

Budget Paper E

**MADE-IN-MANITOBA
CLIMATE AND GREEN PLAN**

MADE-IN-MANITOBA CLIMATE AND GREEN PLAN

CONTENTS

A MADE-IN-MANITOBA CARBON TAX	E1
CARBON SAVINGS ACCOUNT.....	E7
OUTPUT-BASED PRICING SYSTEM.....	E8
CLIMATE AND GREEN INVESTMENTS	E8
CONCLUSION	E9
CONTACT US	E9

A MADE-IN-MANITOBA CARBON TAX INVESTING IN THE ENVIRONMENT, FAMILIES, AND BUSINESSES

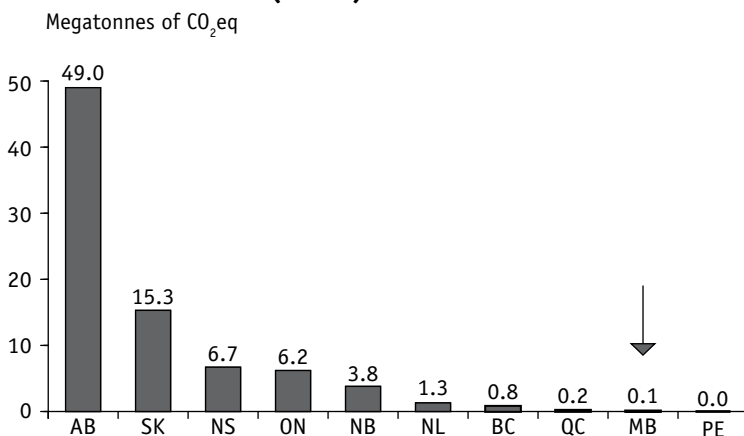
Carbon Pricing

Carbon pricing refers to mechanisms that put a price on carbon with the goal of reducing greenhouse gas (GHG) emissions. Carbon pricing encourages the conservation of fuel, promotes the adoption of clean alternatives, and pushes companies, scientists and engineers to develop newer and more innovative clean energy technologies – technologies we need now and in the years ahead.

As announced on October 27, 2017, Manitoba has designed a carbon pricing system under the Made-in-Manitoba Climate and Green Plan, that carefully balances our unique environmental and economic realities. The approach is based on carbon pricing modelling and analysis that shows that the opportunities to cost-effectively reduce carbon emissions in the province is significantly lower than the federal plan. Anything beyond this price is punitive – economically and environmentally – because it results in rising costs to Manitobans and businesses with diminishing emissions reductions. This finding is largely due to two unique Manitoba features that affect the efficacy of higher carbon prices in our province compared to other jurisdictions: our clean electricity grid and large agriculture sector.

First, as Figure 1 illustrates, Manitoba has one of the cleanest electricity grids in Canada with around 99 percent of our electricity generated from non-emitting renewable resources. There are few opportunities to achieve emissions reductions in this sector, unlike other provinces. There will be even fewer such opportunities once Manitoba’s last remaining coal-fired unit is phased out.

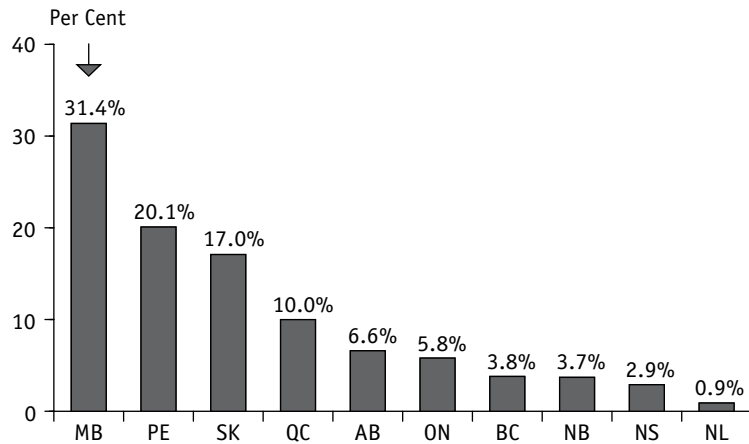
Figure 1. Provincial Electricity Production Emissions Profiles (2015)



Source: National Inventory Report

Second, as Figure 2 illustrates, Manitoba has the highest proportion of agriculture emissions relative to other Canadian provinces. This reality requires special recognition because the majority of agriculture emissions are not due to the burning of fossil fuels but rather to biological processes such as the release of greenhouse gases (GHGs) from livestock, and from non-point sources such as soil and from manure management. These emissions will not be subject to a carbon price.

