

# Climate Change Focused Reports from Canada's Commissioner of the Environment and Sustainable Development

## **Speakers from the Office of the Auditor General of Canada:**

Jerry V. DeMarco, Commissioner of the Environment and Sustainable Development

David Normand, Principal

Kimberley Leach, Principal

Philippe Le Goff, Principal

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# Presentation Outline

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## Role of the CESD

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## Overview of Climate Change Focused Reports

- Just Transition to a Low-Carbon Economy
- Hydrogen's Potential to Reduce Greenhouse Gas Emissions
- Funding Climate-Ready Infrastructure—Infrastructure Canada
- Carbon Pricing—Environment and Climate Change Canada
- Greening Government Strategy

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## Q&A Session



# What is the Commissioner's role?



# Role of the Commissioner of the Environment and Sustainable Development (CESD)

- Appointed by the Auditor General of Canada for a 7-year term.
- Audits the results of federal programs related to the environment and sustainable development.
- Comments on the draft Federal Sustainable Development Strategy, and reviews its implementation.
- Under the *Canadian Net-Zero Emissions Accountability Act*, examines and reports on the Government of Canada's implementation of the measures aimed at mitigating climate change.
- Manages the environmental petitions process under section 22 of the *Auditor General Act* and tables annual report on petitions in Parliament.



# Commissioner's Recent Reports

## Spring 2022

- ▶ [Just Transition to a Low-Carbon Economy](#)
- ▶ [Hydrogen's Potential to Reduce Greenhouse Gas Emissions](#)
- ▶ [Funding Climate-Ready Infrastructure—Infrastructure Canada](#)
- ▶ [Carbon Pricing—Environment and Climate Change Canada](#)
- ▶ [Greening Government Strategy](#)

## Fall 2022

- ▶ [Management of Low and Intermediate Level Radioactive Waste](#)
- ▶ [Review of the 2021 Progress Report on the Federal Sustainable Development Strategy](#)
- ▶ [Environmental Petitions Annual Report](#)

### Biodiversity

- ▶ [Biodiversity in Canada: Commitments and Trends](#)
- ▶ [Protecting Aquatic Species at Risk](#)
- ▶ [Departmental Progress in Implementing Sustainable Development Strategies—Species at Risk](#)



