columbia to the marine coast of Vancouver Island. They learn strategies for creating ecological sustainability and social equity in their communities. With support from founding sponsor Shell Canada, the Redfish School of Change will run its first semester in the spring of 2009.

*We all have an important role to play in equipping this generation of Canadian youth to meet the considerable sustainability challenges that they have inherited. GreenLearning programs support and empower youth to meet those challenges.*

## GreenLearning Gathers Speed

GreenLearning's newest programs, eCards and EnerAction, both launched in the fall of 2007, were well-received by teachers and students in 2008.

eCards, a structured eLearning activity in which students research, write, design and send an eCard on an energy-related topic, expanded to include a research unit on Arctic glaciers. Sponsored by the British Council, the Arctic Glaciers unit educates students about climate change and the Arctic through the eyes and insights of students who traveled on the 2007 Cape Farewell expedition aboard the *Noorderlicht*. Although eCards is an online resource, 2008 saw more than 8,400 downloads of eCards teaching resources.

EnerAction, energy education on energy conservation and efficiency, expanded in 2008 to include five student backgrounders. Teachers downloaded almost 4,000 EnerAction lesson plans and other teaching materials in 2008.



Photo: Kathy Worobec, The Pembina Institute

▲ The grade 8 leadership class at Lawrence Grassi Middle School in Canmore, Alberta led a campaign to ensure all school computers were turned off at the end of each day, saving energy and \$3,000 annually.

# Board and staff

## Board of Directors

**Experience and diverse perspectives characterize the Pembina Institute's Board of Directors.**



Photo: David Dodge, The Pembina Institute

The Pembina Institute's Board of Directors provides governance, support and operational strategic direction for the organization. The board meets regularly throughout the year.

Our board includes experienced and insightful professionals who bring to the table diverse perspectives on environmental priorities, business administration and societal responsibility. Board members volunteer their time. To learn more about our board members, visit [www.pembina.org/about/board](http://www.pembina.org/about/board)

**DAVID ARMOUR**, *Pembina Institute Board President*  
Past-president and CEO of United Way of Canada—Centraide Canada

**FRANCES BOWEN**, *Pembina Institute Board Treasurer*  
Associate Professor of Strategy and Global Management, University of Calgary, and Director, International Institute for Resource Industries and Sustainability Studies (IRIS)

**JOHN ROBINSON**, *Pembina Institute Board Secretary*  
Professor, Institute for Resources, Environment and Sustainability and the Department of Geography, University of British Columbia

**ERIC LLOYD**, *Pembina Institute Board Director*  
President, Lloyd Energy Inc.

**ROB MACINTOSH**, *Pembina Institute Board Director*  
President, Dejanira Enterprises, and Senior Partner, Green Planet Communications

**JANICE MCDUGALL**, *Pembina Institute Past Board President*  
Partner, Goodman, McDougall & Associates Ltd.

## Staff, Consultants and Volunteers

**Passionate and innovative staff are the Pembina Institute's greatest asset**

In 2008, the Pembina Institute's staff team included more than 50 scientists, researchers, engineers, policy analysts, teachers, accountants, lawyers, business administrators, writers, editors, communication strategists and fundraising experts. Our extended team also included exceptional volunteers and consultants who help us achieve our goal of shifting our society to a sustainable energy future.

### Active staff as of December 31, 2008

Alex Doukas, BA  
Alison Bailie, MRM  
Alison Cretney, P.Eng.  
Amy Taylor, MRM  
Anya Knechtel, MAP  
Bev Broks, B.Sc.  
Cherise Burda, MA  
Chris Severson-Baker, B.Sc.  
Christy Goerz  
Claire Beckstead, MES  
Clare Demerse, MJ  
Dan Woyillowicz, MA  
Dana Silver, B.Comm.  
Darlene Zimmer, B.Sc.

Dave Kalbfleisch, B.Math.  
David Dodge, B.Sc.  
David Lovekin, M.Eng.  
Devika Shah, MBA  
Ed Whittingham, MBA  
Gordon Harrison, BA  
Graham Haines, B.A.Sc.  
Greg Brown, B.Sc.  
Greg Powell, B.A.Sc.  
Jaisel Vadgama, MA  
Jeff Bell, M.Sc.  
Jennifer Grant, M.Sc.  
Jeremy Moorhouse, B.Eng.  
Jesse Row, P.Eng.

Johan Stroman, MA  
Joshua MacNab, MRM  
Karen Campbell, LLM  
Karla Pempeluk  
Katherine Mackenzie, MA  
Kathy Worobec, B.Ed.  
Katie Laufenberg, B.Sc.  
Kristin Nicholls  
Laura Fauth, BA  
Lori Chamberland, BA  
Marlo Reynolds, PhD  
Mary Griffiths, PhD  
Matt Horne, MRM  
Matt McCulloch, P.Eng.

Matthew Bramley, PhD  
Mike Kennedy, M.Sc.  
Nadine Reynolds, MA  
Ngaio Hotte, B.Sc.  
Paul Cobb, B.Eng.  
Peggy Holroyd, BA  
Ria Forster  
Rich Wong, B.Eng.  
Roberta Franchuk, B.Sc.  
Roland Lines, B.Sc.  
Simon Dyer, M.Sc.  
Steve Kennett, LLM  
Terra Simierisch, B.Sc.  
Tim Weis, P.Eng.

### Volunteers

We are grateful to our volunteers, including staff and others not listed here, who donate their precious time to the Pembina Institute.

