



# Taking Action on Climate Change

## PREMIER'S MESSAGE

Canada contains a natural bounty of lakes, forests and wilderness spaces – an enviable situation that will change dramatically without concrete action to address one of the greatest challenges to our planet's future – climate change.

The Government of Manitoba, Canada believes strongly in the economic, environmental and social benefits of addressing climate change. It is an honour for us to co-host with the Government of Québec the *Leaders Summit on Climate Change*, held simultaneously with the *United Nations Climate Change Conference (COP11)* in December 2005.

There has been much accomplished in just a few years. In 1999 when our government came into office, Manitoba had no plan to deal with climate change. We ranked ninth out of ten provinces on energy efficiency, had no wind turbines on the horizon, our geothermal industry was modest, and plans for Conawapa – a clean, new generation hydro dam – had been mothballed for more than a decade. The vision of an east-west power grid linking our great country was not even a blip on the national radar screen.

Manitoba is now a leader in these areas – joining other governments, businesses and citizens who have turned debate on climate change into concrete action. By taking action, Manitoba is seizing new economic opportunities and supporting innovative ideas that will build a sustainable economy while reducing greenhouse gases.



Gary Doer  
Premier of Manitoba

### Today Manitoba is:

- Canada's leader in energy efficiency
- home to one of the largest wind farms in Canada (99 megawatts) with a plan to produce 1,000 megawatts of wind power over the next decade
- the hub of geothermal activity in Canada – installing 30% of Canada's heat pumps and training more than half of the country's installers
- building a new generation of hydro development – a recent agreement with Ontario will see hydro exports replace coal-generated greenhouse gases in that province at a rate equivalent to taking 500,000 vehicles off the road
- the leading advocate for an east-west power grid – a vision now supported by the Canadian government, several NGOs and industry leaders
- pursuing a Hydrogen Centre of Expertise as part of a broader hydrogen strategy – the first of its kind in Canada



Despite the progress made in recent years, we still have a great deal of work to do. There are many best practices to learn from and it is important to share our emerging expertise as we continue to advance new initiatives that build our economy and safeguard our future.

Gary Doer  
Premier of Manitoba



## Manitoba is acting on energy and climate change

*Climate change is a tremendous threat to our planet's future. On the shores of Hudson Bay in northeastern Manitoba is the town of Churchill, known worldwide as the Polar Bear Capital of the world. Thousands of ecotourists from all corners of the globe visit this unique place each year.*

*Unfortunately, Churchill's polar bears are now also famous as climate change's canary in the coal mine. Shorter winters mean less time on the sea ice for the bears, which means less hunting and less food. In a few decades, they could be gone forever.*

*But it is not just the north that is threatened by climate change. We know climate change is having serious effects all over the world. This is why Manitoba is taking action to address climate change.*



### St-Léon and Beyond – Harnessing the Wind

One of Canada's largest wind farms is under construction in St-Léon, Manitoba. When completed, it will supply 99 megawatts, enough to power 30,000 households. It will reduce greenhouse gas emissions by more than 3.5 million tonnes annually and is Canada's lowest-cost wind farm. Manitoba has committed to developing 1,000 megawatts of wind power generation over the next decade.



### Hydrogen – Transforming Transportation

Two years ago, Manitoba published the very first hydrogen strategy of any jurisdiction in the country. Our provincially owned electric utility, Manitoba Hydro, has recently installed a hydrogen electrolyzer at its Dorsey station on the outskirts of Winnipeg. The world's first hydrogen hybrid internal combustion engine (H<sub>2</sub>-ICE) bus has been made by Manitoba's New Flyer Industries and was tested with fuelling technology by another Manitoba firm, Kraus Global. The Manitoba government is committed to establishing a *Hydrogen Centre of Expertise* to further encourage and promote hydrogen development.