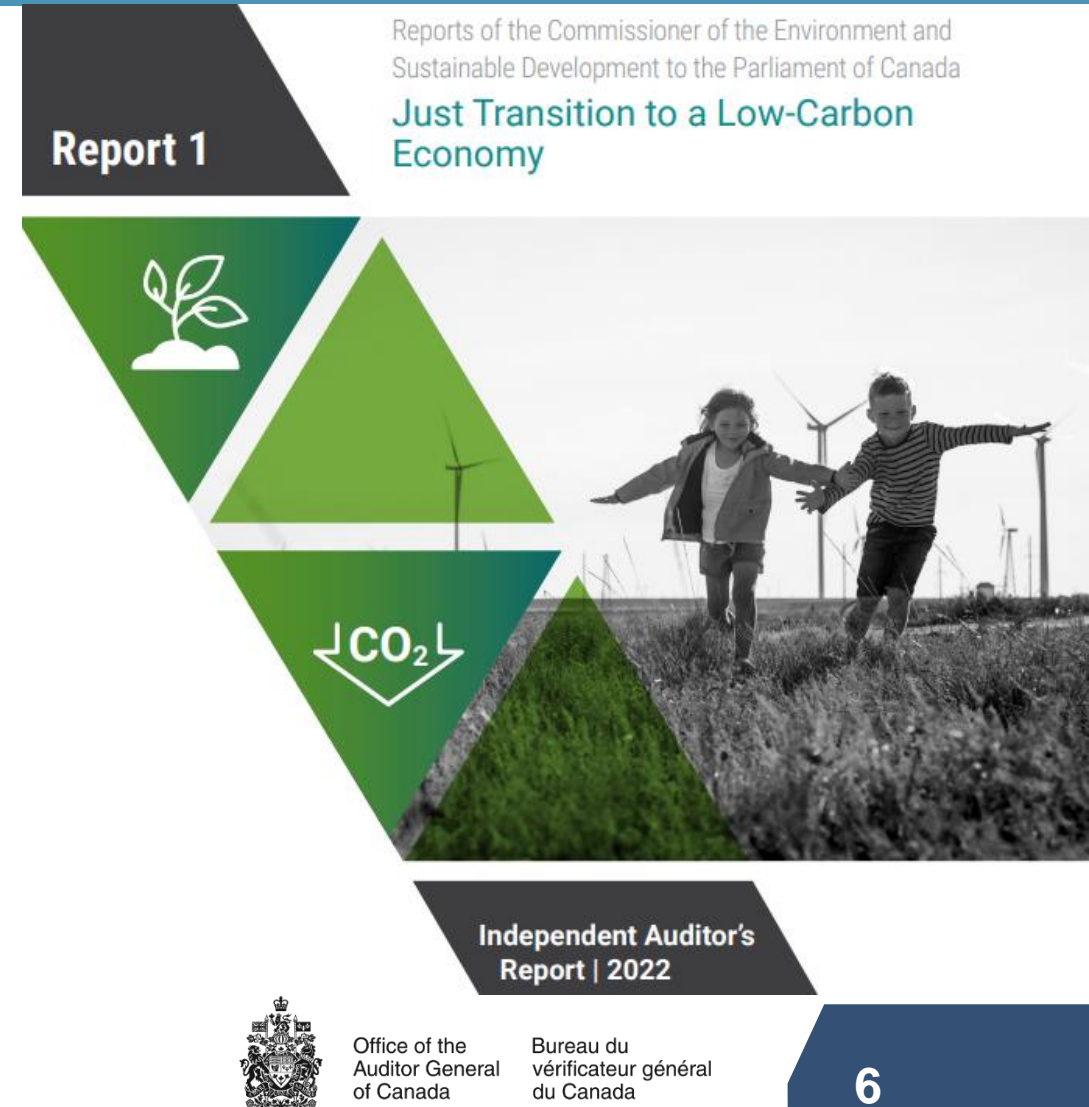
# Just Transition to a Low-Carbon Economy



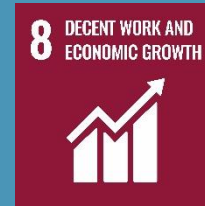


# About the Audit

- For Canada to meet its greenhouse gas (GHG) emission reduction targets, it must **transition its resource and energy sectors** to a low-carbon economy.
  - The transition in these sectors will **affect workers and communities** across the country.
- This audit focused on whether Natural Resources Canada (NRCan), Employment and Social Development Canada (ESDC) and partners had:
  - **prepared** to support workers and their communities for a just transition to a low-carbon economy
  - adequately **supported** a just transition for workers and communities affected by the accelerated federal phase-out of coal-fired electricity.



# Why is a just transition important?



## Individuals



### RISKS

- Loss of stable, good-paying jobs
- Financial stress and uncertainty

### SUPPORTS NEEDED

- Income support
- Skills development, education, and retraining opportunities
- Good-paying jobs, including green jobs
- Re-employment support
- Equitable social and labour policies for diversity
- Retirement security

## Communities



### RISKS

- Citizens moving away
- Decline of local tax bases that support the communities
- Loss of community services and local businesses
- Economic effects spreading throughout the region

### SUPPORTS NEEDED

- Economic diversification to bring in new businesses
- Infrastructure funding
- Capacity building, including community planning, and advisory services

## Coal transition

Phasing out traditional coal-fired electricity in Canada by 2030



**3,400 coal workers** will be affected in 14 different communities.

## Low-carbon transition

Achieving net-zero emissions by 2050



An estimated **170,000 direct fossil fuel jobs** could be affected in more than 50 different communities.