Bill Hamilton  
Linda Jansons  
Martin Scaia  
Omar Bhimji  
Robert Okkerse  
Tara MacDonald

Photo: David Dodge, The Pembina Institute



# Protecting our children's future

Photo: David Dodge, The Pembina Institute



Concerned citizens and parents have an incredible opportunity to magnify their personal commitment to a sustainable energy future by donating to the Pembina Institute. Now more than ever, we are depending on philanthropic support from visionary donors so that we can continue to advance sustainable energy solutions during this critical period. Together, we can effect the change that is so urgently required.

## **DID YOU KNOW?**

*99.5% of the donations we receive from individuals are used to advance sustainable energy solutions. Our infrastructure and fundraising expenses are fully covered by our fee-for-service consulting revenue and our policy-project grants.*

Donations can be made online, by mail or by fax. Go to [www.pembina.org/donate](http://www.pembina.org/donate) for more information or contact Devika Shah, Director of Strategic Relationships at 1-866-777-8441 ext. 3; [devikas@pembina.org](mailto:devikas@pembina.org).

# Our supporters

The Pembina Institute is extremely grateful for the support of these donors who generously contributed to the advancement of sustainable energy solutions in 2008.

## \$100,000 +

Oak Foundation

## \$5,000-\$9,999

Alberta Law Foundation  
Environmental Careers  
Organization of Canada  
Learning for a Sustainable  
Future

## \$1000-\$4,999

Dave Crompton  
Lance and Judy Floer  
Jeffrey and Hanae Gusdal  
IHS Energy (Canada) Ltd  
Innovacom Inc  
Rob and Lori Macintosh  
Don Macintosh  
Millwoods Bottle Depot  
Mr. Robert Page  
Mr. Hal Retzer  
Ms. Doris Toepp \*

## \$500-\$999

Anonymous  
Michael Adams  
Mr. Cameron Baughen  
Ms. Shirley Farlinger  
Dr. John Grant  
Stephen Hall \*  
John Ingram  
Ken Lertzman \*  
George and Mary Morrison  
Martha O'Brien  
Jordan Poppenk  
Tracy and Maria Reynolds \*  
Mrs. Penny Rea  
David and Olga Rigby  
Mr. Mark S. Rudolph  
Mr. J. R. Simpson  
Robert Swallow

## \$100-\$499

Anonymous (4)  
Ms. M. Janis Alton and Mr.  
Douglas Alton  
Ms. Elizabeth Asselstine  
David Baine  
Brenda and John Baker  
Heather Bessey \*  
Linda Bily and John Baldwin  
Blanche and George  
Boorman  
Ms. Georgina M. Brunette  
Stephanie Cairns  
Alain Caissie and Corinne  
Snider  
David and Florence Carr  
Ms. Donna Clandfield  
Robert and Christina  
Constable  
Douglas and Ishbel  
Cormack  
Ms. Sheila Couture  
Dr. Wes Cragg and Mrs.  
Mary Cragg  
Janet Currie  
Richard Daniel  
Norman Darroch

Don Davidson  
Dorothy Dickson  
Mr. Robert C. Dickson  
Barbara Dransch  
Ms. Georgeanna J. Drew  
Kitty D. Dunn  
John Eastwood  
Stewart Elgie  
Ms. Vera Ellaschuk  
Ms. Lila Engberg  
Mr. Alan Ernst \*  
Gilles Fecteau  
Ms. Anne Fitzpatrick  
Stuart Fix \*  
Glen Fox  
Anneliese Fris  
Walter Fryers  
Mr. Terence Galvon  
Mr. John S. Gaul \*  
Mr. Robert Gibbs  
Mr. John Gingrich  
Mr. Kenneth Goodwin  
Mr. Christopher Gosselin  
Edward and Kate Graham  
Dr. Richard Grynock  
Clifford Guebert  
Mr. Joel Hagen and Ms.  
Nadine Fletcher  
Gordon and Karen Hamre  
Florence A. Hanf  
Jim Harris  
Dr. Mark K. Heule  
Mr. George Heyman  
Richard and Elaine Hibbard  
Christopher Higgins \*  
Ms. Joslyn Higginson \*  
Marshall Hoke and Barbara  
Prescott  
Mr. Geoffrey L. Holroyd  
Lorna Hood  
Mr. Stewart Jeffray  
Ms. Jeanne Keith-Ferris and  
Mr. Donald Ferris  
Donald and Mildred Kerr  
Donald Kerr  
Mary Kettenbach  
Douglas Kilpatrick  
Jane Kiltz \*  
Ken Klatt  
Ms. Patricia Kotow \*  
Don Lemare  
Dr. John and Mrs. Noreen  
Lewis  
Ms. Valerie A. Loewen  
Robert and Diana  
MacDonald  
Ms. Barb Macintosh  
Ann Macintosh  
Allan MacKay  
Jim and Kathy Manson  
Mr. Bruno Masquillier  
Gwen McConkey  
Janice McDougall  
Dr. Ronald McElhaney  
Gord McGee \*  
Ms. Diane McGifford and  
Mr. Eduard Wojczynski  
James McMillan

