



# A Made-in-Manitoba Climate and Green Plan

*Discussion Paper*

Draft Regulatory Framework  
for a Made-in-Manitoba  
Output-based Pricing System



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# Introduction

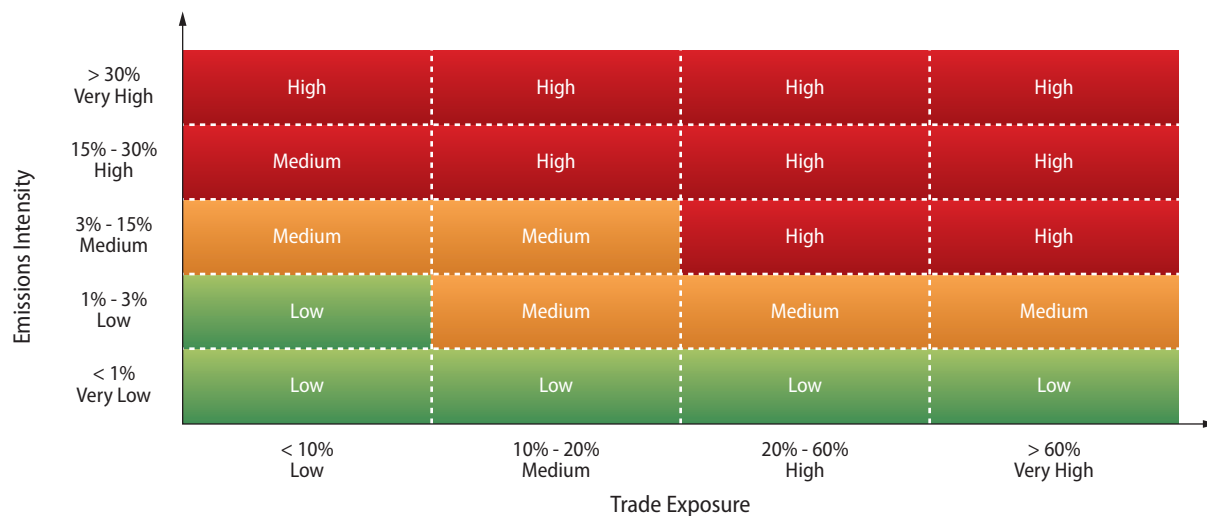
On October 27, 2017, Manitoba released the new Made-in-Manitoba Climate and Green Plan. The Made-in-Manitoba Plan sets out a bold vision for the province to become Canada's cleanest, greenest, and most climate resilient province.

On March 15, 2018, government tabled Bill 16: *The Climate and Green Plan Implementation Act*, which is anticipated to be proclaimed by the end of the fall 2018 legislative session. The Bill provides the legislative authority to implement the mandate item of a Made-in-Manitoba Climate and Green Plan, and the fiscal tools to achieve carbon emissions reductions, including the introduction of a flat \$25 per tonne carbon price.

Specifically, Bill 16 amends *The Fuel Tax Act* to add a flat tax on carbon-based fuels of \$25 per tonne of carbon dioxide equivalent (i.e. carbon tax) and establishes *The Industrial Greenhouse Gas Emissions Control and Reporting Act* (Act).

*The Industrial Greenhouse Gas Emissions Control and Reporting Act* provides government with the authority to develop an emissions compliance scheme for industrial facilities competing in emissions-intensive, trade-exposed (EITE) sectors of the economy, known as an output-based pricing system (OBPS). The aim of the OBPS is to minimize competitiveness risks for EITE facilities while retaining the carbon price signal and incentive to reduce GHG emissions.

EITE sectors are most at risk from a carbon pricing system that does not take their competitiveness circumstances into account. Emissions-intensive sectors are those with a high energy use and cost relative to their production output. Trade-exposed sectors are those with a high level of exported production from their output. The diagram below provides an illustrative example of the interplay between emissions intensity and trade exposure in an EITE sector. Depending on degree of emissions intensity and trade exposure, sectors are categorized into high, medium, and low EITE. Only high EITE sectors meet EITE criteria.



Source: Alberta Government: Standard for Establishing and Assigning Benchmarks

This document sets out draft guidance for stakeholders to be considered in the design and implementation of the OBPS. It will be used as a basis for discussion and feedback with affected companies, sectors, and interested stakeholders.

Output-based pricing systems are being established in Alberta and Saskatchewan. The government of Canada will establish an OBPS as part of its hybrid 'backstop',

together with a carbon levy, in provinces that do not institute a carbon pricing system meeting the federal benchmark by the end of 2018.