# Findings – Preparedness for a Just Transition to a Low-Carbon Economy

- **Findings:**

- NRCan and ESDC were **not prepared** to support a just transition to a low-carbon economy.
- NRCan **delayed the development of proposed just transition legislation** and has not developed an implementation plan.
- NRCan **did not establish a governance structure**, roles or responsibilities to help federal departments coordinate and collaborate to support a just transition.
- While NRCan and ESDC had conducted research to understand the effects of a just transition on workers and communities, they **did not work together to establish a measuring and monitoring system** to report on progress for a just transition.



# Key Recommendation – Preparedness for a Just Transition to a Low-Carbon Economy

- **Key recommendation:**
  - NRCan, with the support ESDC, should define how the federal government will support workers and communities in a just transition to a low-carbon economy and establish a federal approach.
- All recommendations were agreed to.



# Findings – Just transition for Coal Workers and Communities

- **Findings:**

- **No federal approach** for a just transition to a low-carbon economy.
- **ESDC relied on Employment Insurance benefits and did not work with provinces to amend existing Labour Market Transfer Agreements for coal workers.**
- Atlantic Canada Opportunities Agency (ACOA) and Prairies Economic Development Canada (PrairiesCan) engaged with affected workers and communities to understand their needs. But they **used existing program terms and conditions which were designed for economic diversification objectives and not for support for coal workers.**
- ACOA and PrairiesCan **established indicators that were not designed to measure and monitor outcomes specifically for the coal transition programs.**



# Key recommendations – Just transition for Coal Workers and Communities

- **Key recommendations:**
  - To better integrate just-transition principles into federal programs, ACOA, PrairiesCan, and ESDC should work with NRCan to **establish the federal government's approach**. This could include:
    - The design of new federal programs and leveraging of existing mechanisms that **meet the diverse needs** of affected workers and communities.
- All recommendations were agreed to.



# Hydrogen's Potential to Reduce Greenhouse Gas Emissions





# About this Audit

- This audit focused on whether Environment and Climate Change Canada and Natural Resources Canada comprehensively assessed the role that hydrogen should play as a pathway to reach Canada's climate commitments.

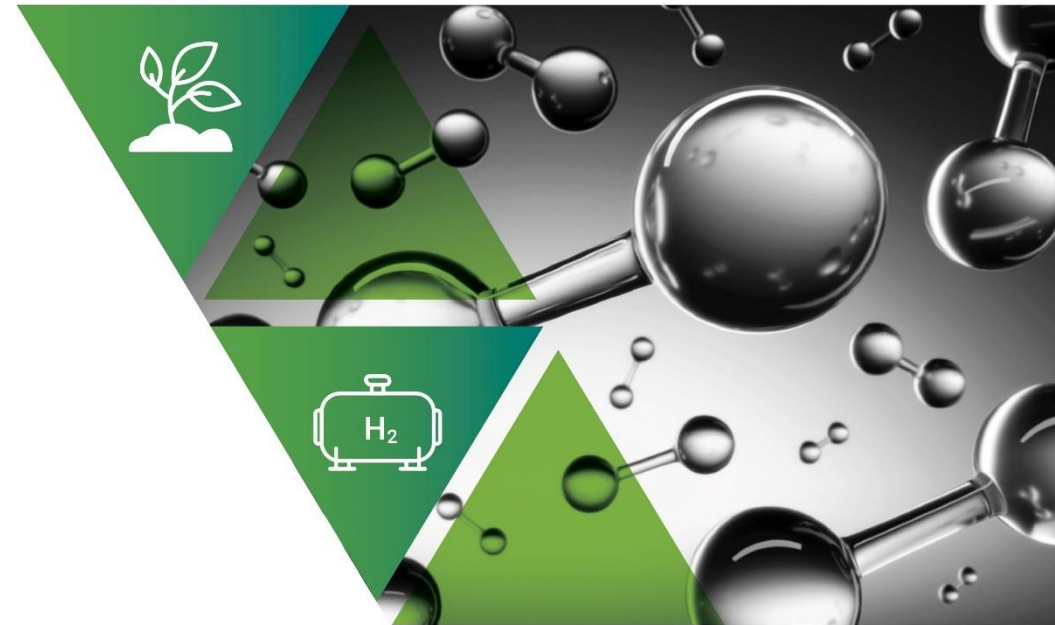
## Hydrogen's Potential

- The potential role hydrogen could play in net-zero energy systems and decarbonization is gaining significant global interest.
- Hydrogen can be used to drive down emissions where electrification is not technically or economically feasible, such as in energy-intensive industries.
- Hydrogen's potential for decarbonization depends on how the hydrogen is produced and used.