Jan McMillan  
Gordon McNulty  
Shauna Megill  
Elizabeth Miller  
Mr. Parker Mitchell  
Ms. Helen Molloy  
E. K. and M. H. Morgenstern  
Ms. Barbara Myers  
William and Dagmar Myhill  
Nina Newington  
Ms. Carole Nyquist  
Ms. Nobuko Oikawa  
Anne and John Packer  
Derek Paul  
Peter T. Boland & Associates  
Inc  
David Petrik  
Dr. Richard and Mrs. Vivian  
Pharis  
David Poch and Hinda  
Goldberg  
Michael Polanyi  
Sheila Pratt  
Tasmin Rajottle  
Mr. and Mrs. Ramos  
Neil Richards  
John Robinson  
Christiaan Schrag \*  
Ms. Cornelia Schuh  
Frances and Arvid Schultz  
David Scott  
Basil and Gillian Seaton  
Robert and Winnifred Settle  
Mr. George B. Shand  
Dr. Amil B. Shapka  
Ms. Susan Sheard and Nory  
Takata  
Peter Sherrington  
Ms. Nan Shuttleworth  
Patricia and E. Sieber  
Cyndi Smith  
Fred Tarlton  
Ms. Brenda Tempest \*  
Lee Towndrow  
Dr. Bradley Walters  
Owen Ward  
Anne and Dale Watson  
Charles M. Webster  
Mr. Michael Weinfeld  
Kellogg and Katherine  
Wilson  
Gerald Wobick  
Coralie Woodley  
Gerard and Mary Ev Wyatt  
Gustave Yaki  
Ms. Wendy Yule

## \$50-\$99

Anonymous (2)  
Ms. Margaret A. Abbott  
Peter Abrams  
Greg and Barbara Adams  
Greg Alexander  
Stewart and Anne-Marie  
Anderson  
Avery Ascher and Paul  
Chapman  
Albert Baes

Dr. Jessica Ball and Mr.  
Kenneth Moselle  
Kathleen and George Ball  
Alan and Uta Bangay  
Mrs. Deborah Beatty  
Gerald and Marjorie  
Behrman  
Reverend Sydney Bell  
Yvonne Bell  
Jeremy Bell \*  
Jacqueline Bennett  
Margaret Benson  
Sam Boskey  
Ms. Cheryl Bradley  
Richard and Marika  
Brenneis  
Ms. Elizabeth Brown  
Mr. Jim Brown  
Ruth Bucknell \*  
Ms. Ann Carson  
Mr. Orval K. Chapman  
Mr. Richard Clayton  
H. Neil Collins  
Mr. Patrick Corbett  
John Davis  
Lloyd and Gloria Delisle  
Lucien Duigou \*  
Patricia Eligh

Ernest Enns  
Mr. Edwin Erickson  
Ms. E. A. Finley  
Douglas Fish  
Michael Flanagan  
Paul Forestell  
Mr. Gordon Fox  
Gilman Freschauf  
Gerald Friebe  
Ms. Jean Fulton \*  
Ms. Catherine Garvey \*  
Ms. Gail Gates  
Ms. Maryelle C. Gaudreau  
Ms. Ann J. Gibson  
Ms. Constance C. Gibson  
Jordan B. Grant  
Mr. Richard Guttormson  
Elizabeth Hanley  
Helen B. Hanna  
Doug Hart  
Mr. Clifford Havig  
Mrs. Patricia Henry and Dr.  
David Zackon  
Jocelyn Hirose  
David and Rosi Jory  
Morny Joy  
Carey Kaplan  
Mr. Lloyd Karges

Mr. Albert Karvonen  
Helen Keay  
Gordon and Marilyn Kerr  
Dennis and Evelyn Kershaw  
Beverley Kine  
Dieter and Christa Kirste  
Johannes and Dorothea  
Klein  
Mr. Charles W. Knowles  
Katie Kotulak  
Mrs. George and Susannah  
Kurian  
John and Jillian Lawson  
Mr. Sandy Levin  
Mr. Walter Logan  
Gerald Lyon  
Yvon Mahé  
Barbara Maheu  
William and Ann Malnychuk  
Mr. J. E. Mathison  
Mr. Luc Matter  
Mr. Richard McFarlane  
Jean McNeil  
Mr. Peter Miller and Ms.  
Carolyn Garlich  
Dr. Gerald E. Morgan  
George W Morrison  
Orest and Helen Moysiuk



Photo: Roberta Franchuk, The Pembina Institute

Ms. Sheila Nabigon-Howlett  
 Mr. Charles Neill  
 Patricia and Edward Oakes  
 Judy Otton and Saul Greenberg  
 Mrs. M. A. Pelzer  
 Peter and Margaret Peters  
 D. L. Petherbridge  
 Christine Pike  
 Ms. Aura L. Pombert \*  
 Mr. Greg Powell  
 Aaron Quesnel \*  
 Mr. Geoffrey D. Richards  
 Mr. Ronald P. Roesch  
 Ms. Diane Rogers  
 Ms. Lourene Roode  
 Edmon and Orla Ryan  
 Arlene and James Sagan  
 Wayne and Kate Schlepp  
 Brad Sewall  
 Mr. George Shane  
 Marjorie Smith  
 Prof. Donald C. Smith  
 Dr. Colin L. Soskolne  
 St. Paul Veterinary Clinic  
 Marjorie and Brian Staples  
 William and Muriel Stollery  
 Verna L. Stone  
 Nick and Margaret Taylor  
 Mrs. Mary F. Thompson  
 D. Edward and D. Anne Toole  
 Quinn Underhill  
 Mary and Peter Vermeulen  
 George and Heather Waddell  
 Ms. Sharon J. Walker  
 Ted and Sylvia Walker  
 Michael Wenig  
 Fred Wheatley  
 John and Nora Wheeler  
 Ms. Gwen Williams  
 Alice Williamson  
 Mrs. Mary Wilson  
 Ms. Patricia Woods and S. M. Bergh  
 John and Shirley Wright  
 Agnes and Albert Wurfel

