



# **Assessing the greenhouse gas and economic impacts of the Conservative Plan to Combat Climate Change**

Prepared for the Conservative Party  
of Canada

April 16, 2021

# About us

**Navius Research** is an independent and non-partisan consultancy based in Vancouver. We operate proprietary energy-economy modeling software designed to quantify the impacts of policy on energy use and greenhouse gas emissions. Our analytical framework is used by our clients across the country to inform energy and greenhouse gas abatement strategy.

We are proud to have worked with:

- Most provincial and territorial governments, as well as the federal government
- Utilities, industry associations and energy companies
- Non-profit and research organizations with interests in energy, climate change and economics

# Contents

1. Introduction
2. Approach
  - Introduction to gTech
  - Reference case
3. Policy overview
  - Overview of Conservative Plan
4. Findings
  - How does the Conservative Plan influence Canada's greenhouse gas emissions?
  - How do greenhouse gas impacts compare with announced federal policy?
  - How do economic impacts compare with announced federal policy?
  - Summary of key findings

# Introduction

## Project objective

- To quantify the greenhouse gas and economic impacts of the Conservative Plan to Combat Climate Change through 2030.

## Approach

- This analysis employs **gTech**, a computable general equilibrium model that accounts for energy production/use and economic activity across Canada. It is used by most provincial governments, various federal departments and other clients to assess the impact of technological change and climate policy on greenhouse gas emissions.
- The impacts of the Conservative Plan are measured relative to a forecast that includes policies that have been implemented or announced by the federal and provincial levels of government as of early April, 2021.

# Section 2 Approach

# Introduction to gTech (1 of 2)

This analysis uses **gTech** to simulate the effects of climate policy in Canada.

gTech is a technologically-detailed computable general equilibrium model. It is designed to simulate the impacts of government policy and economic conditions on both technological adoption and the broader economy. gTech simultaneously combines an explicit representation of technologies (everything from vehicles to refrigerators to ways of extracting natural gas from the ground) with key economic transactions within an economy. As such, the model is designed to provide insight about the impact of different policies and policy combinations on broader economic indicators such as GDP, industrial competitiveness and household welfare.

gTech is well suited for assessing climate policy impacts in Canada because it:

1. **Provides a detailed accounting of low carbon technologies and fuels that can lower greenhouse gas emissions.** In total, gTech includes over 200 technologies (e.g. electric vehicles, industrial heat pumps, electric compressors) across more than 50 end-uses (e.g. light-duty vehicles, industrial process heat, manure management) that are available or are likely to become available in the future.

# Introduction to gTech (2 of 2)

2. Simulates how firms and consumers make decisions in the real world, describing likely outcomes rather than simply prescribing financial cost-optimized solutions. Technological choice is strongly influenced by behaviour. In some cases, behaviour has as much or more influence on a decision than financial cost (e.g. if consumers only cared about minimizing financial costs, few would buy an SUV over a small car).
3. Accounts for existing and announced provincial and federal policies, including how they interact. Canada's greenhouse gas emissions are influenced by a large number of provincial and federal policies. Accounting for the combined impact of these policies is crucial for identifying the incremental impact of new policy.

# Reference case

The impacts of the Conservative Plan are measured relative to a reference case that includes policies that have been implemented or announced by the federal and provincial levels of government as of early April, 2021.

Announced federal policies that are modified by the Conservative Plan include:

- Increasing the carbon price to \$170/t by 2030<sup>1</sup>.
- Investing \$15 billion in energy efficiency, low carbon fuels, and low carbon technology<sup>1,2</sup>.
- Implementing the Clean Fuel Regulations as described in the recent regulatory impact analysis statement<sup>3</sup>.

These modifications, as well as new policies included in the Conservative Plan, are described in the following section. The Conservative Plan does not change any other federal policies (e.g. coal phase-out regulations, etc.).

