

# *Transportation :* Greening our Transportation Sector

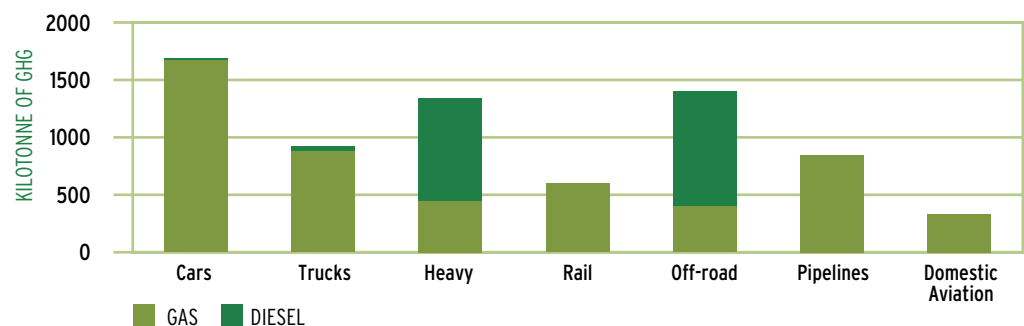


Manitoba and Winnipeg are founded on historical transportation links that continue to support a strong freight warehousing, forwarding and distribution network in central North America. Transportation is important to the provincial economy, generating about seven per cent of the gross domestic product (GDP) and employing over 40,000 people. Transportation is a diverse demand-driven activity which is directly linked to our level of economic activity. As a result,

reducing GHG emissions in this sector will require an innovative approach. As Manitoba continues to develop as an international transportation hub, incorporating green policies into this growing sector will become increasingly important.

Transportation activities, including road, rail, marine, air and off-road vehicles, are Manitoba's largest source of greenhouse gas (GHG) emissions. They account for approximately 37 per cent of Manitoba's total emissions. Environment Canada reports that in 2005, Manitoba's road transportation emissions were 18.6 per cent above 1990 levels. Emissions from rail transportation have decreased 50 per cent (0.3 Mt) from 1990 levels due to declining use of this mode. Over the same time period, emissions from heavy trucking have increased by 80 per cent (0.71 Mt) above 1990 levels. While emissions from light duty gasoline vehicles are 32 per cent (0.52 Mt) lower today than in 1990, this gain has been eroded by a growing preference for trucks and SUVs, which have experienced an 87 per cent (0.77 Mt) increase in emissions from 1990 levels.

#### EMISSIONS FROM TRANSPORTATION IN MANITOBA – 2005



Transportation demand is increasing, and energy use and emissions from transportation activities are forecasted to rise. A study completed by Transport Canada in 2006 indicated that traffic congestion in Winnipeg may cost our economy up to \$104 million annually in lost time, increased fuel costs and GHG emissions. Apart from greenhouse gases, air toxins in vehicle emissions can create ground-level ozone, contribute to smog and impair air quality. There is a growing realization that the non-renewable fossil fuels and individual personal transportation practices that we have been relying on are not sustainable.

The provincial government will continue to advance its leadership in sustainable transportation measures, including GHG emissions reductions. Provincial activities in this area include increased funding for public transit, biking and walking trails, a biofuels mandate, tax incentives, support for biofuels production, incentives for low-emitting vehicles and converting the government fleet to more highly efficient vehicles. The province also funds agencies that provide research, outreach and education on sustainable transportation.