### Report 3

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### Hydrogen's Potential to Reduce Greenhouse Gas Emissions



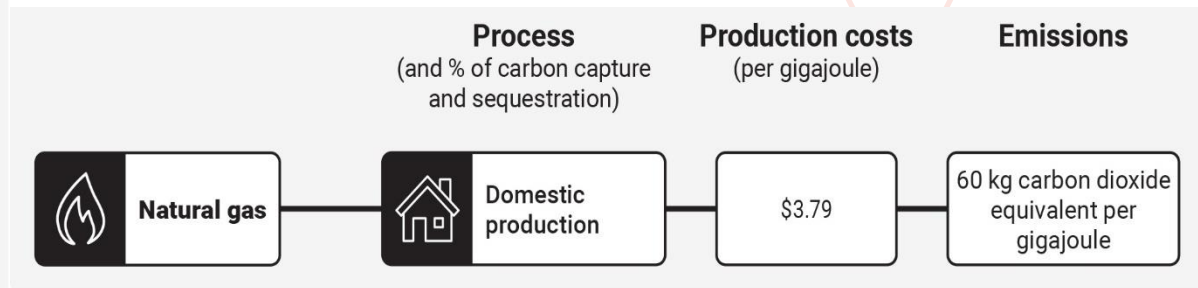
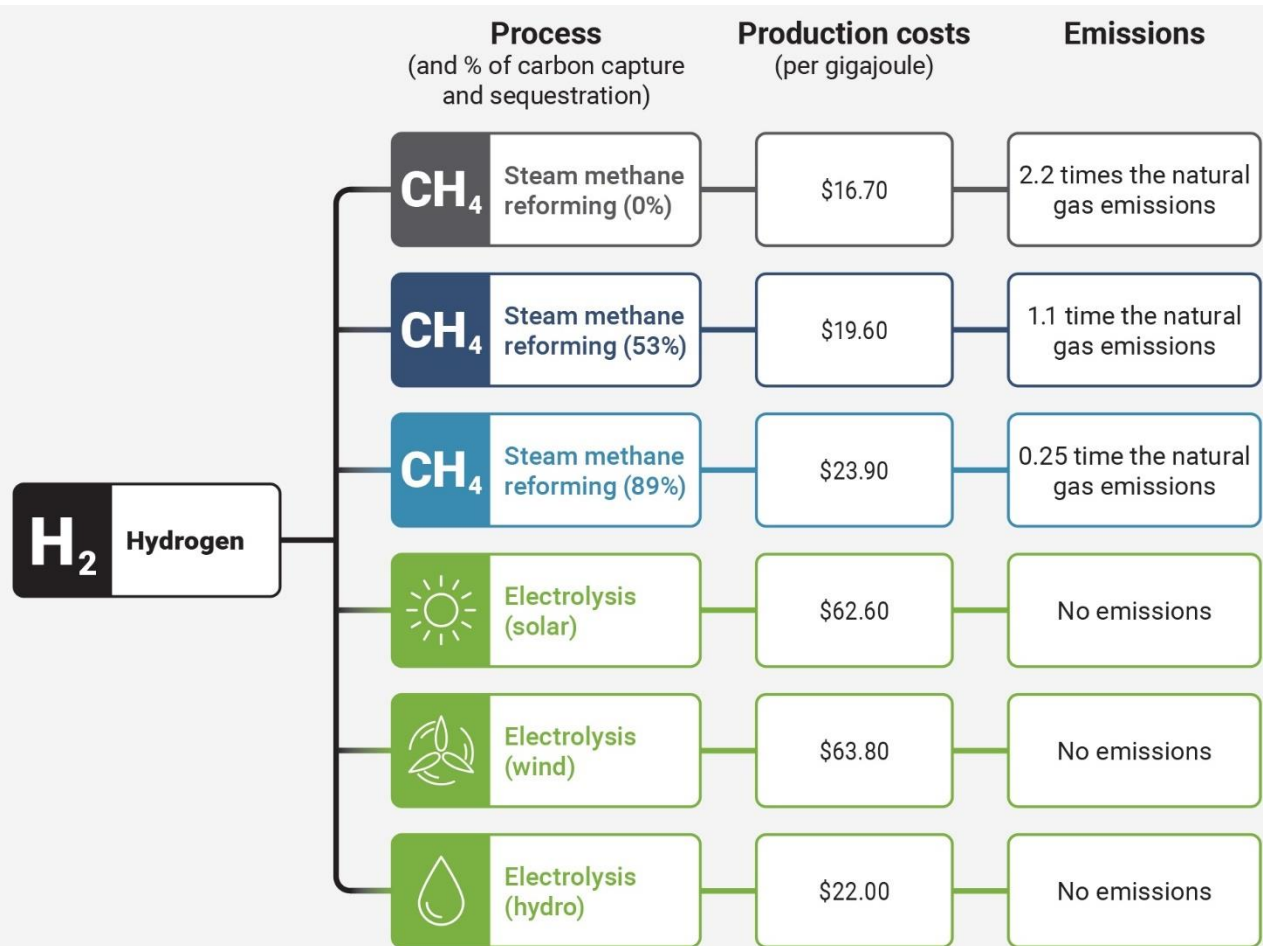
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# Hydrogen Types by Carbon Intensity and Production Costs (2020)