1. Environment and Climate Change Canada. 2020. A Healthy Environment and a Healthy Economy. <https://www.canada.ca/en/environment-climate-change/news/2020/12/a-healthy-environment-and-a-healthy-economy.html>
2. Please note that this investment includes \$3.9 billion for nature-based solutions. The impact of this investment on greenhouse gas emissions is uncertain and has not been simulated. For reference, the Conservative Plan includes an additional \$3 billion for nature-based solutions, which is likewise excluded from this analysis due to uncertainty.
3. Canada Gazette, Part 1, Volume 154, Number 51: Clean Fuel Regulations. 2020. <https://gazette.gc.ca/rp-pr/p1/2020/2020-12-19/html/reg2-eng.html>

# Section 3

## Policy overview

# Overview of Conservative Plan

	Consumer carbon price	Flexible regulation (industry)	Flexible regulation (industry & buildings)	Flexible regulation (transport)	Spending
<b>Conservative Plan to Combat Climate Change<sup>1</sup></b>	Replace the consumer carbon tax with a <b>Low Carbon Savings Account</b> . Consumers pay into the fund at \$50/t, similar to the current carbon levy. However, households and businesses can use revenue collected by this policy for low carbon technologies and activities such as electric vehicles, heat pumps, building efficiency upgrades, and transit.	Maintain <b>Output-Based Pricing System</b> for large final emitters that reaches \$170/t by 2030 <sup>2</sup> .	Implement a <b>Renewable Gas Mandate</b> based on BC's policy, requiring that 15% of gaseous fuel consumption (by energy content) outside the oil and gas sector be from renewable sources by 2030.	Implement a <b>Zero-Emissions Vehicle Mandate</b> based on BC's policy, requiring that 30% of new light-duty vehicles sold be plug-in electric or hydrogen fuel cell by 2030.  Replace the Clean Fuel Regulations with a <b>Low Carbon Fuel Standard</b> based on BC's policy, requiring a 20% reduction in carbon intensity of transport fuels by 2030.	Replace \$15 billion of low carbon investments under the Healthy Environment and a Healthy Economy plan with \$5 billion in <b>carbon capture and storage</b> .

1. Conservative Party of Canada. 2021. Secure the Environment: The Conservative Plan to Combat Climate Change.
2. To reflect potential uncertainty during efforts to harmonize North American standards, we assume that businesses don't account for ultimate carbon price (i.e., \$170/t) in their investment decisions until after 2025.

# Section 4 Findings

# How does the Plan affect emissions? (1 of 2)

Limiting the consumer carbon price to \$50/t rather than increasing it to \$170/t lessens the incentive for firms and consumers to reduce their emissions. To compensate for the lower tax rate, the Conservative Plan introduces several new policies to achieve greenhouse gas reductions from sectors that would have been affected by the higher carbon price.

These new policies include regulations that:

- Increase the supply of light-duty zero-emission vehicles so that they account for 30% of new vehicle sales by 2030 ([Zero-Emissions Vehicle Mandate](#)). Plug-in electric and hydrogen fuel-cell vehicles qualify for compliance under this policy.
- Decrease the carbon intensity of gasoline and diesel fuel pools by 20% in 2030 ([Low-Carbon Fuel Standard](#)). Various renewable and low carbon fuels qualify for compliance under this policy (e.g. ethanol, biodiesel, hydrogenation-derived renewable diesel, electricity).
- Increase the supply of renewable gas by requiring 15% blending (by energy content) in the natural gas stream by 2030 ([Renewable Gas Standard](#)). Methane generated from agriculture and landfills, as well as hydrogen qualify for compliance.

# How does the Plan affect emissions? (2 of 2)

Similar regulatory policies have been adopted in California, BC, and Québec, leading jurisdictions in terms of climate policy development in North America. The Conservative Plan adopts these policies as they have been implemented in BC<sup>1,2,3</sup> and applies them nationally. These “flexible regulations” allow for multiple ways of complying with the policy and offset a reduction in the consumer carbon price.

