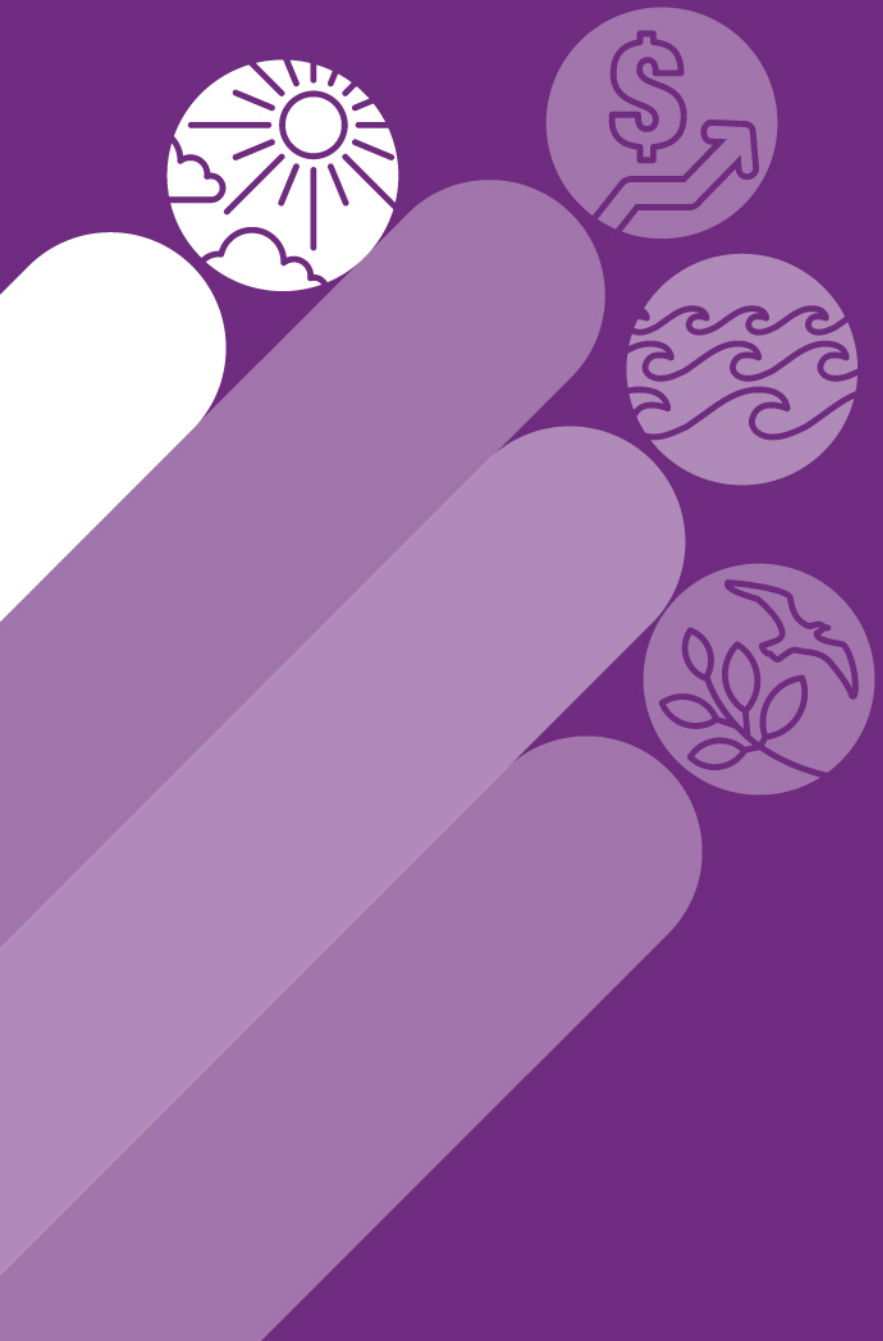
Manitoba Climate and Green Plan

Association of Manitoba Municipalities

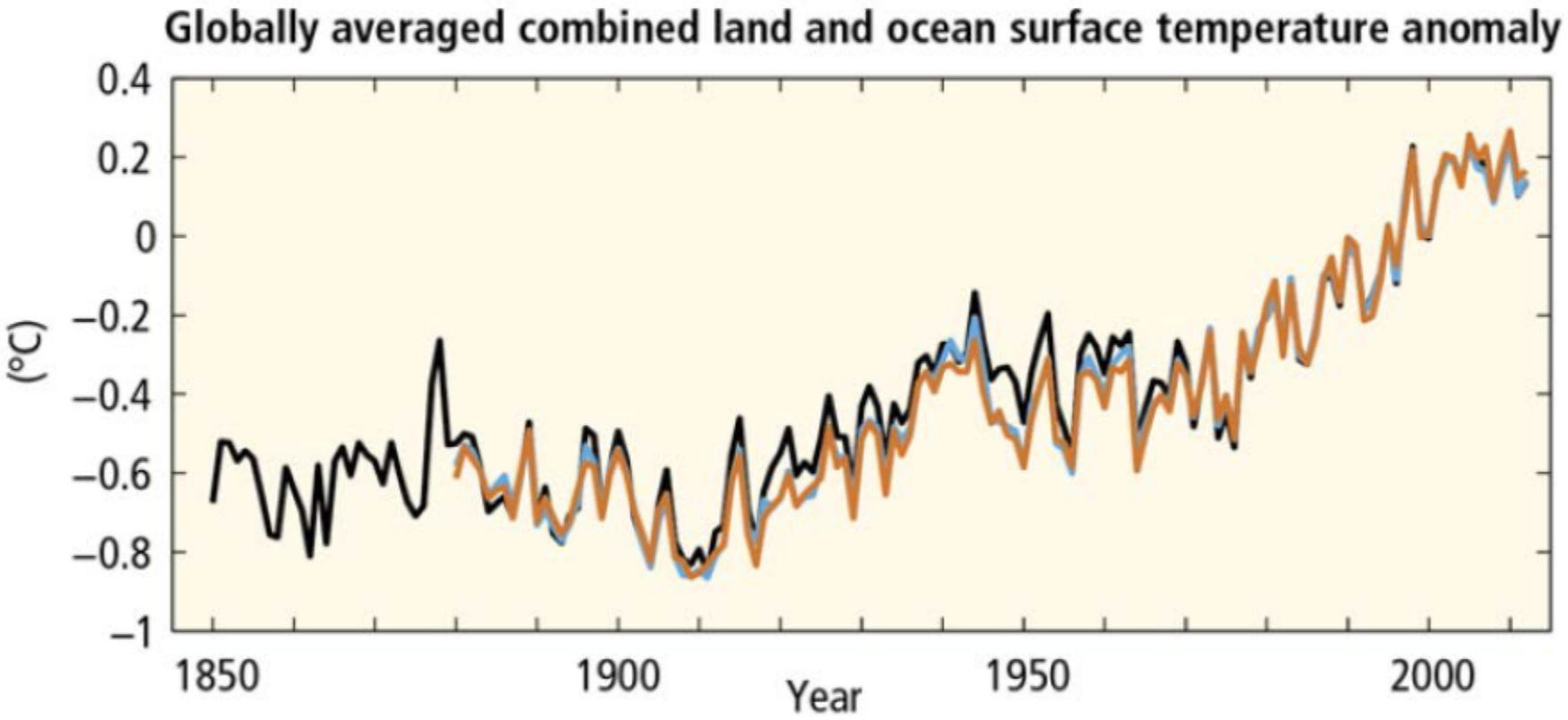
November 28, 2017



Climate and Green Plan

Context

Trend in Global Temperatures



Source: IPCC Fifth Assessment Report

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Climate Change Impacts to Manitoba Municipalities

- Information from the Prairie Climate Centre (University of Winnipeg) show that the climate in southern Manitoba by 2050 will have:
  - Up to 2-3 times more days above 30 degrees Celsius per year
  - Up to 4 weeks longer frost free season
  - Greater frequency of intense precipitation events
  - Less summer precipitation; more in winter, spring and fall
  - More variable and less stable climate

Source: www.prairieclimatecentre.ca

Global Oil Reserves

"Global proved oil reserves in 2016 rose by 15 billion barrels (0.9%) to 1707 billion barrels, which would be sufficient to meet 50.6 years of global production at 2016 levels."

- British Petroleum, Statistical Review of Oil Reserves, 2017

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Insurance Bureau of Canada

- Severe weather due to climate change is already costing Canadians billions of dollars annually.
- Claim payouts from severe weather have doubled every five to ten years since the 1980s.
- Insured damage for 2016 topped $4.9 billion – smashing the previous annual record of $3.2 billion set in 2013.