Note: Capital provided by sectors that produce natural gas for steam methane reforming, and steam methane reforming with carbon capture and sequestration. Capital provided by wind, solar and hydro electricity generation. Natural gas costs include capital, labour, fuel for natural gas processes. Natural gas emission is the sum of emissions from combustion and production.

Source: based on information from Environment and Climate Change Canada



# One Government, Two Approaches for Hydrogen

- **Environment and Climate Change Canada (ECCC)** expected to achieve 15 megatonnes of carbon dioxide equivalent emission reduction in 2030, using an inadequate approximation, called a proxy, in modelling the potential demand for hydrogen.
- **Natural Resources Canada (NRCan)** projected up to 45 megatonnes by favoring a transformative scenario based on unrealistically low production cost assumptions, ambitious technology uptake and did not consider supporting infrastructure costs



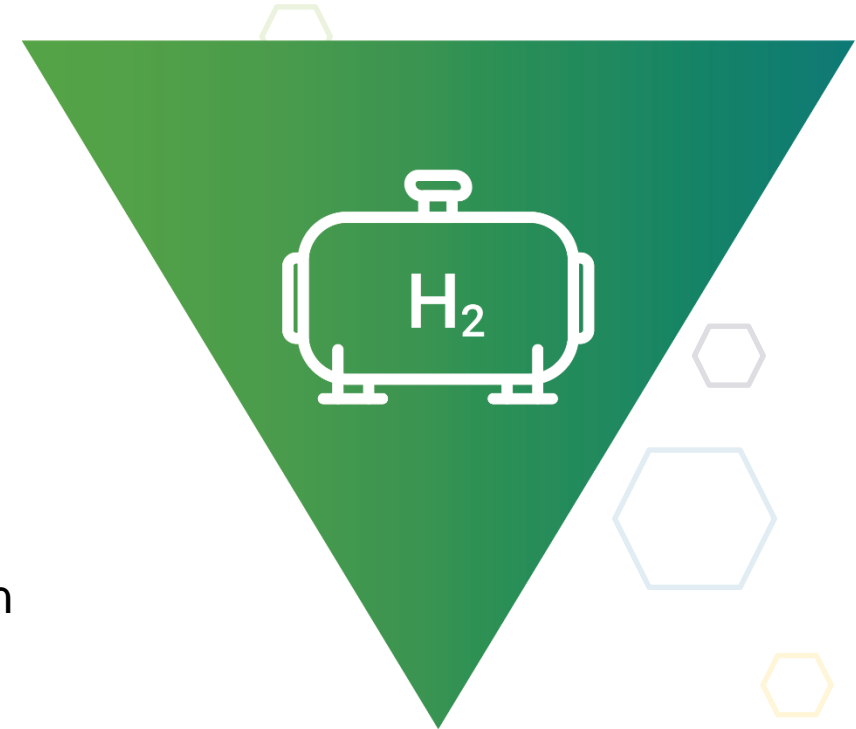
# Modelling: A Stronger Transparency Framework is Needed