**under \$50**

Anonymous (4)  
 Ms. Liliane Albert  
 Leila and William Anderson  
 Miss Jean Armour  
 Jo-ann D. Ashford  
 Dennis and Isabel Baker  
 Ted Baldwin  
 Mrs. Mary E. Baldwin and Mr. Hugh Casbourn  
 Ms. Mary L. Baltgailis  
 Mr. James G. Baxter  
 Mr. William P. Beaudoin  
 Ms. Anne Becker  
 Joan and Ronald Begley  
 Mr. Larry A. Bengé  
 Dr. David A. Boag \*  
 Dr. Frances A. Booth \*  
 Helen F. Bowen  
 Michael Bradfield  
 Doris Bradley  
 Otto and Lorraine Braun  
 Dorothea and Geoffrey Broadbent  
 Allan and Susan Brown  
 Charles and Marguerite Bryant  
 Robert and Helen Buck  
 Patricia and Chester Carlow  
 Jacques Charbin

Ms. Silvia Chiaramello and Mr. Italo Ferrarese  
 Mr. Clive H. Clark  
 Frances and John Cleave  
 Jean Clelland  
 Janet Cole  
 Mr. Richard Collier  
 Ms. Margaret L. Condie  
 Brian Cooper  
 Judson and Margaret Corey  
 Ms. Joan M. Cracknell  
 Marie Cranley  
 Wayne Crosby  
 John and Stamatia Darbyshire  
 Donald Dau  
 Ms. Judith F. Davis  
 Louis and Janine de Salaberry  
 Mr. Thomas A. Deakin  
 Mrs. Judith Deutsch \*  
 Donata Dickinson  
 Ms. Manuela C. Dixon and Mr. Robert Macintosh  
 Ms. Deanna Downton-Jullyan  
 Abraham and Amelia Dredge  
 Elisabeth Eldridge  
 Mr. Gordon R. Ellmers  
 Margarete Emminghaus  
 David Etherington  
 Mr. Christopher Evans \*  
 Margaret and Leo Evers  
 Gary Fabris  
 Patrick and Jane Fawkes  
 Miss Gertrude E. Fellner  
 Mr. Daniel P. Fleischhacker  
 Mr. E. B. Foden  
 Ms. Lesley Forrester  
 Mr. Amos Frey  
 Jim Galloway  
 Ann Gammell  
 Dorothy Gant  
 Nancy Gardiner  
 Clare and Dorothy Geddes  
 Ms. Allison Gentry \*  
 Isaac Gideon Gould  
 Ms. Rena Ginsberg  
 G. L. Gooding  
 Lorna Graham  
 Ms. Elizabeth J. Graham  
 Graeme and Patricia Greenlee  
 Mr. Gerard Gumpinger  
 Terry and Gloria Gunter  
 Mr. Donald Hall  
 Mr. Gareth Harding  
 Manfred Harpe  
 Sr. Kathleen Harrigan  
 Mrs. Eilene Harris  
 Ms. Pauline Heinonen  
 Kathryn Heller-McRobertson  
 Glenn and Helen Hepburn  
 Philip Herman and Heather MacLean \*  
 Ms. Barbara Heron  
 Nina Hillier  
 Jonathon Holmes  
 Pamela and Louis Honore  
 R. W. Horner  
 Dr. David G. Hughes  
 Mr. David Hughes \*  
 Ronald Hyatt  
 Rouben Ishayek  
 Mr. Edgar F. Jull  
 Frank and Penny Keating  
 Mr. Myles Keleman  
 Richard Klotz  
 Anya Knechtel

Mr. and Mrs. Knopp  
 Roger S. Krohn  
 George and Lorraine Kupfer  
 Candace Labelle  
 Jean Laflamme  
 Lucene and Wayne Lafrance  
 Madeline Lavender  
 Mr. Paul Lawson  
 Ms. Maureen Leblanc and Mr. Ron Blanchard  
 Mr. Fred Lerner  
 Annie Levasseur  
 Judy Lewis  
 John and Mary Lisle  
 Ms. Ruth Long  
 Margrith Loretz  
 Gary Lyon  
 Cal MacKendrick  
 Robyn Maerz  
 Ms. Linda Maw  
 Mr. Brian Mazer and Ms. Candice Schachter  
 Helen and D. Mel McAllindon  
 James and Claire McAllister  
 Ann McFarlane  
 Ms. Pegasis McGauley  
 Beatrice McLaren  
 Mr. Greg Michalenko  
 Mr. Peter Mix  
 Ms. Marilyn Morton and Mr. Brian Zimmerman  
 Mrs. Dorothy E. Moss  
 Nestor and Phyllis Mudry  
 Carmen L. Nikal  
 Mr. Jan W. Noppe  
 Robert Oldham  
 Grace Beverley and Donovan Olds  
 Mary Olson  
 Ms. Doreen Orman  
 Beverley A. Page  
 Mr. Gary Palmer  
 Mr. George J. Pavelka  
 Mr. George Peloquin  
 Ms. Dorothy M. Peterson  
 Hannelore Plonka  
 Ms. Laura Porcher  
 William Porochuk  
 Jane Power  
 Rosemary and Peter Preuss  
 Ms. Joan M. Reid  
 James and Nancy Riesberry  
 Ms. Francis J. Rigby  
 Mr. David Robertson and Ms. Annalise Van Ham  
 Eric and Anne Robinson  
 John Ross  
 Patricia Rowe  
 Jack Rush  
 Mr. James Sanjana  
 Mr. Brock Savignac and Mrs. Ania R. Nazr Savignac  
 Earl Sawchuk  
 Jean Shafto \*  
 David and Jean Sheppard  
 J. Patrick Shipton  
 Kevin Sills  
 Mr. R. G. Skinner  
 Mrs. Helena Skirrow  
 Cecily Smith  
 Adrian Smith  
 Stewart and Ann Smith  
 John G. and Irene Smith  
 Sidney and Gloria Soban  
 Mr. John Spooner  
 Ms. Diana N. Stott  
 Mr. Nigel Swytink-Binnema \*