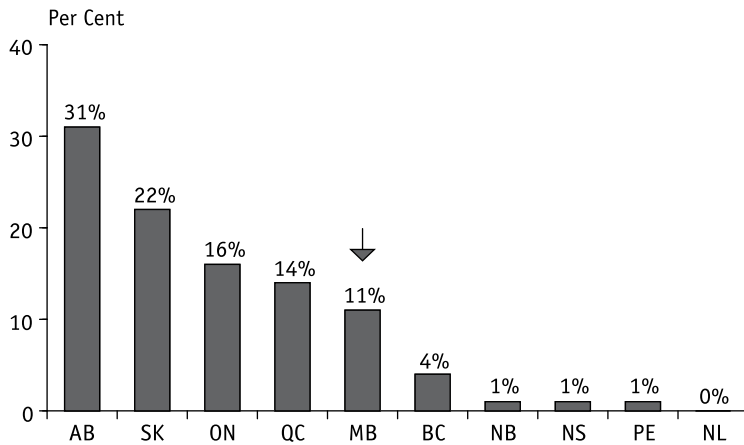
Figure 2. Provincial Agriculture Emissions as Per Cent of Provincial Total Emissions (2015)



Source: National Inventory Report

Nevertheless, as illustrated in Figure 3, Manitoba’s emissions from agriculture as a percentage of total Canadian emissions from the agricultural sector puts the province in fifth position.

Figure 3. Provincial Agriculture Emissions as Per Cent of National Agriculture Emissions (2015)



Source: National Inventory Report

These realities, along with other considerations outlined in the Made-in-Manitoba Climate and Green Plan, provided the context in which Manitoba's approach to carbon pricing was determined.

There are two basic types of carbon pricing: a carbon tax or a cap-and-trade system. A carbon tax (sometimes referred to as a carbon levy) is a simpler and more effective carbon pricing approach for Manitoba, which has a limited number of large emitters and overall emissions. As a specified price per tonne of greenhouse gas emissions, Manitoba's carbon tax will also give price certainty to business and households, helping them plan and invest accordingly.

Manitoba's carbon pricing system will have two components:

1. Effective September 1, 2018, a **Carbon Tax** on gas, liquid or solid fuel products intended for combustion, at \$25 per tonne of carbon dioxide equivalent (CO₂eq); and
2. An **Output-Based Pricing System (OBPS)** for the energy intensive and trade-exposed industry with emissions over 50,000 tonnes of (CO₂eq), to come into effect after 2018 following further consultation with industry.

The carbon tax will remain at that level until a comprehensive carbon pricing and competitiveness review is complete in 2022.

Carbon Tax

The carbon tax will be implemented through legislation which will be introduced as a Government Bill during the Spring 2018 legislative session. The \$25 carbon tax per tonne of emissions is estimated to generate \$248 million in net revenue during the first twelve months. These revenues are forecast to decline over time as emissions reductions are achieved.

The carbon tax will be paid by consumers of fuel products in Manitoba, with the rates determined by the emissions released when each fuel is eventually combusted. Some specific fuels and their uses are exempt from the carbon tax, as outlined in the section on exemptions below. Figure 4 illustrates the increased costs for the main types of fuel consumed in Manitoba, with the full list of fuels to be outlined in legislation.

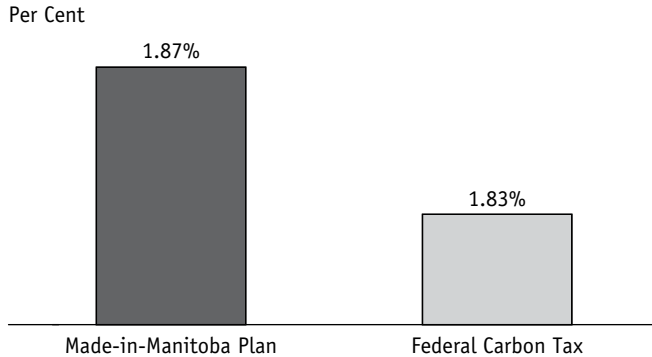
Figure 4. Carbon Tax Rates by Select Fuel Type (2018–2022)