- A **Healthy Environment and a Healthy Economy** presented a list of government policies, programs, and strategies that aimed to support the achievement of its emission reduction target.
- **ECCC** modelled A Healthy Environment and a Healthy Economy based on measures that sometimes have not been implemented and **did not rely on policies** that have the **necessary legislative and financial support**.
- Generally, ECCC did not distinguish existing policies and measures from those not yet announced or implemented when modelling.



# Key Recommendations

- NRCan should perform a **comprehensive bottom-up modelling** for the use of hydrogen. This modelling should account for the following:
  - emission reduction efficiencies by sector (cost of emission reductions per megatonne of carbon dioxide equivalent)
  - substitutional fuels (for example, biofuel, electrification, credit systems)
  - feasible deployment of technologies and supporting infrastructure.
- To improve consistency across departments, ECCC and other federal departments should **adopt a standard framework** to estimate emission impacts of proposed policies, clean technologies, and fuels.
- All recommendations were agreed to.





# Funding Climate-Ready Infrastructure



# About the Audit

- Climate change impacts buildings and other infrastructure, which need to be **adapted** or need to become **energy efficient** to reduce GHG emissions
- Federal funding programs help meeting these objectives
  - Over \$37 billion until 2033
- This audit examined Infrastructure Canada's design and application of the **Climate Lens** tool, and whether federal investments resulted in more resilient and less carbon-intensive infrastructure
  - **Climate Lens:** Tool used to assess the eligibility and contribution of proposed infrastructure projects



## Design of Climate Lens tool

- Infrastructure Canada designed and used the Climate Lens assessment tool
  - First version of the tool (2018-2021): With detailed estimates from proponents, provided assurance that proposed projects were more climate-resilient and helped reduce GHG emissions
  - Weaker version of the tool (2021-2022): Infrastructure Canada simplified the tool to expedite the approval process to release funding.
    - → Reduced Infrastructure Canada's ability to track and report on the funding programs' contributions to the government's climate-related objectives

## Implementation of the Climate Lens tool

- First version: Some assurance that individual projects would result in emission reductions and resilience outcomes.
- Second version: Infrastructure Canada did not have the assurance that the mitigation and resilience outcome assessments prepared by proponents were complete, reliable, and comparable.
- Inefficient management by Infrastructure Canada of climate-related information received from proponents → This made information either unreliable or difficult to analyze to determine program results.
- Poor reporting of program outcomes: Infrastructure Canada did not report publicly on the expected climate change outcomes of its investment programs.



# Key Recommendations

## Infrastructure Canada should:

- Require that information be prepared on the basis of **clear, specific, and internationally recognized** quality criteria for proponents to use when preparing emission reduction and climate resilience information for their proposed projects.
- Integrate its information management procedures, and establish effective and efficient **data transfer protocols** and **quality controls** as this information is pulled from submissions and transferred in internal systems.
- All recommendations were agreed to.