The Conservative Plan also achieves greenhouse gas reductions in several other ways:

- By maintaining the output-based pricing system for industry. Seeking policy alignment with the US (to establish a North American standard) introduces uncertainty into the future carbon price for industry, which could deter low carbon investments. By guaranteeing a price of \$170/t by 2030, the Conservative Plan can offset this uncertainty.
- By using carbon revenue from the consumer carbon price to invest in low carbon technologies and activities via the Low Carbon Savings Account. This use of carbon revenue results in greater greenhouse gas reductions than would be achieved under a similar carbon price which returns most revenue directly to households.
- By investing \$5 billion in carbon capture and storage.

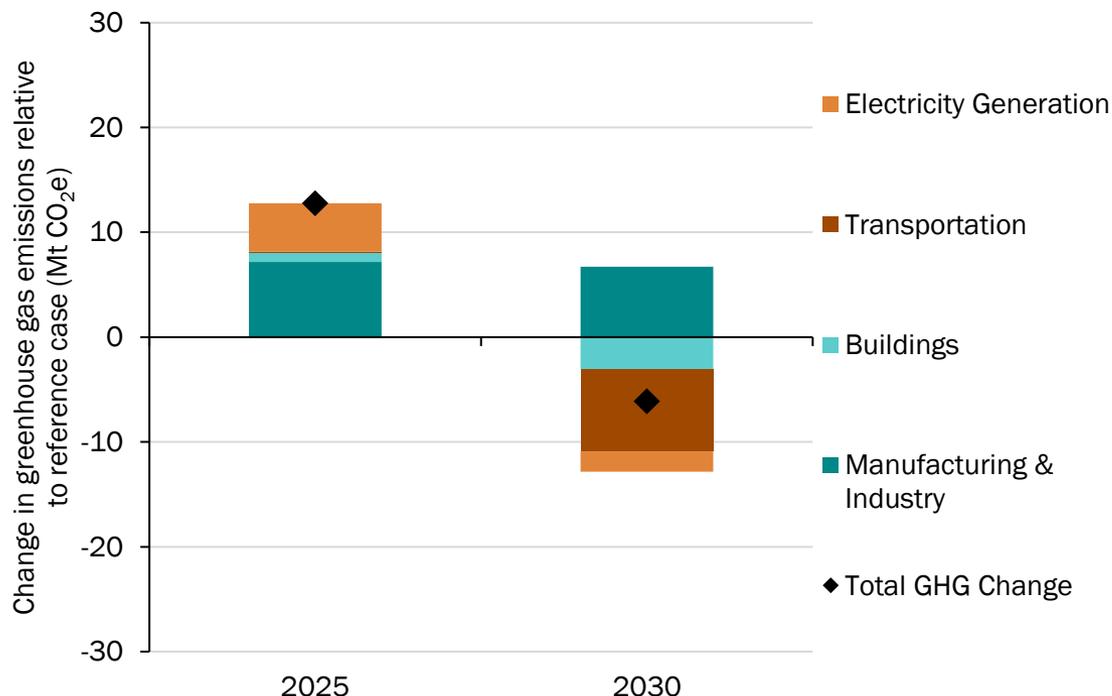
1. B.C. Renewable & Low Carbon Fuel Requirements Regulation. <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/renewable-low-carbon-fuels>

2. B.C. Zero-Emission Vehicles Act. <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/clean-transportation-policies-programs/zero-emission-vehicles-act>

3. Renewable gas standard as described in CleanBC. [https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC\\_Full\\_Report\\_Updated\\_Mar2019.pdf](https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC_Full_Report_Updated_Mar2019.pdf)

# How do emissions compare with fed policy?

The Conservative Plan achieves comparable greenhouse gas reductions as announced federal policy through 2030.