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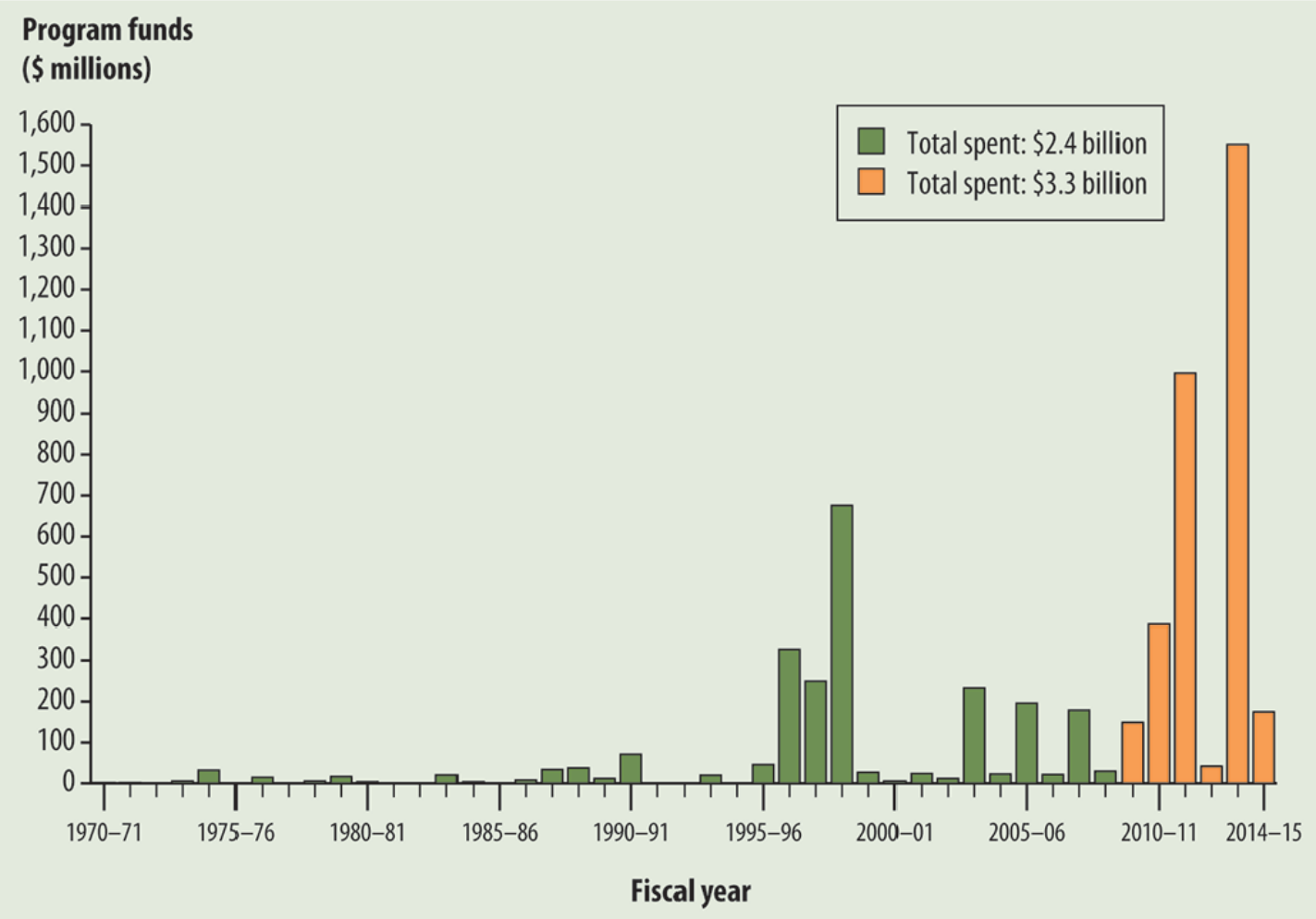
Disaster Financial Assistance Program



Source: Office of the Auditor General of Canada

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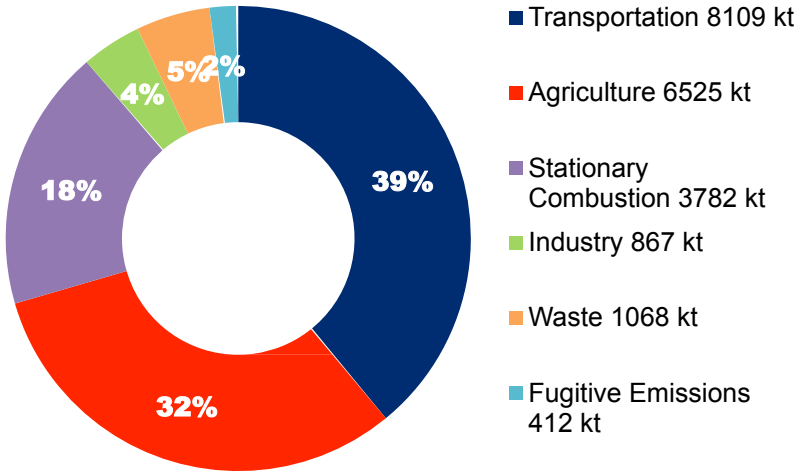
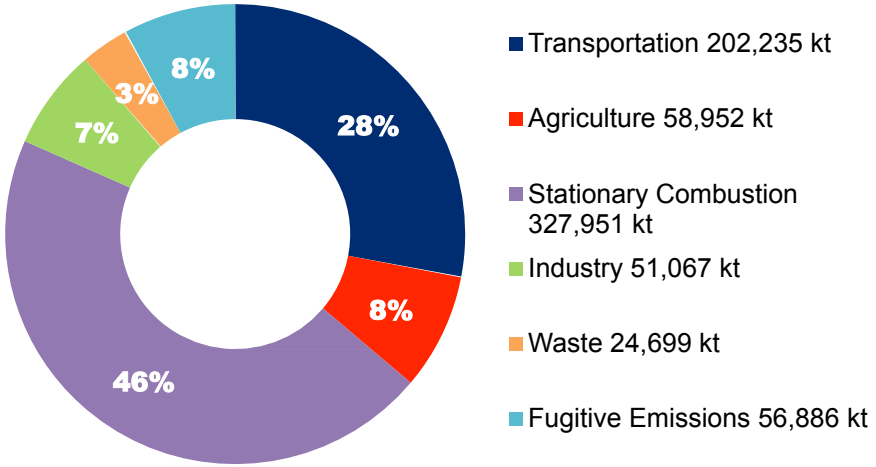
Manitoba's Unique Emissions Profile