# Carbon Pricing



# About the Audit

- Carbon pricing is broadly recognized as one of the most efficient policy approaches to reducing greenhouse gas emissions
  - Fairness helps provinces, territories, and Canadians across the country appreciate that they are not being disproportionately burdened by carbon pricing.
- This audit focused on whether Environment and Climate Change Canada (ECCC) **ensured that carbon pricing systems were applied effectively, fairly, and transparently**

## Report 5

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### Carbon Pricing—Environment and Climate Change Canada



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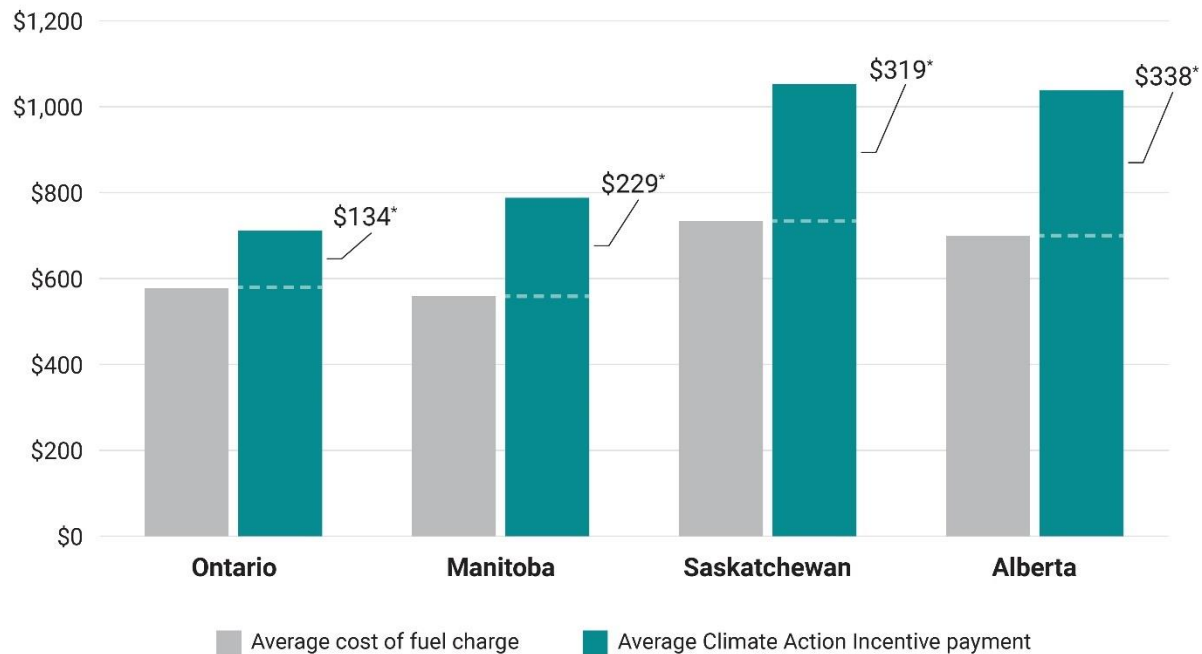
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# Impact of Carbon Pricing



**All revenue collected from the federal fuel charge is returned to households and businesses through payments and climate programs.**

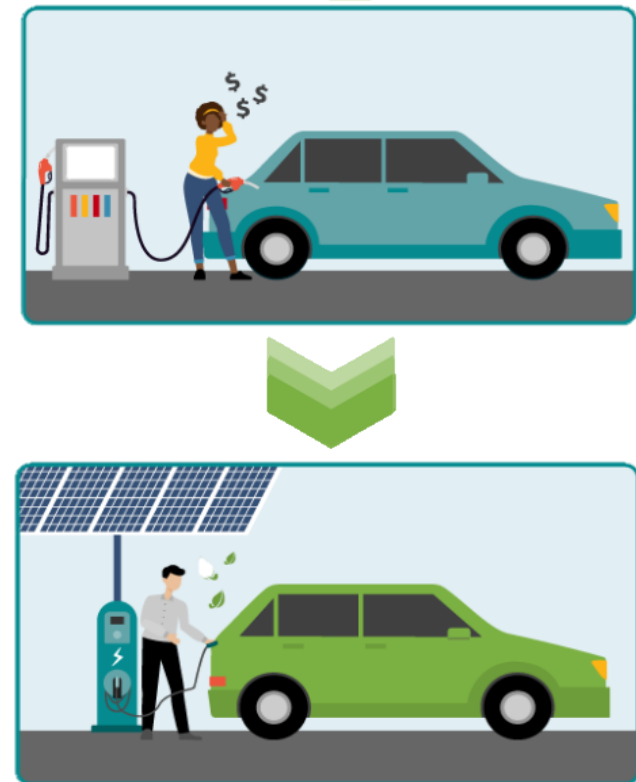
Impact of carbon pricing on average households in provinces subject to the federal fuel charge (2022–23)