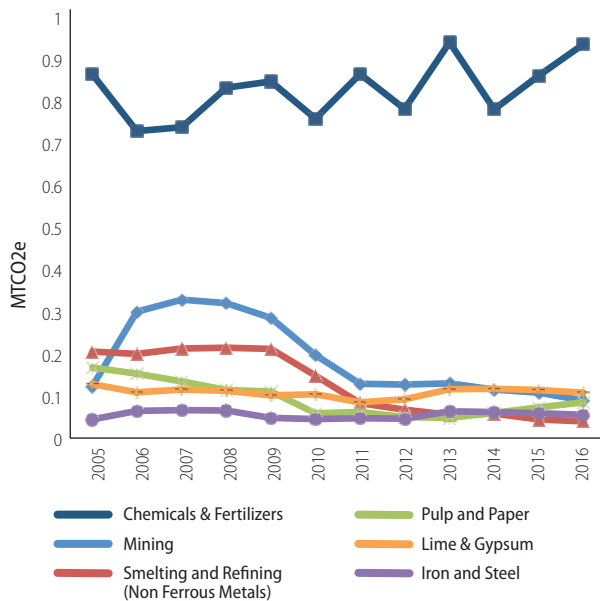
Manitoba wishes to establish its own Made-in-Manitoba OBPS reflective of its unique emissions profile, as well as its environmental and economic goals. A well-designed OBPS can reduce the overall cost of carbon compliance for industry while still improving GHG performance.



# Industrial Emissions in Manitoba

Manitoba has only a few large industrial emitters. Facilities emitting over 50,000 tonnes of carbon dioxide equivalent per year are considered to be large emitters. Historically, emissions from this sector have averaged around 1.3 megatonnes of carbon dioxide equivalent (MTCO<sub>2</sub>e) or about 6 per cent of total emissions in the province.

**Historical Emissions in Heavy Industry Sector**



Source: 2018 National Inventory Report

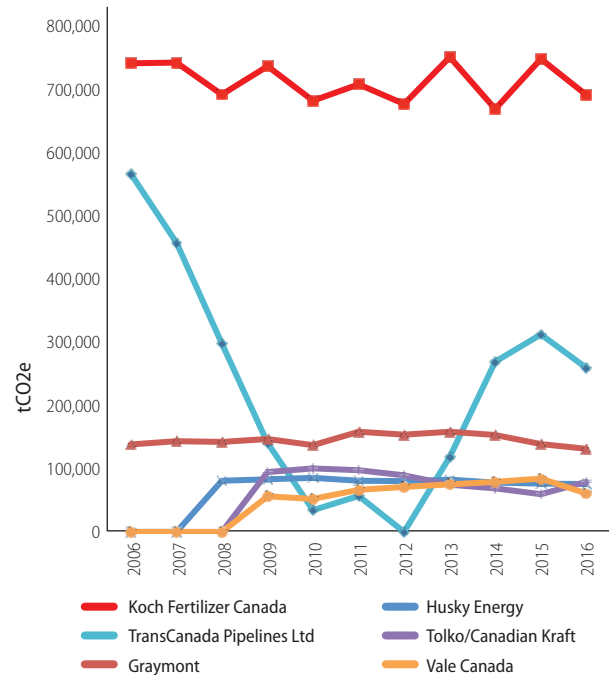
The top large industrial emitters by company are listed below.

Company	Sector/sub-sector	2016 emissions tonnes CO <sub>2</sub> e
1. Koch Fertilizer Canada	Nitrogen Fertilizer	688,159
2. TransCanada Pipelines	Natural Gas Pipelines	258,559
3. Graymont	Lime	130,624
4. Canadian Kraft Papers	Pulp and Paper	78,964
5. Husky Oil	Chemicals (ethanol)	75,252
6. Vale	Mining	60,641

Source: Environment and Climate Change Canada: Greenhouse Gas Reporting Program

Over the period of 2006 through 2016, GHG emissions from these companies have been fairly stable, with much of the year-to-year variance due to higher or lower production volumes.

**Large Industrial Emitter Historical GHGs**



Source: Environment and Climate Change Canada: Greenhouse Gas Reporting Program

# Design Purpose & Principles

The purpose of the output-based pricing system (OBPS) is to generate meaningful carbon emissions reductions through appropriate incentives that maintain industry competitiveness, prevent carbon leakage, and encourage continuous improvement in greenhouse gas (GHG) performance.