## Actions to date

### ALTERNATIVE TRANSPORTATION

- Since 1999, the province's annual transit operating grant to Winnipeg has increased more than 40 per cent to \$22.9 million, with an 18 per cent increase in 2006 alone. Transit capital grants to Winnipeg have increased 28 per cent. **Also, in 2006, Winnipeg received \$3.8 million in capital support for projects to improve ridership and promote an environmentally friendly transit system. This includes support for new diesel hybrid-electric buses.**
- To date, the provincial government has contributed \$3.7 million for trails projects across Manitoba. In addition, **through its participation in the WinSmart program, Manitoba has contributed \$550,000 toward construction of a dedicated cycling and walking network from Jubilee Avenue to downtown.** The province also provides support to the Winnipeg Trails Association and the Manitoba Recreational Trails Association. The Bishop Grandin Greenway and the Marconi Line are examples of community-led trail projects that will become legacies to future generations.
- Resource Conservation Manitoba (a non-profit community group) receives Provincial funding to run successful programs including Active and Safe Routes to School, Workplace Transportation Demand Management, Campus Challenge, the Student Transportation Network and the annual Commuter Challenge.
- Manitoba Health and Healthy Living and Helmets R Us worked together to provide more than 13,000 low-cost safety-certified bike helmets to Manitoba students and their families.

### REDUCING VEHICLE EMISSIONS

- Since January 2008, the oil and gas industry has been required to replace 8.5 per cent of its gasoline needs with clean burning ethanol. **The completion of a new 130-million litre-per-year ethanol plant in Minnedosa will enable Manitoba to meet this mandate. The province has established a biodiesel target and no longer collects the 11.5-cent fuel tax on biodiesel.** In addition, Manitoba released a 10-point action plan to promote biodiesel and develop a local production capacity. A world-class biodiesel testing facility is now operating in Selkirk.
- Manitoba recently launched successful biodiesel demonstration projects in large, commercial fleets with Manitoba Hydro; school buses with Winnipeg School Division Number One; and the trucking industry through Border Chemical.
- **Hudson Bay Mining and Smelting is currently testing biodiesel blended fuel in its underground mining operations.** The use of biodiesel in underground operations may lead not only to emission reductions, but may also have important health and safety benefits for workers.

Non-government organizations in Manitoba, including the Lung Association, Diabetes Foundation and Kidney Foundation, cumulatively **remove up to 4,000 older, high emitting vehicles** from our roads every year through their voluntary donation programs.

Between 10 per cent and 15 per cent of light-duty vehicles in Canada are pre-1996, generating up to 50 per cent more GHGs and air pollutants than newer vehicles.



Stonewall's **Idle-Free Girls** are committed to helping the planet as well as motivating adults and other students to get involved. Their efforts have resulted in Idle Free signs all over their community.

(left to right) Destiny Gulewich, Katelyn Morran, (a young fan - Kaile Gulewich), Rachel Perrella and Neely Swanson.

## Financial costs of \$200 million annually to buy fossil fuels

from outside of the province are being entirely offset by equivalent investments in local biofuel production.

- **An E85 fuel station has been established in Winnipeg to provide E85 gasoline to provincial fleet vehicles.** Between March and October of 2006, about 22,000 litres were used by provincial vehicles reducing GHG emissions by about 25,000 kilograms. The Manitoba government's provincial fleet currently has 340 E85 vehicles, 29 hybrid electric vehicles, and one Smart Car.
- **In 2006, the province announced a \$2,000 rebate on new hybrid vehicles bought in Manitoba.** Hybrid vehicles offer significant fuel savings over conventional vehicles. As a result, sales of hybrid vehicles have doubled in Manitoba. This rebate program is among the most generous in Canada.
- **To encourage sustainable driving habits, the Climate Change Connection, a community organization funded by the province, continues to run an extremely successful vehicle anti-idling campaign.** It has established 300 idle-free zones across Manitoba.