E. Margaret Taylor  
 Mr. Maurice and Mrs. Mary Tebo  
 Blanche Thoms  
 Rosemary Thomson  
 Mrs. Karen Tippett  
 Carol and Peter Tracey  
 Kathleen Tripp  
 David and Rose Tupper  
 Mr. Daniel Vokey \*  
 Ms. Patricia A. Wallis  
 Ken and Mary Ward  
 Mr. J. Michael Watts  
 Mrs. Joyce Webb  
 Barrie and Phyllis Webster  
 Dr. Joel Weinstein  
 Mr. Gordon Wieggle  
 Ms. Linda Wiggins and Dr. Stephen Herrero  
 Mr. Dale Winder  
 Sareh Wodlinger  
 Mr. Sam Wong  
 George A. Wood  
 Joanne Young \*  
 Ms. Dorothy Zarski  
 David Zell  
 Dale Zinovich  
 Greg Zolad

\* These individuals make an ongoing commitment to the Pembina Institute with monthly donations.



Photo: Roberta Franchuk, The Pembina Institute

**In 2008, the Pembina Foundation for Environmental Research and Education contracted the Pembina Institute to undertake several key projects with the generous support of the following donors:**

- |   |  |
|---|--|
| Anonymous                                   | Max Bell Foundation                      |
| Alberta Ecotrust Foundation                 | RBC Foundation                           |
| Catherine Donnelly Foundation               | Silicon Valley Community Foundation      |
| The EJLB Foundation                         | Toronto Community Foundation             |
| George Cedric Metcalf Charitable Foundation | Vancouver Foundation                     |
| Gordon and Betty Moore Foundation           | The W. Garfield Weston Foundation        |
| Ivey Foundation                             | Walter & Duncan Gordon Foundation        |
| The J.W. McConnell Family Foundation        | The William and Flora Hewlett Foundation |

**Sponsors of the Carbon Capture and Storage Thought Leader Forum**

*hosted by the Pembina Institute and the University of Calgary's Institute for Sustainable Energy, Environment and Economy*

- |   |   |
|---|---|
| Institute for Sustainable Energy, Environment and Economy | IMV Projects  |
| StatoilHydro  | Kinder Morgan Canada                                |
| ConocoPhillips Canada                                     | Suncor Energy                                       |
| Enbridge Canada   | International Institute for Sustainable Development |
| EPCOR   |   |

**Additional Project Sponsor**

TD Bank Financial Group

# Finding solutions through knowledge

## Pembina Institute authors present credible information on energy challenges, coupled with practical solutions for solving them.

The Pembina Institute is one of Canada's most highly respected think tanks with experts in the areas of climate change, oil sands, renewable energy, and many other areas crucial for a transition to a more sustainable energy future.

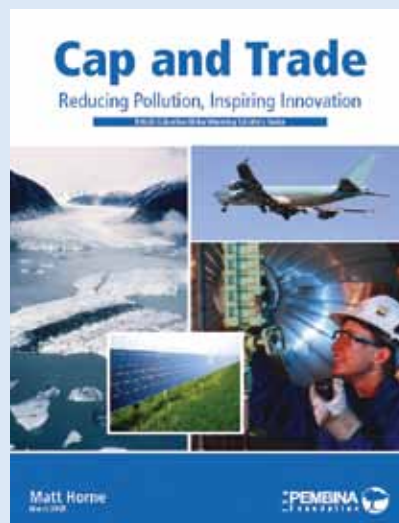
Below are some key publications from 2008. Browse the complete archive at [www.pembina.org/pubs](http://www.pembina.org/pubs)

### *Cap and Trade: Reducing Pollution, Inspiring Innovation*

**Matt Horne**

**Mar 27, 2008**

British Columbia is developing a cap-and-trade system that could ensure that large industry and aviation reduce the pollution that causes global warming. The report describes the key elements needed for this policy to successfully achieve low-cost solutions to the province's climate challenge.

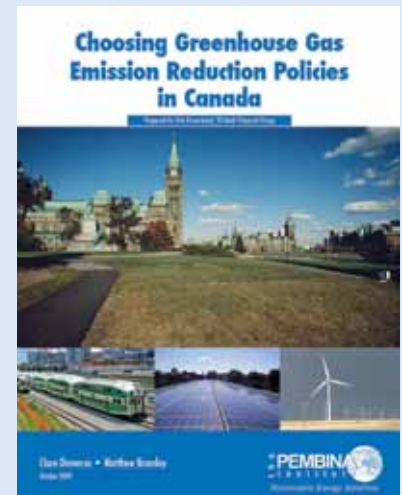


### *Choosing Greenhouse Gas Emission Reduction Policies in Canada*

**Clare Demerse and Matthew Bramley**

**Oct 24, 2008**

The Pembina Institute surveyed climate policy options, including existing studies and international experience, and assessed them to determine the most efficient and effective options that might be suitable for Canada.