Designed correctly, OBPS can help deliver ongoing emissions reductions at the lowest possible cost to industry. It will do so through a series of performance standards, free emissions allocations up to the performance standard, and compliance obligations and options.

The Made-in-Manitoba Output-based Pricing System is anchored in the following design principles:

- 1. GHG Reductions**
  - The system will seek to deliver incremental GHG emission reductions at the lowest possible cost to industry.
- 2. Minimizing Risk of Carbon and Investment Leakage**
  - Emissions limits via performance standards will be established that carefully consider and protect the competitiveness of Manitoba industries.
- 3. Reducing Red Tape**
  - Unnecessary and duplicative administrative requirements that create burdensome red tape for industry will be avoided and minimized.
- 4. Harmonization**
  - The system will be aligned as much as possible with policies and regulations of other jurisdictions to ensure local industries are not competitively disadvantaged.
- 5. Predictability**
  - Future emissions limits and compliance opportunities will be clear from the outset of the system to provide policy, regulatory, and financial certainty to industry.
- 6. Transparency**
  - Data sources and methodologies employed to support the development and implementation of the system will be shared with impacted stakeholders with appropriate confidentiality protections.
- 7. Continuous Improvement**
  - The system will be continuously monitored and measured to assess its efficacy in achieving the design objectives and will undergo a comprehensive review in 2022.



## Overview of Output-based Pricing System

The OBPS will apply to industrial facilities (covered facilities) with annual emissions of 50,000 tonnes or greater of carbon dioxide equivalent (tCO<sub>2</sub>e).

Emissions limits for covered facilities in the form of emissions-intensity performance standards, expressed in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e), will be determined. To the extent possible, standards will be developed using a consistent approach across sectors.

Covered facilities that emit beyond their established emissions limit will be required to pay the \$25 per tonne carbon tax for each tCO<sub>2</sub>e emitted beyond their limit or meet their compliance obligations through another approved compliance option (i.e., emissions offset credits).

Covered facilities which emit less than their established emissions limit will be able to bank or sell emissions to other covered facilities up to their limit at a compliance price of \$25 per tCO<sub>2</sub>e.

## Covered Emissions Sources

The OBPS will cover emissions from the following on-site sources: stationary combustion, on-site transportation, industrial processes and product use, waste and wastewater, flaring, and some venting and fugitive sources.

Emissions associated with electricity generation off-site and other indirect emissions sources will not be subject to pricing under the OBPS.

The OBPS will include the following greenhouse gases – carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>).

## Benchmarking Methodology

The Manitoba government is considering three options for establishing emission-intensity (EI) performance standards for covered products/activities. The three options are:

1. **Facility-specific standards** - an emissions-intensity performance standard is set at the individual facility-level based on a facility's historical GHG performance.
2. **Sector-level standards** - an emissions-intensity performance standard is set at a designated percentage below the production-weighted average emissions-intensity of similar facilities within the same sector.
3. **Best-in-class standards** - an emissions-intensity performance standard is set at the emissions-intensity of the best-performing facility within a sector, globally, nationally, regionally, or provincially.

## Baseline Reference Years

The OBPS will consider the three most-recent calendar years of emissions and production data (i.e., 2015-2017) to calculate emissions-intensity performance standards for covered products/activities.



## Emissions Limits & Compliance Obligations

The OBPS will determine a covered facility's emissions limit by multiplying the established emissions-intensity performance standard (EIPS) for the facility's covered product/activity by the facility's production of the covered product/activity, as expressed below:

$$\text{Emissions Limit (tCO}_2\text{e)} = \text{EIPS } i \left( \frac{\text{tCO}_2\text{e}}{\text{units } i} \right) * \text{Production } i \text{ (units } i)$$

Where,  $i$  = product/activity

In Manitoba, there are industrial facilities with multiple product/activity lines that may warrant establishing multiple emissions-intensity performance standards (one for each product/activity). The emissions limit for these facilities will be based on the sum of the limits for each product/activity.

A covered facility's compliance obligation will be based on the following formula:

$$\text{Compliance Obligation (tCO}_2\text{e)} = \text{Facility's Total Emissions} - \text{Facility's Emissions Limit}$$

### Declining Cap Factor

In order to encourage continuous improvement in GHG performance, the stringency of emissions-intensity performance standards will increase over time. The OBPS is considering subjecting each emissions-intensity performance standard to an annual two percent declining cap factor. The declining cap factor would apply to all emissions included in the emissions-intensity standard, with the exception of industrial process emissions<sup>1</sup>. This exclusion is to recognize the limited reduction opportunities available for fixed, industrial process emissions.