## ADVANCING LOW-EMISSION VEHICLE TECHNOLOGY

- Manitoba is advancing low-emission bus technologies by leading a consortium of local organizations in successful, cold-weather testing of a New Flyer Hydrogen Hybrid Internal Combustion Engine Bus with Winnipeg Transit. Manitoba is also collaborating with the federal government and Hydrogenics to conduct a demonstration of a New Flyer Hydrogen Hybrid Fuel Cell Bus in Winnipeg. **In 2006, a business consortium, including New Flyer Industries, ISE Corporation and SunLine Transit, announced that it will receive \$9 million from the United States Federal Transit Administration for two new projects involving hydrogen and fuel cell buses.**
- **The Plug-in Highway Program is a Manitoba Hydro and University of Manitoba initiative that is advancing the process of substituting electricity for fossil fuels in transportation.** This is achieved by linking a variety of technologies, including plug-in hybrid electric vehicles (PHEVs) and truck stop electrification. The University of Manitoba and Manitoba Hydro are running trials on converted plug-in hybrid electric vehicles (PHEV). In 2007 Manitoba hosted Canada's largest conference on PHEV technology.
- **Winnipeg's Centre for Sustainable Transportation was formed to help overcome barriers to attaining sustainable transportation,** in Canada and elsewhere, by providing balanced information and analysis. The role of the Centre is to help decision-makers in making appropriate choices regarding how Canada's transportation systems are planned and delivered.



The plug-in hybrid electric vehicle (PHEV) can travel a distance of up to 20 kilometres (12.5 miles) on a full electric charge without using any gasoline.

When the charge is used up, the vehicle continues to operate as a hybrid electric vehicle, resulting in reduced fuel costs and fewer emissions.

For more information go to: [hydro.mb.ca/](http://hydro.mb.ca/)

- **Red River Community College's planned training and research programs will build Manitoba-based research and advanced training in leading edge technologies such as biofuels, hydrogen fuel cells, hydrogen and electric hybrids and emissions and cold-weather testing.** In addition, a new \$15.1 million training facility will provide young Manitobans with related research opportunities to support Manitoba's growing green economy.

## Next steps: to 2012 and beyond

### ALTERNATIVE TRANSPORTATION

- **The province will set up an Active Transportation Advisory Group to provide recommendations to the Minister on expanding active transportation opportunities in our province.**



The Province of Manitoba is providing funding for 20 New Flyer hybrid-electric buses to add to Winnipeg Transit's fleet.

- **PUBLIC TRANSPORTATION.** In addition to increased investments in public transit, **Manitoba, in partnership with the City of Winnipeg, recently winter tested an 18 meter articulated, hybrid diesel-electric bus along the Pembina Corridor.** Pending successful winter testing and with funding from the province, Winnipeg Transit intends to add 20 new hybrid-electric buses to its fleet over the next two years, and upgrade the Telebus system to provide real-time information on bus arrivals and departures. Starting in 2007, Manitoba municipalities received \$12.6 million for their public transit systems, supported with funds from the federal Public Transit Capital Trust. **Manitoba will support public transit by legislating a 50/50 funding agreement to share net operating costs including future rapid transit.**

- **ACTIVE TRANSPORTATION PATHWAYS.** The province has committed \$6 million to the City of Winnipeg's trail system. To improve opportunities for active commuting, a new trail from Jubilee Avenue to downtown is being built with a provincial contribution of \$550,000.

- **EXPANDING GREEN COMMUTING OPPORTUNITIES.** The province will partner with the other levels of government, Crown corporations and the private sector to explore opportunities to broaden green commuting opportunities including:

- improving local active commuting infrastructure, such as designated bike lanes and secure bicycle parking facilities
- public education and outreach
- broadening participation in Winnipeg Transit's EcoPass program

- **COMMUNITY-BASED INITIATIVES.** The province is working with Resource Conservation Manitoba (RCM) to develop a household marketing campaign to provide incentives for Winnipeg citizens to modify their transportation choices and reduce single-occupancy vehicle trips. The province will work with RCM on a year-round workplace commuter challenge.



## In 2006, Bison Transport received the U.S. Environment Protection Agency (EPA) SmartWay Environmental Excellence Award.