<u>Fuel Type</u>	<u>Carbon Tax Rate Per Unit</u>
Gasoline	5.32 ¢/L
Diesel	6.71 ¢/L
Natural Gas	4.74 ¢/m ³
Propane	3.87 ¢/L

Manitoba's Economy Grows Under Carbon Price

Forecasts show that with a carbon price of \$25 per tonne, Manitoba's economy would grow by 1.87 per cent annually, compared to 1.83 per cent under the federal carbon tax, which would see a carbon tax of \$50 per tonne by 2022.

Figure 5. Forecasted Annual GDP Growth (2018–2022)



Source: Manitoba Sustainable Development

Carbon Tax Impacts

Households and businesses will be impacted by the carbon tax in different ways, proportional to their use of carbon-emitting fuels. The majority of the costs incurred by the tax come from heating (natural gas, propane, etc.) and transportation fuels (diesel, gasoline, etc.). Figure 6 illustrates representative costs for different household profiles assuming average fuel consumption of natural gas to heat a home and gasoline to fuel vehicles.

Figure 6. Illustrative Annual Household Costs from the \$25 Carbon Tax

	Single	Couple	Couple With 2 Children	Average Household
Consumption Levels				
Natural gas usage (m ³)	2,200	2,300	2,400	2,400
Gasoline usage(L)	1,700	2,375	3,500	2,400
Carbon Tax Impacts				
Natural gas cost	\$105	\$110	\$115	\$115
Gasoline cost	\$90	\$125	\$185	\$125
Total cost	\$195	\$235	\$300	\$240

Note: Numbers may not add due to rounding.

It is estimated that, on average, households with higher income will see more of a cost from the carbon tax than households at lower income levels. This is due to a number of factors, such as size of living space that is heated, the amount of kilometres driven in a year, or the fuel efficiency of vehicles. Figure 7 illustrates the estimated average costs to households at several income ranges in a year.

Figure 7. Illustrative Average Annual Costs from the \$25 Carbon Tax Based on Household Income

Income Range	Under \$13,600	\$13,600 to \$28,600	\$28,600 to \$49,150	\$49,150 to \$82,900	Over \$82,900
Natural gas carbon tax cost	\$108	\$103	\$103	\$115	\$125
Gasoline carbon tax cost	\$55	\$85	\$115	\$148	\$188
Total impact	\$163	\$188	\$218	\$263	\$313

On the business side, costs will vary for much of the same reasons as they do for households. A business that has a large energy requirement, for example, fuel for a large fleet of vehicles and having to heat a large space for their operations or storage, will typically see higher carbon tax costs than businesses with lower energy requirements. Note, that some firms will be covered under the Output-Based Pricing System.

Figure 8 illustrates the impact of the carbon tax on different types of businesses depending on their energy use.

Figure 8. Illustrative Additional Annual Business Costs from the \$25 Carbon Tax**Profile A: Large gasoline vehicle fleet and medium space heating**

With fleet of 100 cars at 40,000km/year per car and a fuel efficiency of 12.5 L/100 km	\$26,600
Heating a warehousing space of approximately 4500 sq. metres with natural gas	\$7,830
Total Carbon Tax Cost	\$34,430

Profile B: Large diesel vehicle fleet and medium space heating

With fleet of 25 diesel trucks at 60,000km/year per truck and a fuel efficiency of 35 L/100 km	\$35,228
Heating a warehousing space of approximately 4500 sq. metres with natural gas	\$7,830
Total Carbon Tax Cost	\$43,058

Profile C: No vehicle fleet or electric fleet and small space heating

No fleet or electric powered fleet	\$0
Heating a retail space of approximately 1000 sq. metres with natural gas	\$2,020
Total Carbon Tax Cost	\$2,020

Exemptions from the Carbon Tax

The fossil fuels subject to the carbon tax make up approximately 50 per cent of Manitoba's total emissions. Certain fuel uses will not be subject to the carbon tax. These exemptions are being provided primarily to protect Manitoba sectors and industries that are trade-exposed to jurisdictions which do not have a comparable carbon price, to protect Manitoba's agricultural sector, and to only apply the carbon tax on emissions occurring in Manitoba. In addition to these traditional fuel exemptions, other emissions, including from agricultural processes, as well as from landfills and other sources, will also be exempted. An overview of the main exemptions is outlined below.