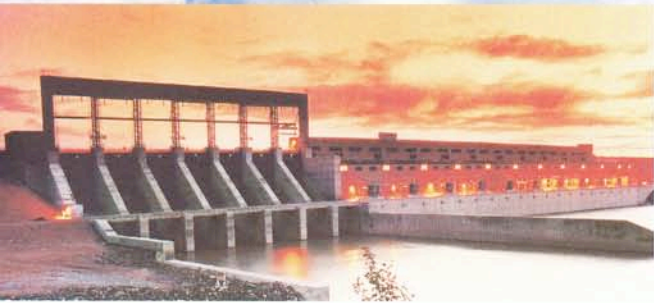
### Current Events – A New Generation of Hydropower in Manitoba

Flooding and disruption of lives in Northern First Nations territories as a result of hydro development in the 1960s and 70s will never happen again. New projects are being negotiated in full partnership with the local First Nations and are being designed to ensure minimal or no flooding. For example, the next planned hydro project in Manitoba – Wuskwatim – has been redesigned from the original 340 megawatts to 200, based on advice from local people. The Nisichawayasihk Cree Nation is a full partner in the project.

**“Manitoba's climate change plan is the best of all the provincial and territorial plans.”**

*David Suzuki Foundation, October 2005*





### **Green and Growing – Displacing Coal Emissions**

Manitoba exports about 40% of its hydro power – almost all of it to the United States. This displaces 10 million tonnes of greenhouse gas emissions annually south of the border. Recently, the province of Ontario, Canada signed a \$500 million agreement with Manitoba for 400 megawatts of electricity and a significant upgrading of the east-west grid between the two provinces. This could lead to a 1,500 to 3,000 megawatt deal that would see the construction of the Conawapa hydro project. Not only is Manitoba's hydro power clean and renewable, it will help Ontario reduce its reliance on coal plants and displace 2.5 million tonnes of Ontario's greenhouse gas emissions by 2008.

### **Earth Energy – Heating and Cooling from the Ground Up**

Manitoba is a leader in earth energy systems, or geothermal. Our province is home to 30% of all the geothermal system installations in Canada, and 56% of Canada's geothermal installers are now trained in Manitoba. Manitoba Hydro's *Earth Power Loan Program* has helped fuel this growth, with installations growing four-fold since 2001 and predicted to double again by 2007. By fall 2006, construction of the new Waverley West subdivision in the city of Winnipeg will begin. Thousands of new houses will be outfitted with geothermal systems, and each house will represent a greenhouse gas emission reduction of five tonnes annually.

### **Demand Side Management – Less Demand Means Less Waste**

Manitoba Hydro's updated *Power Smart* program is one of the most aggressive demand management and energy efficiency programs in North America. Through *Power Smart*, Manitoba will invest \$610 million in energy efficiency initiatives over the next 12 years. These initiatives will help our

province achieve 842 megawatts of energy savings and annual natural gas savings of 62 million cubic metres. This increase in energy efficiency will reduce greenhouse gas emissions by 800,000 tonnes annually. Manitoba's actions to increase energy efficiency have been recognized by the Canadian Energy Efficiency Association who recently awarded our province its number one ranking.

### **Biofuels – Harvesting a New Crop of Energy**

Manitoba passed legislation to mandate the use of 10% ethanol in all gasoline sold in the province. This mandate will be phased in as ethanol production capacity expands. The recently announced \$145 million expansion of the ethanol plant in Minnedosa, Manitoba will help produce 130 million litres of ethanol and replace nearly one million barrels of oil every year. This will cut 135,000 tonnes of greenhouse gas emissions annually. Manitoba has also recently launched a strategy to increase biodiesel production and use in our province.

*For more information on Manitoba's efforts to fight climate change and create a greener, prosperous future, please visit the following websites:*

[www.gov.mb.ca/est/climatechange](http://www.gov.mb.ca/est/climatechange)

[www.gov.mb.ca/est/energy](http://www.gov.mb.ca/est/energy)

[www.climatechangeconnection.org](http://www.climatechangeconnection.org)

[www.hydro.mb.ca](http://www.hydro.mb.ca)

**“Manitoba, which ranked first with an A, is setting the gold standard for the rest of the country.”**

*Canadian Energy Efficiency Alliance, December 2004*



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