### Compliance Period & Reporting

Recognizing that the OBPS will not be operational when the Act comes into force in Fall 2018, the first compliance period will not begin until January 2019. Emissions

reporting would be required as of January 1, 2019 but performance standards would not be set until June 2019. Several options for compliance periods are being considered, including annual and multi-year periods.

Registered facilities will be required to submit a compliance report for each compliance period. Deadlines for submission will be determined based on the final date chosen for the commencement of the OBPS system. Compliance reports will detail the facility's emissions, emissions limit, and its calculated compliance obligation. Additionally, reports will indicate a facility's fuel consumption by fuel type, emissions by emissions source, emissions by product/activity, and production quantity by product/activity.

Registered facilities will be required to quantify emissions using a prescribed methodology. Consideration is being given to requiring third-party review of facility reports verified by a certified third-party accredited to ISO 14065 by the Standards Council of Canada or the American National Standards Institute.

<sup>1</sup> Industrial process emissions are emissions that are the result of a non-combustion chemical or physical reaction, where the primary purpose is not for energy or heat generation



## Compliance Units

Covered facilities with a compliance obligation must compensate for excess emissions by:

- a. Remitting an emissions performance credit at a rate of one credit for each tonne of greenhouse gas emissions in excess of the limit
- b. Paying a levy at a rate of \$25 for each tonne of greenhouse gas emissions in excess of the limit
- c. A combination of both (a) and (b)

The Manitoba government will issue performance credits to facilities for each tonne of emissions (tCO<sub>2</sub>e) below their emissions limit.

## Emissions Registry & Offsets

The Manitoba government will institute an emissions registry to track the issuance, trading, and use of emissions performance credits. Each registered facility will be required to create an account with the registry once it becomes available.

Offsets will be considered as a potential compliance option for covered facilities. The Manitoba government is examining options for establishing offset protocols and an offsets registry that would recognize and track offset credits from Manitoba projects. Priority will be given initially to offset activities and protocols in the areas of agriculture, waste, and land use change and forestry as potential compliance options.

In both instances, Manitoba will work with other jurisdictions to determine if existing or shared registry platforms can be utilized. Offset protocols will be developed to match current and anticipated design standards and criteria in other Canadian jurisdictions.

## Types of Emissions Offsets Credits

- a. **Performance Credits** – Issued to an industrial operation whose emissions in a compliance period are below the limit that applies in that period
- b. **Manitoba offset credits** – under the regulations, an emissions offset credit system may be established for projects in Manitoba that reduce emissions or remove emissions from the atmosphere
- c. **Agreements with other jurisdictions** – the minister may enter an agreement respecting recognition of credits issued by the other jurisdiction

## Application

The OBPS will apply to industrial facilities with annual emissions of 50,000 tonnes or greater of carbon dioxide equivalent (tCO<sub>2</sub>e).

The OBPS will not apply to municipalities, universities, school, hospitals (MUSH), landfills, wastewater treatment facilities, or natural gas distribution networks. This exclusion is to recognize that the MUSH, waste, and natural gas distribution sectors do not compete in international markets and therefore, do not face a significant carbon leakage risk.

All industrial facilities that exceed the 50,000 tCO<sub>2</sub>e threshold must register with Manitoba Sustainable Development to receive an OBPS registration certificate.

## Registration Certificate

Registered industrial facilities will receive an OBPS registration certificate that enables them to purchase carbon tax-free natural gas and solid fuels and receive a full rebate on the carbon tax paid throughout the calendar year on all other fuel types (See Section 5 of *Bill 16: The Climate and Green Plan Implementation Act* for carbon tax rates on fuel types).

Registration requirements will include providing details on the facility operations, covered activities, and criteria to assess eligibility.

## Voluntary Participation in Output-based Pricing System (opt-in)

Specific consideration is required for industrial facilities that do not exceed the 50,000 tCO<sub>2</sub>e eligibility threshold but may experience competitiveness pressures due to the carbon tax. An opt-in provision for facilities that meet both of the following criteria is being considered:

- Have annual emissions between 10,000 and 50,000 tCO<sub>2</sub>e
- Compete in an emissions-intensive trade-exposed (EITE) sector/sub-sector of the economy (See Appendix for Preliminary List of EITE sectors/sub-sectors)<sup>2</sup>

Industrial facilities that satisfy the above requirements will be eligible to voluntarily join the OBPS and receive a registration certificate beginning January 1, 2020. During the interim period (i.e., December 1, 2018 to December 31, 2019), these facilities will be required to pay the carbon tax on their fuel purchases.