- *Agricultural process emissions*: All agricultural process-related emissions are exempted from the carbon tax (e.g., emissions from soil and animals).

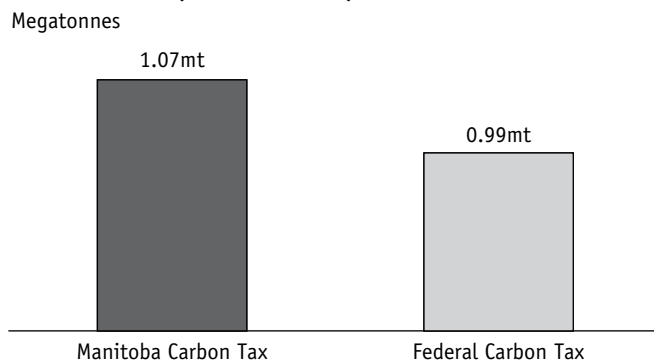
- *Marked fuels:* All marked fuels, including marked gasoline and marked diesel, will be exempted from the carbon tax. It is estimated that 90 percent of marked fuels in Manitoba are consumed in the agricultural sector, with the remainder consumed by the fishing, forestry, mining and other sectors. Exempting all eligible marked fuel uses from the carbon tax will ease the compliance requirement on fuel providers and users.
- *Output-Based Pricing System (OBPS) Entities:* Until 2019, all entities that are to be included by the government in the OBPS will receive an exemption or a refund from the carbon tax on all their emissions from fuels consumed on-site and process emissions. The OBPS will apply to entities emitting at least 50,000 tonnes of CO₂eq per year with smaller emitters able to opt-in upon review and approval by the government.
- *Other exemptions:* Other exemptions relate primarily to fuels and fuel uses that do not result in emissions that are attributable to Manitoba (e.g., fuel consumed outside of Manitoba in inter-provincial transportation).

Additional guidance on exemptions and refunds will be provided.

Emissions Reductions

Figure 10 compares the estimated emissions reductions achieved by the Manitoba carbon tax alone compared to the federal carbon tax plan. Our lower, Made-in-Manitoba carbon price is just as effective in reducing carbon emissions as the higher federal carbon tax. In fact, it is projected to reduce emissions by 0.08 megatonnes more than the federal carbon tax. This is the result of the flat \$25 carbon tax bringing about higher greenhouse gas reductions from the outset and sustaining these emission reductions over time. This is better for the environment and, by doing so at a lower carbon price, better for the economy.

Figure 10. Comparison of Cumulative Emissions Reductions (2018–2022)

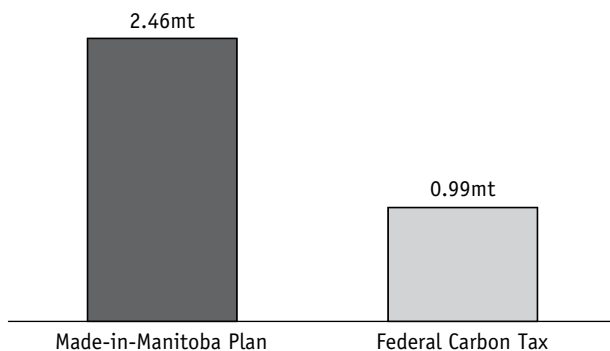


Source: Manitoba Sustainable Development

As illustrated in Figure 11, the estimated cumulative emissions reductions achieved from Manitoba carbon tax and complementary climate actions set out in the Made-in-Manitoba Plan from 2018–2022 are 2.46 megatonnes of carbon dioxide equivalent (MtCO₂eq). Combined, these emission reductions total over 1.4 megatonnes more than the federal carbon tax.

**Figure 11. Federal Plan vs. Made-in-Manitoba Plan
(Estimated Cumulative Emission Reductions 2018–2022)**

Megatonnes CO₂eq



The Made-in-Manitoba plan emission reductions are from the Manitoba carbon tax, the 5% biodiesel mandate, Efficiency Manitoba, organics diversion, heavy-duty truck retrofits, coal phase out, ozone recovery from appliances, electric bus conversion, low carbon government, sustainable agricultural practices, and displacing propane in Churchill.