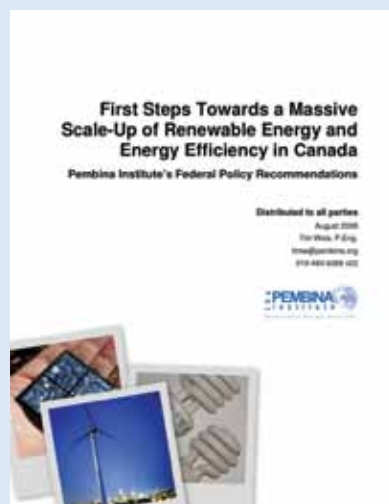


### *First Steps Towards a Massive Scale-Up of Renewable Energy and Energy Efficiency in Canada*

**Tim Weis**

**Aug 31, 2008**

This list of policy options would put Canada on a path towards a massive scale-up of renewable energy and energy efficiency. The Pembina Institute provided this report to all parties in the run-up to the October 2008 Federal election.

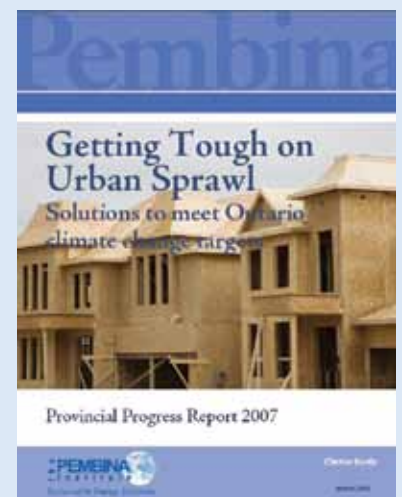


### *Getting Tough on Urban Sprawl: Solutions to Meet Ontario Climate Change Targets*

**Cherise Burda**

**Mar 19, 2008**

The report outlines seven priority areas Ontario needs to address to combat sprawl and help meet its greenhouse gas emission reduction targets, including incorporating sustainable energy policies into urban planning policy and increasing urban density.



## *Putting a Price on Pollution: Assessment of the Federal Parties' Plans to Fight Climate Change*

**Matthew Bramley**

**Oct 8, 2008**

This analysis, released during the fall 2008 Canadian election, assessed each major federal party's proposal for putting a price on greenhouse gas pollution — widely agreed to be the most important element of any Canadian plan to fight global warming.

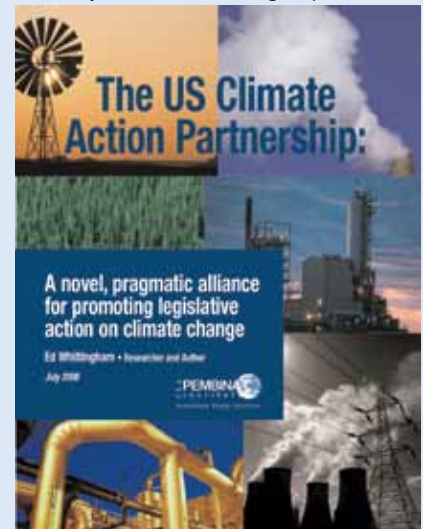


## *The U.S. Climate Action Partnership*

**Ed Whittingham**

**Jul 18, 2008**

The U.S. Climate Action Partnership (USCAP) is a coalition of transnational companies and major environmental groups that advocates for strong federal U.S. legislation on climate change. Using insider perspectives, this report explores USCAP's successes and challenges to date, and offers lessons to those interested in cross-sector partnerships for influencing regulation and policy.

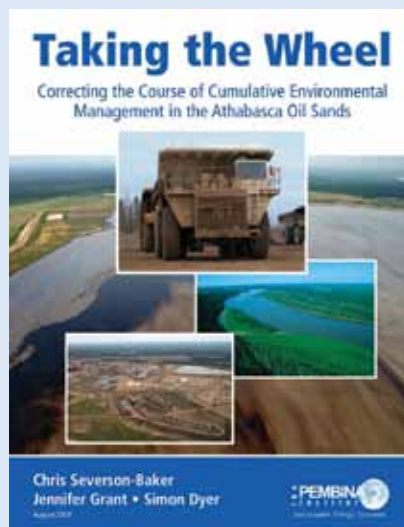


## *Taking the Wheel: Correcting the Course of Cumulative Environmental Management in the Athabasca Oil Sands*

**Chris Severson-Baker,  
Jennifer Grant and  
Simon Dyer**

**Aug 18, 2008**

For eight years, a multi-stakeholder organization has been trying, and failing, to develop and apply environmental management tools, thresholds, guidelines and objectives in an effort to address the cumulative impacts of oil sands developments in the Athabasca Boreal Region. The Pembina Institute lays out a new pathway for improving environmental management through a new, reconstituted multi-stakeholder process.

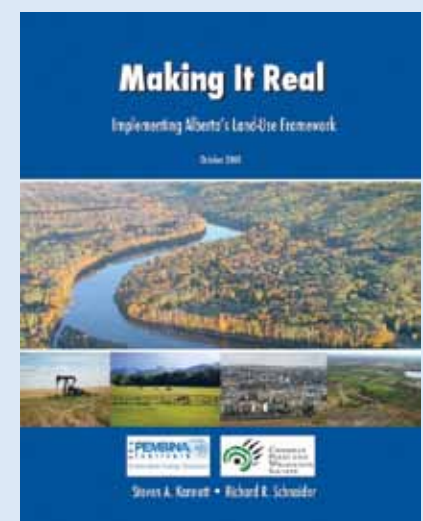


## *Making It Real: Implementing Alberta's Land-Use Framework*

**Steve Kennett and CPAWS**

**Oct 17, 2008**

Alberta's new Land-Use Framework could become one of the government's most important policy and legislative initiatives in several decades. In this report, the Pembina Institute and the Canadian Parks and Wilderness Society recommend specific actions for the Government of Alberta to take in six key areas to translate the Land-Use Framework's policy direction into meaningful change on the ground.