Once Manitoba Sustainable Development approves a facility's opt-in application and issues a registration certificate, the opt-in facility will be subject to the same regulatory requirements as other facilities regulated under the Act.

## New Facility Treatment

Specific consideration is required for new market entrants that do not yet have a representative period of operations necessary to establish an emissions-intensity performance standard.

Consideration will be given to the following:

- New market entrants may adopt a pre-existing, verified top-performing EIPS from another output-based system if the standard meets the principles and objectives of the Manitoba OBPS system
- Alternatively, new market entrants can apply to receive a new performance standard for their activities where no appropriate pre-existing standard is available. Once an application is accepted, the new market entrant will be subject to reporting requirements during their first three years of operations. New market entrants will not be assigned emissions limits during this period. The Manitoba government will utilize the data reported by new market entrants during the initial three years to establish any new emissions-intensity performance standards
- Establishing suitable compliance periods that could include retroactive assessment of GHG performance, including compliance options.

A key objective will be to ensure that new market entrants into Manitoba do not establish inferior performance standards that discourage new technologies and innovation that inhibit GHG improvements in the future.

Expanded current facilities will not normally be treated as a new market entrant unless they result in new products/activities that have no pre-existing EIPS that can be applied.

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<sup>2</sup> Industrial facilities in alternate sectors/sub-sectors may also receive consideration if there is demonstrable evidence they are emissions-intensive trade-exposed.



## Review

As part of a commitment made in the Made-in-Manitoba Climate and Green Plan, the Manitoba government will undertake a comprehensive review in 2022 of our Made-in-Manitoba carbon price design, including the output-based pricing system, to assess the carbon price's efficacy in achieving environmental and economic objectives.

## Timelines

- **July 2018:**
  - Guidance document released
- **September – December 2018:**
  - Workshop and consultations continue with stakeholders
  - Information and data request to covered facilities
- **November 2018:**
  - *Bill 16: Climate and Green Plan Implementation Act* receives Legislative Assembly approval
  - Registration certificate application for covered facilities, re: carbon tax
- **December 2018:**
  - Registration certificate issuance to covered facilities, re: carbon tax
- **January 2019:**
  - OBPS in effect
- **June 2019:**
  - Emissions-intensity performance standards established
- **January 2020:**
  - Opt-in commences

## Next Steps

The Manitoba government will continue to engage with industry and other stakeholders on the setting of emissions-intensity performance standards as part of the Made-in-Manitoba output-based pricing system.

The Manitoba government will also organize workshop and information sessions in fall 2018 to provide in-person support to affected industries.

The Manitoba government invites interested parties to provide written comments/feedback on the proposed regulatory framework to Manitoba Sustainable Development at the below address by September 30, 2018. Comments will be taken under advisement as we finalize regulations under *The Industrial GHG Emissions Control and Reporting Act*.

**Sustainable Development**  
Climate Change and Energy Branch  
12-155 Carlton St.,  
Winnipeg, MB, R3C 5R9

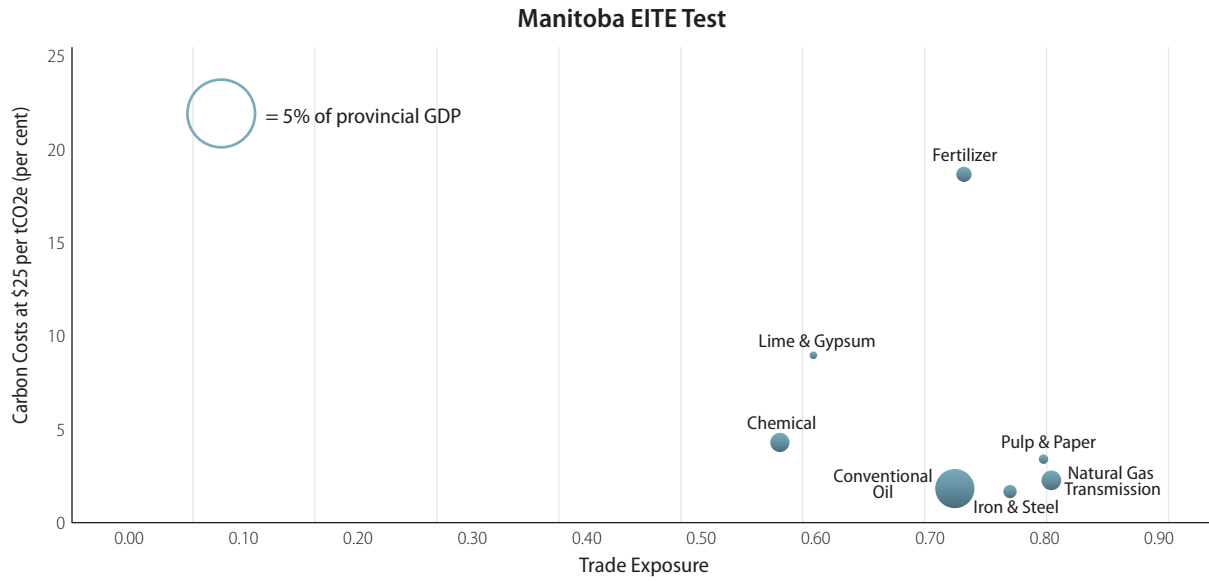
Email: [ccinfo@gov.mb.ca](mailto:ccinfo@gov.mb.ca)