Manitoba Emissions (2015)
20,762 kt CO2e



Canada's Emissions (2015)
721,788 kt CO2e



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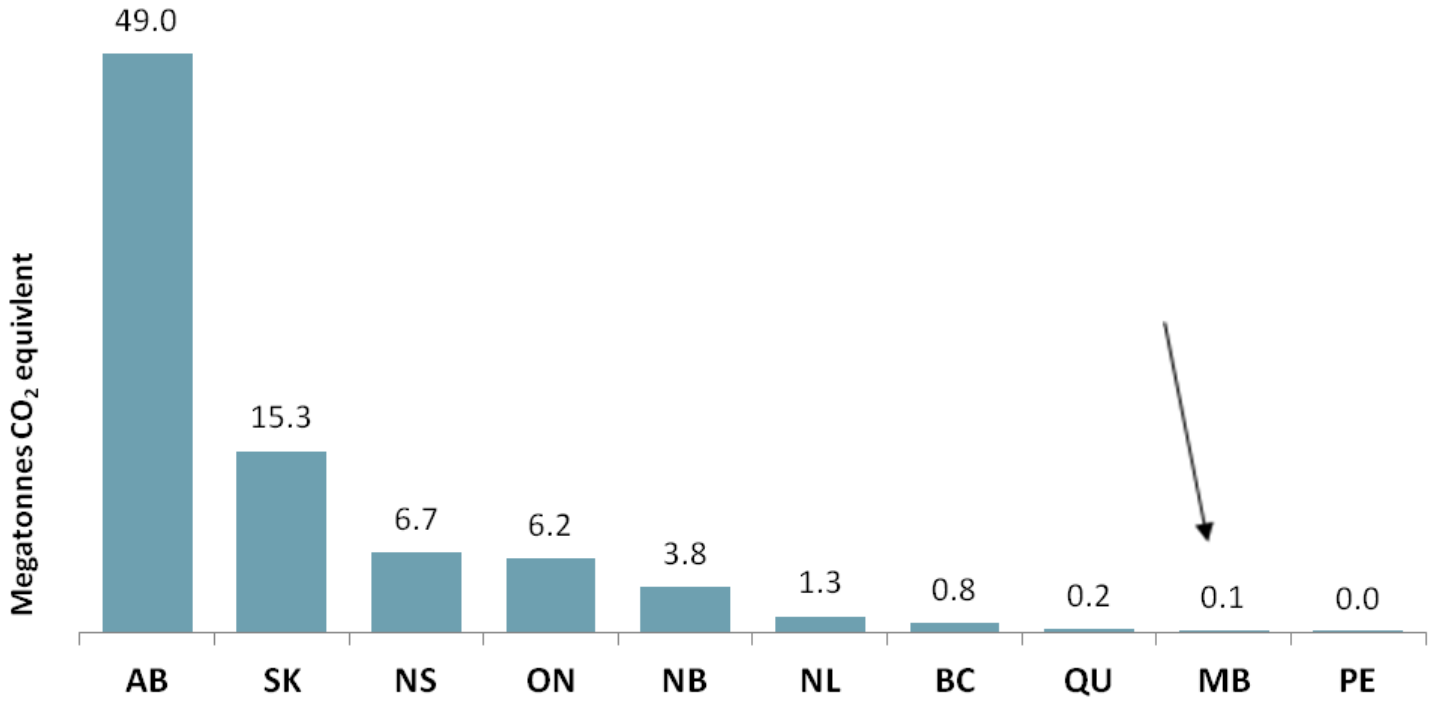
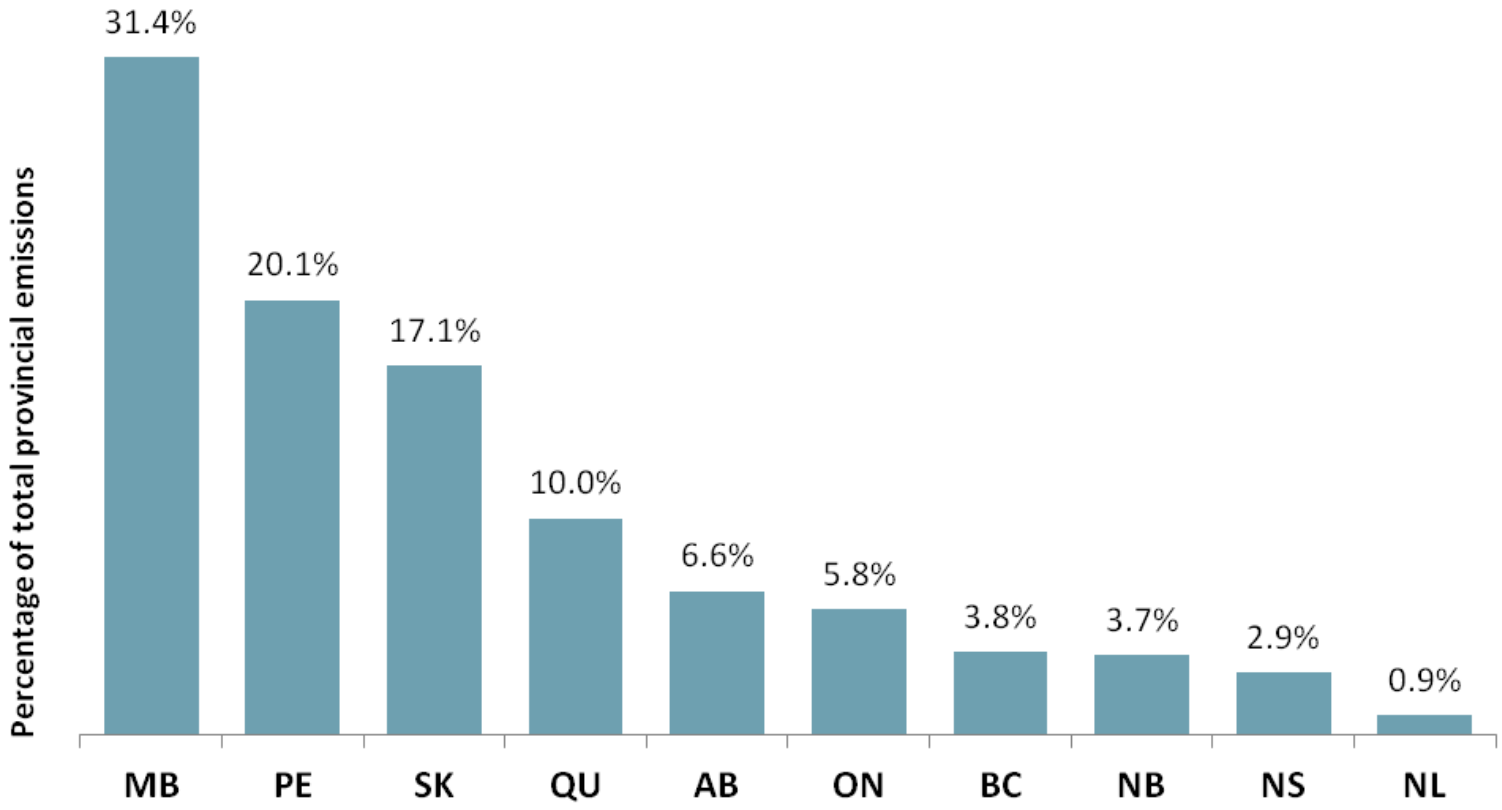
GHG Emissions from Electricity Generation
(Provincial Comparisons 2015)