# Multimedia tools and outreach

**The Pembina Institute's top-rated websites inform, inspire and engage us all to create a more sustainable world.**

Constantly changing and always credible, information-rich Pembina Institute websites were a destination of choice for journalists, government officials, policy makers, industry representatives and the general public in 2008. Our media outreach program expanded to include the regular publication of op-eds in major news outlets. The Pembina Institute was cited in local, national and international media well over 1,700 times. Every year, people from all over the world download hundreds of thousands of documents and learning materials from our websites.

## Pembina.org [www.pembina.org](http://www.pembina.org)

Visit the Pembina Institute's updated website for timely reports, media releases and other information about our many programs.



## Oilsandswatch [www.oilsandswatch.org](http://www.oilsandswatch.org)

This media-rich website provides timely reports, slide shows and videos that examine the environmental impacts resulting from the rapid development of Alberta's oil sands. All resources can be downloaded from the website free of charge.



## Green Economics [www.greeneconomics.ca](http://www.greeneconomics.ca)

Green Economics connects you to real-world examples of fiscal policies that are helping to achieve environmental objectives in Canada and internationally. It also profiles the Pembina Institute's work with the Genuine Progress Indicator (GPI) — a total well-being accounting system that goes beyond economic measures in assessing the status of our society.



## GreenLearning [www.greenlearning.ca](http://www.greenlearning.ca)

This eLearning website delivers timely, accurate and engaging environmental learning resources on energy and the environment for teachers and students. Find classroom-tested materials including lessons plans, activities and more.



## Climate Change <http://climate.pembina.org>

Canadians rank global warming among their top environmental concerns. Learn about Canada's role in limiting climate change.



## Pembina Corporate Consulting <http://corporate.pembina.org>

Industry leaders can find out more about the Pembina Institute's innovative programs for advancing corporate sustainability.

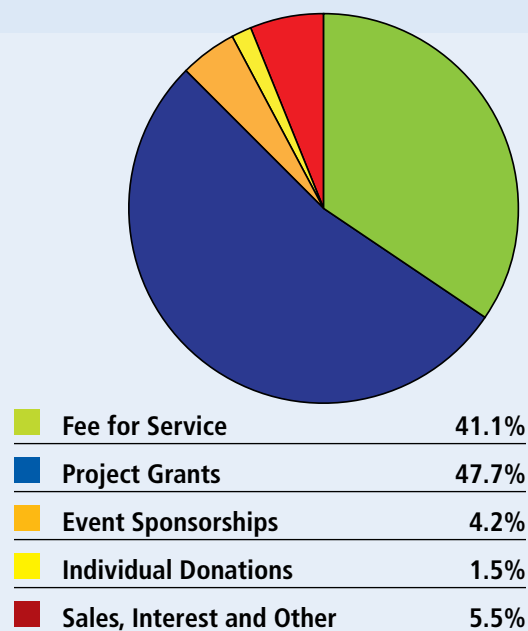


# Financial Data

## Revenue 2008 (from the audited financial statements)

The Pembina Institute advances sustainable energy solutions and advocates for change through fee-for-service contracts, foundation and government grants, and support from organizations and individuals.

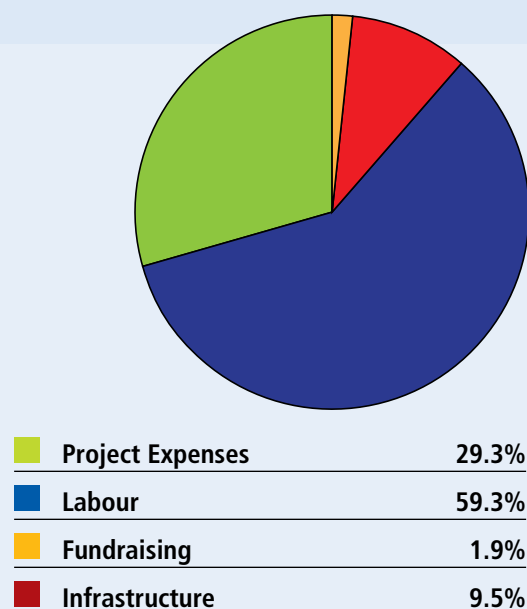
<b>Fee for Service</b>	<b>\$2,054,449</b>	<b>41.1%</b>
<i>Revenues received for completing research and advisory services for NGOs, government, First Nation communities, and corporate clients.</i>		
<b>Project Grants</b>	<b>2,388,374</b>	<b>47.7%</b>
<i>Revenues received from granting agencies to complete specific projects. The Pembina Institute currently does not receive core funding from any granting agency.</i>		
<b>Event Sponsorships</b>	<b>210,202</b>	<b>4.2%</b>
<i>Revenues from sponsoring agencies and non-receipted gifts to support the work of the Pembina Institute.</i>		
<b>Individual Donations</b>	<b>73,245</b>	<b>1.5%</b>
<i>Major donor gifts, individual responses to direct mail appeals and other gifts from individuals.</i>		
<b>Sales, Interest &amp; Other</b>	<b>275,237</b>	<b>5.5%</b>
<i>Revenues from the sales of Wind Power Certificates and publications, and interest from investments.</i>		
<b>Total Revenue</b>	<b>\$5,001,507</b>	<b>100%</b>



## Expenses 2008 (from the audited financial statements)

Project labour includes the expertise, skills and research required to develop, implement, communicate and evaluate the projects that help us all move towards a more sustainable energy future.