Source: Manitoba Sustainable Development

CARBON SAVINGS ACCOUNT

Starting in 2018, Manitoba proposes to be the first province in Canada to establish a carbon savings account process to emissions accounting and reporting with designated five-year carbon savings account periods. Each account period will be given a specific amount of cumulative emissions reductions to achieve. Any shortfalls in achieving the cumulative emissions reductions target must be carried over and added to the next account period's target. An Expert Advisory Council to be established in legislation will assist in setting the cumulative emissions reduction targets for each period.

The aforementioned 2.46 megatonnes of cumulative emissions reductions in the initial carbon savings account period will help bend the carbon curve down in a meaningful and effective way.

OUTPUT-BASED PRICING SYSTEM

Firms in emissions-intensive, trade-exposed sectors compete in global markets and often do not have the flexibility to pass on costs to consumers. In 2016, these facilities accounted for slightly over 6% of Manitoba's emissions.

In order for a carbon price to work effectively it must encourage companies to reduce their emissions in a meaningful way and not simply migrate their operations to a different jurisdiction to avoid environmental policies. This is known as carbon leakage. Manitoba is taking steps to minimize carbon leakage and protect business competitiveness. Beginning in 2019, Manitoba will introduce a separate, output-based pricing system for at-risk firms competing in emissions-intensive trade-exposed sectors. This form of carbon pricing has been recommended to the government by the companies involved.

- *How OBP works: Output-based pricing (OBP)* applies the carbon pollution price to that portion of a facility's emissions that exceed a designated emissions intensity benchmark for that type of facility. Facilities that emit less than their emissions-intensity benchmark earn credits that can be banked or sold to facilities that have exceeded their benchmark.
- *OBP benefits:* OBP keeps costs low, while retaining an incentive for firms to reduce carbon emissions. It means they can take steps to improve their emissions performance and mitigate their carbon price exposure.
- *OBP Eligibility:* OBP will apply only to large industrial emitters over the 50,000 tonne CO₂eq threshold. Smaller emitters that are deemed to be trade-exposed may be included under the OBPS.
- *OBP Implementation:* OBP will be transitioned into place during 2019 and will be developed in full consultation with affected firms.

CLIMATE AND GREEN INVESTMENTS

Government will create a Conservation Trust Fund intended to provide significant financial support to achieving the goals and objectives of our provincial climate strategy, particularly those related to conserving ecosystems, green infrastructure (natural assets), water quality and carbon sinks. The independently from government administered Trust would provide matching funds to municipalities, community groups, non-government conservation organizations and academic institutions. Matched funding helps to leverage funds and resources external to government, therefore generating more commitment and action on the ground.

Experiences in other jurisdictions suggest that the multiplication factor may be up to three times the initial government investment in terms of overall value. The Trust will be funded from budgetary savings with an initial endowment of \$102 million. The Trust will be managed by the Winnipeg Foundation, with the use of proceeds administered by the Manitoba Habitat Heritage Corporation. The endowment will be irrevocable, giving the fund permanent autonomy and independence from government. The Trust will be available to private and public stakeholders engaging in projects that align with the goals of the Climate and Green Plan.

Budget 2018 also includes the forming of a Climate and Green Fund that will provide the necessary funds to implement the Made-in-Manitoba Climate and Green Plan, and we look forward to partnering with the Federal Government on climate change programs.

CONCLUSION

Manitoba selected a flat \$25 per tonne carbon tax as the best tool to achieve its goal of maximizing emissions reductions at the least economic cost.

1. It gives Manitobans certainty about the carbon price and emissions reductions until reviewed in 2022.
2. It creates a clear and strong starting price signal to achieve emissions reductions.
3. It produces more emissions reductions compared to the federal backstop but at a cheaper price and less cost to the economy.
4. It returns all anticipated carbon revenues back to Manitobans.
5. It provides compliance flexibility for large industrial emitters through the output-based carbon pricing system.
6. It reduces competitiveness risks to the province's energy-intensive and trade-exposed sectors.

CONTACT US

Sustainable Development
Climate Change and Air Quality Branch
160-123 Main St., Box 40,
Winnipeg, MB, Canada
R3C1A5

Email: ccinfo@gov.mb.ca
Website: www.manitoba.ca