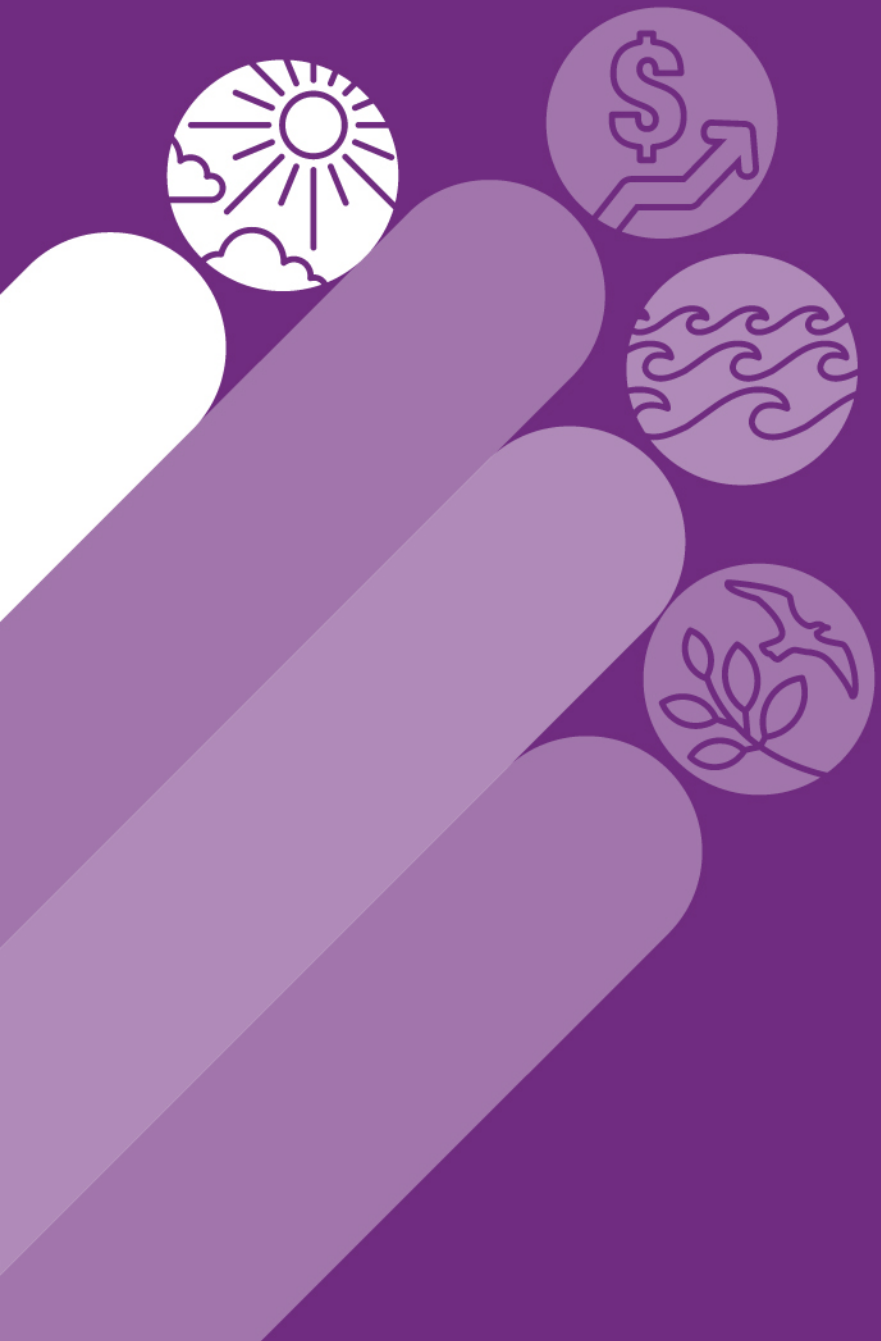
Source: National Inventory Report 2015

GHG Emissions from Agriculture

(Provincial Comparison 2015)