<b>Project</b>	<b>\$1,336,589</b>	<b>29.3%</b>
<i>Hard costs including contractor services, travel, project materials and communications incurred to deliver our project work.</i>		
<b>Labour</b>	<b>2,694,802</b>	<b>59.3%</b>
<i>Wages, wage costs and staff benefits for 49 FTE staff to design, develop, deliver and manage our projects.</i>		
<b>Fundraising</b>	<b>88,461</b>	<b>1.9%</b>
<i>Fundraising costs (comprised primarily of labour, contractor fees, travel, postage and phone) all shown in their respective categories in the Statement of Operations.</i>		
<b>Infrastructure</b>	<b>434,851</b>	<b>9.5%</b>
<i>Overhead costs including offices, telecommunications, staff development, accounting and equipment incurred in the day-to-day operations of the organization.</i>		
<b>Total Expenditures</b>	<b>\$4,554,703</b>	<b>100%</b>
<b>Total Revenue</b>	<b>\$5,001,507</b>	
<b>Net Revenue</b>	<b>\$446,804</b>	



## Statement of Operations

The Pembina Institute year ending December 31, 2008

	2008	2007
<b>Revenue</b>		
Program cost recovery - Pembina Foundation agency agreement	\$2,045,386	\$1,549,327
Consulting fees	1,834,396	1,322,943
Grants	342,988	606,455
Windpower sales and workshop fees	217,353	199,179
Sponsorships and fundraising	210,202	264,442
Reimbursed expenses	161,650	182,313
Donations	73,245	83,067
Speaking and board honoraria	58,403	106,024
Rental	45,300	5,500
Interest	12,584	9,168
	<b>\$5,001,507</b>	<b>\$4,328,418</b>
<b>Expenses</b>		
Wages and wage costs	\$2,742,201	\$2,630,911
Contractor services	657,204	681,160
Travel	455,249	271,416
Office rent	213,068	175,100
Project materials and supplies	138,991	113,215
Telephone and utilities	58,959	46,484
Amortization	47,306	25,463
Office	43,889	34,114
Interest on long-term debt	37,954	181
Advertising and promotion	27,450	26,585
Insurance	26,383	22,176
Equipment rental	20,527	18,689
Professional fees	17,165	15,386
Property taxes	13,382	13,892
Property repairs	12,332	9,093
Staff development	12,023	10,364
Postage and courier	10,199	26,690
Website hosting and development	9,993	8,118
Library purchases and subscriptions	5,700	7,815
Bank charges	5,007	4,018
Computer support	3,170	4,892
Equipment repairs	1,780	1,593
Bad debts (recovered) expense	(5,229)	8,071
Fundraising	-	283,950
	<b>\$4,554,703</b>	<b>\$4,439,376</b>
Excess (Deficiency) of revenue over expenses from operations	446,804	(110,958)
Gain on disposal of property, plant and equipment		290,485
<b>Excess of Revenue Over Expenses</b>	<b>\$446,804</b>	<b>\$179,527</b>

## Statement of Financial Position

The Pembina Institute year ending December 31, 2008

	2008	2007
<b>Assets</b>		
<b>Current Assets</b>		
Cash	\$865,818	\$467,465
Accounts receivable	559,454	935,208
Due from related party	370,796	119,228
Prepaid expenses	47,041	40,958
Deposit	-	50,000
Inventory	-	2,000
	<b>\$1,843,109</b>	<b>\$1,614,859</b>
Property, plant and equipment	1,461,358	68,844
	<b>\$3,304,467</b>	<b>\$1,683,703</b>
<b>Liabilities and Net Assets</b>		
<b>Current Liabilities</b>		
Accounts payable	\$264,925	\$234,148
Deferred revenue	383,993	211,211
Mortgage payable within one year	44,835	-
Mortgage payable after one year	925,566	-
	<b>\$1,619,319</b>	<b>\$445,359</b>
<b>Net Assets</b>		
Investment in property, plant and equipment	\$490,957	\$68,844
Reserve fund	331,000	210,000
Unrestricted	863,191	959,500
	<b>\$1,685,148</b>	<b>\$1,238,344</b>
	<b>\$3,304,467</b>	<b>\$1,683,703</b>

These statements are excerpts from the audited financial statements prepared for the organization and exclude the audit report, other pertinent statements and notes to the financial statements. Users are cautioned that these statements alone may be inappropriate for their purposes.

**Calgary**

221 19 St NW Calgary AB T2N 2H9

**Drayton Valley**

PO Box 7558 Drayton Valley AB T7A 1S7

**Edmonton**

2nd Floor 10008 82 Ave Edmonton AB T6E 1Z3

**Ottawa-Gatineau**

164 rue Wellington Gatineau QC J8X 2J4

**Toronto**

Suite 417 215 Spadina Ave Toronto ON M5T 2C7

**Vancouver**

Suite 610 55 Water St Vancouver BC V6B 1A1

**Yellowknife**

4807 49th St Yellowknife NT X1A 3T5



Photo: Region of Peel