\* Net benefit  
Source: Department of Finance Canada

Source: [Link](#)

**Carbon pricing puts a price on emissions in order to encourage changes in behaviour.**

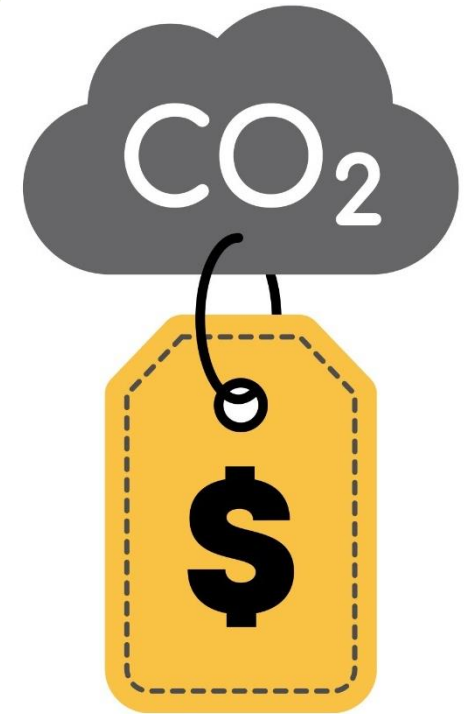


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# Findings

- ECCC ensured carbon pricing **systems were in place** in all P/Ts and strengthened the minimum standards for these pricing systems
  - But weaknesses in these systems could limit ability to meet national GHG reduction target
- Government **made efforts to lessen burden** of carbon pricing on some groups of people and industry
  - But Indigenous groups and smaller enterprises remained disproportionately affected
- ECCC reported publicly on carbon pricing
  - But **several weaknesses in the information needed** to demonstrate the effectiveness of the existing systems and to guide policy changes
- In 2021, ECCC updated the federal requirements for pricing systems, addressing several shortcomings
  - But the **update did not fully address the shortcomings** of the **large-emitter programs**



# Key Recommendations

- **Large-emitters programs**
  - ECCC should work with P/Ts to **determine an approach to minimizing domestic competitiveness** risks while improving effectiveness
  - ECCC should assess, on the basis of federal modelling, whether each P/T system is sufficiently stringent
- **Addressing the disproportionate burden**
  - ECCC should work with P/Ts to **assess disproportionate burden** of carbon pricing systems on certain groups, including Indigenous peoples, and **report publicly on measures** implemented
- **Transparency**
  - ECCC should **collect key info** on P/T systems, make it publicly available, and regularly report on their results
- All recommendations were agreed to.





# Greening Government Strategy



# About the Audit & Findings

- The government has set out a Greening Government Strategy aimed at reducing emissions generated by federal government operations.

## We found:

- **Valuable elements** in the Greening Government Strategy such as a long-term vision and targets for emission reductions but the strategy **lacked some details** about the government's plans
- Only **8 of 27 departments** had created emission reduction plans for government-owned real property but **accounted for 81% of total emissions** from departments.
  - Reaching 91% reduction by 2050 for facilities is estimated to cost \$9 billion and save \$6.2 billion, **\$2.8 billion net cost**
- National Defence and Transport Canada reduced and reported on their emissions but may have **challenges in meeting the 2050 net-zero target.**

## Report 2

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## Greening Government Strategy



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# QUESTIONS?

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