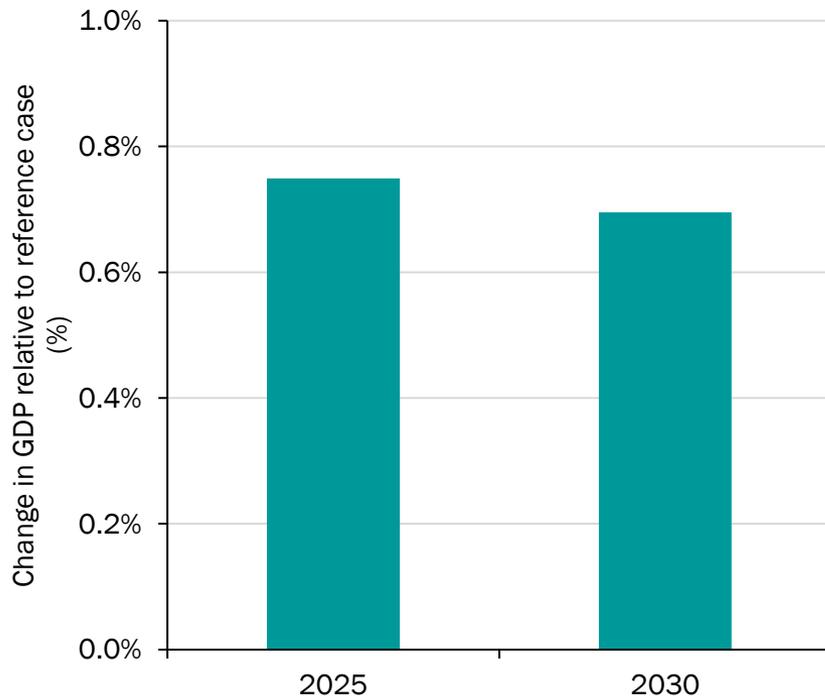


Source: Navius analysis using gTech.

- The net effect of the Plan is that Canada's greenhouse gas emissions are 13 Mt higher in 2025 and 6 Mt lower in 2030 relative to announced federal policy.
- By 2030, the Plan results in lower emissions from buildings (RNG mandate) and transport (ZEV mandate & LCFS) because these flexible regulations achieve greater reductions than an increase in the consumer carbon price from \$50/t to \$170/t.
- Emissions from electricity also decrease because of the RNG mandate.
- By contrast, current federal policy provides more certainty about the future industrial carbon price, leading to higher emissions from manufacturing and industry under the Conservative Plan.

# What are the economic impacts?

By transferring consumer carbon revenue to businesses, the Conservative Plan offsets the higher cost of regulations relative to carbon pricing.



Source: Navius analysis using gTech.

- Canada's GDP is 0.7% higher in 2030 than it would be in response to announced federal policy (before accounting for the benefits and/or costs of avoided climate change).
- The flexible regulation approach of the Conservative Plan is less cost-effective than carbon pricing. However, this cost is more than offset because the Plan's use of consumer carbon price revenue is more economically efficient.
- The Conservative Plan returns money to households and small businesses via the Low Carbon Savings Account. Under announced federal policy, most revenue is returned to households, which generates less economic activity than if a greater share of revenue is given to businesses.

# Summary of key findings

1. The Conservative Plan swaps out an increase in the consumer carbon price for a package of policies including a national ZEV mandate, LCFS and RNG mandate. These “flexible regulations”, which have been pioneered in jurisdictions like California, British Columbia and Québec, can achieve comparable greenhouse gas reductions in buildings and transport relative to a consumer carbon price that increases to \$170/t by 2030.
2. Seeking policy alignment with the US to establish a North American standard introduces uncertainty into the future carbon price for industry, which could deter low carbon investments. By guaranteeing a price of \$170/t by 2030, the Conservative Plan can offset this uncertainty and help ensure comparable industrial greenhouse gas reductions relative to announced federal policy.
3. The use of carbon revenue has a large impact on the economic effects of climate policy. Directing consumer carbon revenue to both households and businesses generates more economic activity than if most revenue is transferred to households (as it is under announced federal policy). This use of carbon revenue offsets the greater cost of the Plan’s regulations relative to carbon pricing.

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Corrections: This deck has been updated from an earlier version which stated that all consumer carbon revenue is returned to households under announced federal policy. In fact, about 90% is, with the remaining 10% being used to support small businesses, schools, universities, municipalities and Indigenous groups.

Source: Government of Canada. Climate Action Incentive Payment Amounts for 2021. <https://www.canada.ca/en/department-finance/news/2020/12/climate-action-incentive-payment-amounts-for-2021.html>