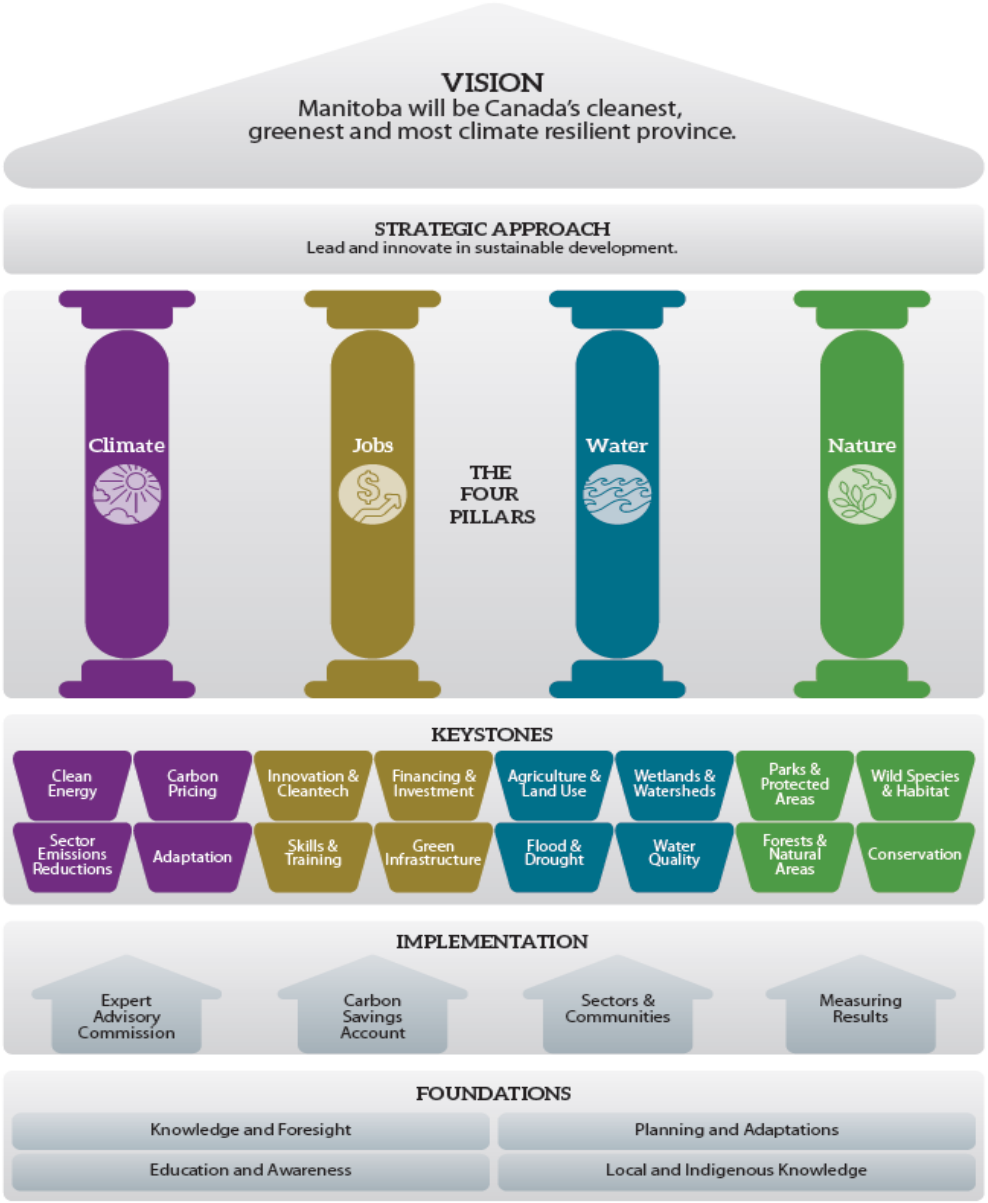


Source: National Inventory Report 2015



Climate and Green Plan

The Strategic Framework



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Carbon Pricing

Low and level at $25/tonne

Exemptions for farmers & agriculture emissions

Output based pricing for large industrial emitters

Carbon offsets and credit trading

Emissions Reductions

Targeted sector emissions reductions

Five-year Carbon Savings Accounts

Carbon sequestration via forests, farms and wetlands

Revenue Recycling

Carbon revenue recycling to households and families

Climate and Green Plan investments from carbon revenue

Public Accountability

Full public disclosure of carbon revenue and spending

Independent expert advisory commission of Manitobans

Five-year review in 2022

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Made-in-Manitoba Carbon Price

Manitoba will have a flat $25/tonne carbon levy starting sometime in 2018.