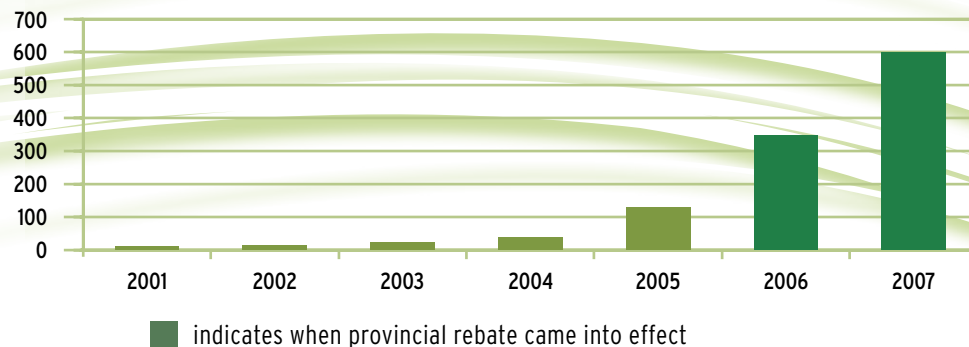


The award recognized the company's efforts to protect the environment through its equipment purchasing decisions, effective marketing of fuel-efficient driving techniques and its full-motion simulation fuel management course that all Bison Transport drivers are required to complete. The company has also been honoured with the Truckload Carriers Association National Fleet Safety Grand Prize and has been named one of Canada's 50 Best Managed Companies.

### DRIVING GREEN

- **EXPANDING BIOFUELS PRODUCTION.** In addition to *The Biofuels Act* passed in 2003 establishing an ethanol mandate (effective in 2008), the Manitoba government is establishing a first-of-its-kind biodiesel mandate. Manitoba is the first province in Canada to adopt legislation providing this authority. It is anticipated that four biodiesel plants could be in operation by 2008, with annual production reaching 85 million litres by 2012 or earlier.
- **SUPPORTING SUSTAINABLE TRUCKING PRACTICES.** Through *WinSmart, Manitoba Infrastructure and Transportation* will research efficient freight-transportation practices. New initiatives totalling \$1.5 million will be provided to help Manitoba's heavy trucking sector adopt new sustainable trucking practices and technologies.
- **MADE-IN-MANITOBA VEHICLE STANDARD.** Of the approximately 45,000 new vehicles sold in Manitoba each year<sup>17</sup>, only about 6,000 achieve fuel economy of 5.9 litres per 100 kilometre (40 miles per U.S. gallon) or greater. Manitoba's existing private vehicle fleet achieves, on average, 19.1 miles per U.S. gallon per vehicle. **New climate change legislation will require a made-in-Manitoba approach to ensure that a greater percentage of high-efficiency vehicles become part of the private fleet.** A Vehicle Standards Advisory Board will be established to help determine an efficiency standard or emissions standard to take effect, in conjunction with the California standard, by 2010.
- **DRIVING GREEN MANITOBA.** The provincial government will work with not-for-profit organizations to increase the attrition rate of older high emitting vehicles. Enhanced incentives will be offered to Manitobans interested in getting rid of their older vehicles and choosing a cleaner alternative. In addition, this new program will focus on influencing changes in behaviour in the ways that Manitobans buy, drive and maintain their vehicles to reduce energy use and greenhouse gas emissions. The program will include tips on buying a new or used vehicle, green driving and maintenance tips and tips to reduce vehicle idling.
- **MANDATING a PROVINCE of MANITOBA GREEN FLEET POLICY.** The provincial government will establish a standard for all newly purchased and leased light duty/passenger vehicles to meet high-efficiency and lower emissions ratings. This will start with an executive fleet policy requiring the use of hybrid electric vehicles. This policy will be legislated and extended to include efficiency or fuel-mix standards for heavy duty fleet vehicles, in conjunction with the province's biodiesel mandate by 2010.
- **EXPANDING UPTAKE of LOW and ZERO EMISSION VEHICLES.** Hybrid electric vehicles converted using PHEV technology have the potential to reduce vehicle GHG emissions and fuel costs by two-thirds, compared to conventional vehicles. **Manitoba's advanced demonstration project will include the conversion of up to 15 vehicles into plug-in hybrid electric vehicles over the next two years.** In addition, new climate change legislation will enable the use of low-speed, low and zero emission vehicles in Manitoba.

#### NEWLY REGISTERED HYBRID VEHICLES



<sup>17</sup> <http://www.statcan.ca/english/research/11-621-MIE/11-621-MIE2007054.htm#6>