## Appendix A: Preliminary List of Emissions-intensive Trade-exposed Sectors/Sub-sectors

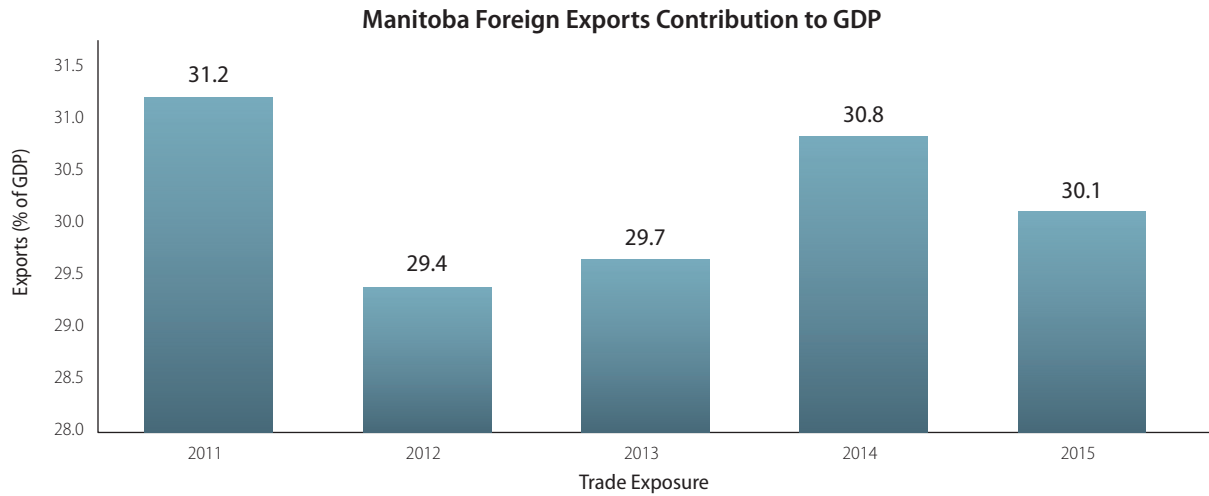
Sector/Sub-sector	Proposed Covered Product/Activity	Proposed Metric(s)
Nitrogen Fertilizer	Ammonia	Tonnes CO2e/tonne ammonia
	Nitric acid	Tonnes CO2e/tonne nitric acid
Lime	High calcium and dolomitic lime	Tonnes CO2e/tonne lime
Chemicals (Ethanol)	Ethanol	Tonnes CO2e/cubic metre ethanol
Pulp & Paper	Kraft paper	Tonnes CO2e/air dried tonne finished product
Iron and Steel	Mini Mill	Tonnes CO2e/tonne melted steel and rolled steel
Mining	Overburden and ore	Tonnes CO2e/tonne overburden and ore
Base Metal Smelting and Refining	Base metals	Tonnes CO2e/tonne base metals produced
Natural Gas Transmission	Natural gas transmission pipelines	Tonnes CO2e/km throughput
Other Manufacturing	Food/Beverage Processing	Tonnes CO2e/unit product



# Other Background Information



Manitoba is a trading province. Foreign exports consistently contribute roughly 30 percent to provincial GDP.



Manufactured goods are Manitoba's largest exporting sector, representing over 60 percent of total provincial exports.

In 2016, Manitoba's total GHG emissions were 20,935 ktCO<sub>2</sub>e.