Year	2018	2019	2020	2021	2022
Made-in-Manitoba Price	$25	$25	$25	$25	$25
Federal Carbon Tax	$10	$20	$30	$40	$50
Difference from federal carbon tax	**-$15**	**-$5**	**$5**	**$15**	**$25**

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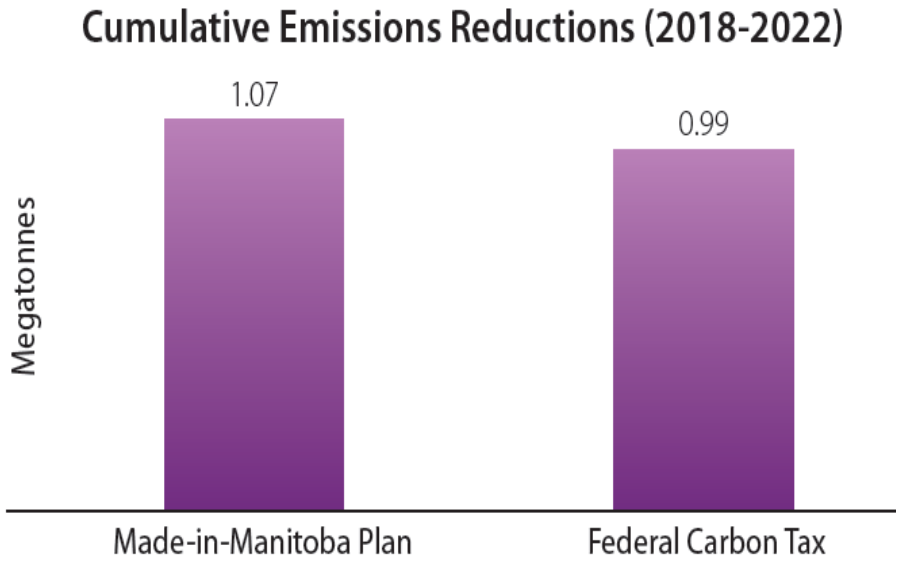
Made-in-Manitoba Price vs. Federal Carbon Tax GHG Impact

- Made-in-Manitoba carbon price reduces cumulative emissions reductions by 80,000 tonnes more than the federal carbon tax.

- This is the result of the flat $25 carbon levy bringing about higher greenhouse gas reductions from the outset and sustaining these projected emissions reductions over time.



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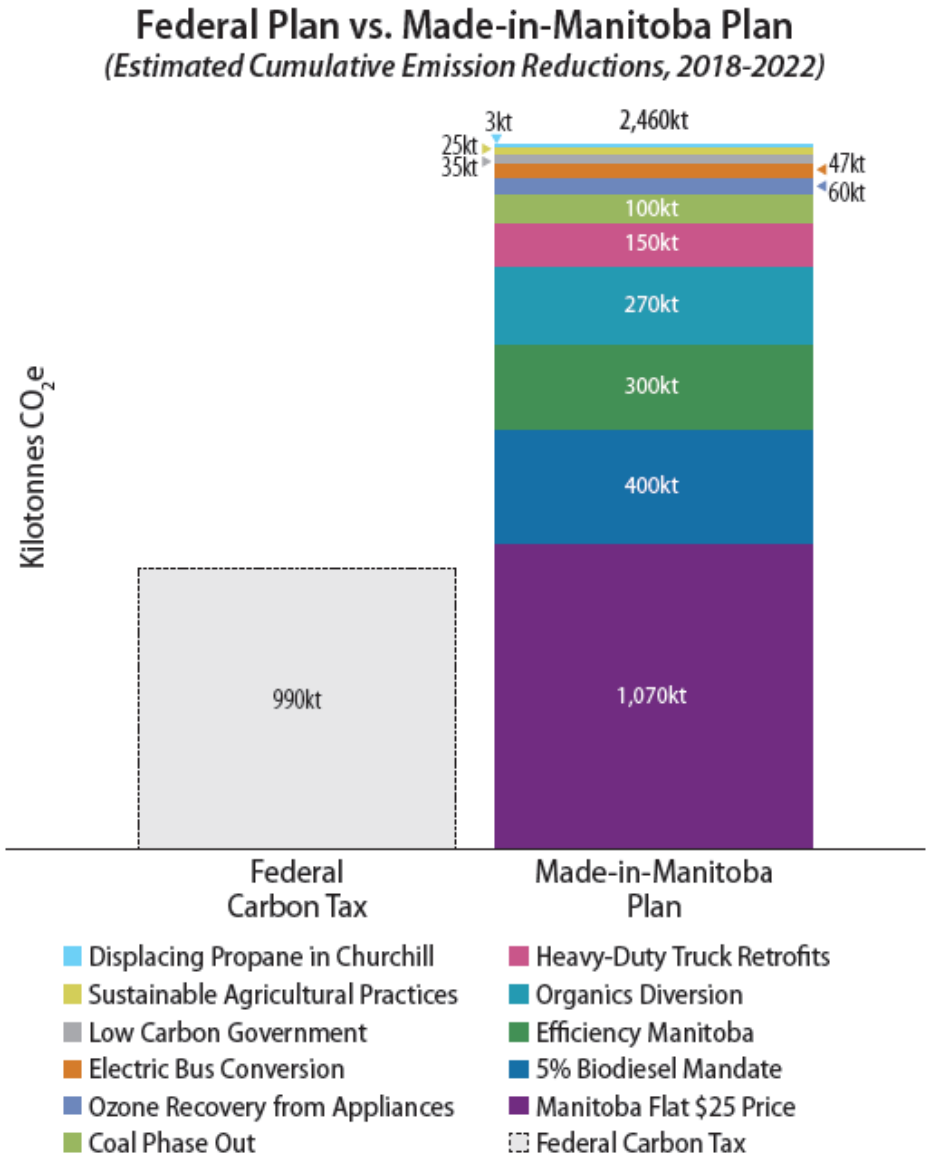
Overall Reductions Comparison



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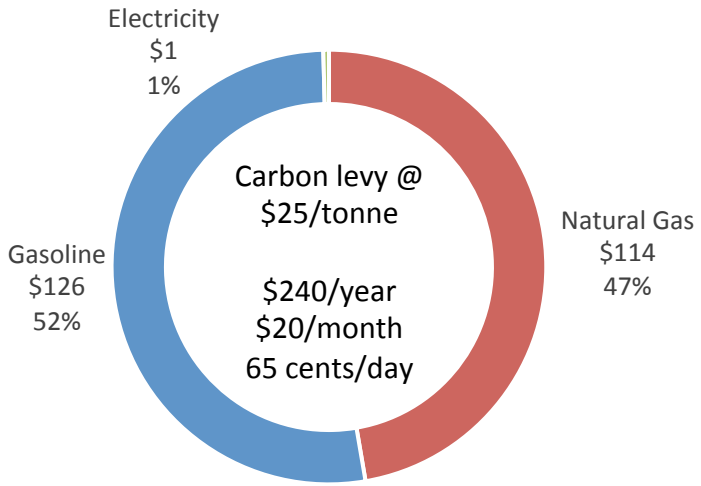
Average Household Impacts - Natural Gas Home Heating

Household heating fuel is a significant determinant of impact.

Approximately 60% of Manitoba homes heat with natural gas.

Example, in 2022, natural gas consuming household:

- costs $240/year, $20/month, 65 cents/day.
- Assumes consumption of approximately 2,400 L/year of gasoline and 2,400 m^3/year of natural gas.



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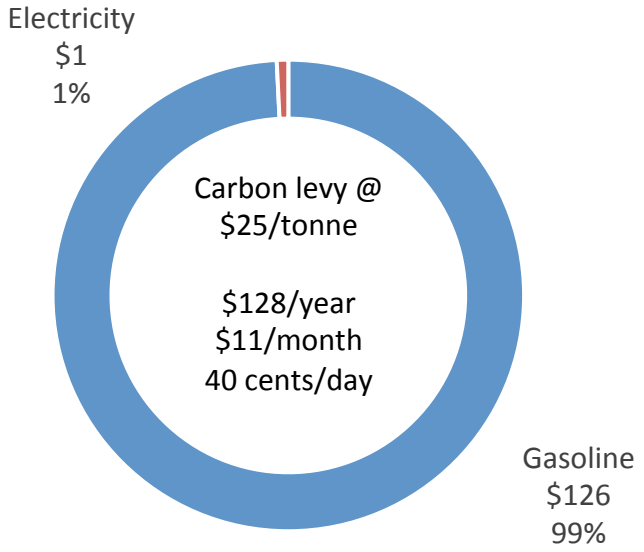
Average Household Impact - Electric Home Heating

Approximately 40% of Manitoba homes use electricity for heat.

Example, in 2022, electric heat household:

- Low carbon hydro electricity reduces cost exposure.
- Costs $128/year, $11/month, 40 cents/ day.
- Assumes consumption of approximately 2,400 L/year of gasoline.



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Made-in-Manitoba Price vs. Federal Carbon Tax Household & Business Savings

Federal Carbon Tax	**Made-in-Manitoba Plan**
$50 carbon tax	$25 carbon levy
10 cents per litre more on gas	5 cents per litre more on gas
10 cents per m^3 more on natural gas	5 cents per m^3 more on natural gas
$240 more in carbon taxes for avg. household	$240 less
$520 million in carbon taxes for economy	$260 million less

Fuel Cost Differences in 2022:

	Federal Carbon Tax	**Made-in-Manitoba Plan**
Gasoline	10.4 cents per litre	5.2 cents per litre
Diesel	13.4 cents per litre	6.7 cents per litre
Natural Gas	9.6 cents per cubic metre	4.8 cents per cubic metre

= 100% Higher under Federal Carbon Tax.

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Revenue Recycling Principles

Three principles for revenue recycling will be established:

1. All revenue collected will go to Manitoban priorities.
2. All revenue collected and distributed will be accounted for and reported annually to the public.
3. All revenue collected will focus, first and foremost, on reducing the carbon levy impact on lower and middle-income Manitobans and their families.

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Municipalities

- Understanding carbon price impacts will require municipalities to work with fuel suppliers and the provincial government to identify and track fuel consumption.

- The *Manitoba Climate and Green Plan* proposes to assist municipalities in developing local Community Energy Plans that will support them in measuring both energy use and costs and identifying opportunities to conserve energy and reduce carbon emissions.

Thank you!

Please visit:

www.manitobaclimategreenplan.ca

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