Evaluating Canadian Climate Policy

by

Chelsea Mathieson

B.Sc., (Environmental Science), Royal Roads University, 2017

Diploma (Integrated Environmental Planning Technology), Selkirk College, 2016

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Declaration of Committee

Name:	**Chelsea Mathieson**
Degree:	**Master of Resource Management (Planning)**
Title:	**Evaluating Canadian Climate Policy**
Committee:	**Tom Gunton** Supervisor Professor, Resource and Environmental Management
	Sarah McBain Committee Member Senior Analyst, Transportation The Pembina Institute

Abstract

Successful and significant reductions of GHG emissions is contingent on having effective, ambitious, and comprehensive climate policies. Policy evaluation is a crucial step in the policy cycle, providing feedback on climate policies and allowing opportunity for improvements. This paper describes a new methodology for evaluating climate policy and applies it to Canadian climate policy. The evaluation framework was developed based on international best practices in climate policy and climate policy evaluation. It assesses Canada's climate leadership performance across 20 climate policy criteria and indicators (16 general and four sector-specific). The case study application shows that the proposed evaluation methodology is feasible to apply and effective in identifying the strengths and weaknesses in climate policy. Canada was rated overall at 65.2% *green* (strong climate leadership), 30.4% *yellow* (some climate leadership), and 4.3% *red* (no climate leadership). Highlights of Canada's climate leadership included decreasing emissions trends and an application of a suite of recent climate policies that largely meet best practices criteria. The evaluation identified Canada's priorities for action to address gaps in its climate policy including implementing policies in development and planning to meet net-zero emissions in 2050.

Keywords: climate policy; policy evaluation; Canadian climate policy; climate action; climate policy evaluation; Canada; federal climate policy; GHG emissions reduction; environmental policy evaluation

Dedication

I dedicate this research to all of my loves.

To my family: first and foremost, to my mum, dad, as well as my grandparents, aunts, and uncles: you've painted on the canvass of who I am, provided emotional and financial support, and shaped the me into the person I am today.

To my wonderful partner Josh: you stand by me through the highest highs and the lowest lows, and always inspired me to keep going and never give up.

To my beloved orange cats Rockette and Mango: you bring calm to the storm, fur to my laptop, and always keep me smiling.

And finally, to nature, to planet Earth, and to all things living here: you are truly a gift.

> "Our planet is a lonely speck in the great enveloping cosmic dark. In our obscurity -- in all this vastness -- there is no hint that help will come from elsewhere to save us from ourselves. It is up to us. […] To me, it underscores our responsibility to deal more kindly and compassionately with one another and to preserve and cherish this pale blue dot, the only home we've ever known."
>
> - Carl Sagan

May this research inspire positive change, now and into the future.

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Table of Contents

Declaration of Committee ii
Abstract iii
Dedication iv
Acknowledgements v
Table of Contents vi
List of Tables viii
List of Figures ix
List of Acronyms x
Glossary xii
Image xiii

Chapter 1. Introduction 1

Chapter 2. Methods 4
2.1. Research context 4
2.2. Scope of research 5
2.2.1. Research roles and responsibilities 5
2.3. Research methodology 6
2.3.1. Literature review 7
2.3.2. Development of evaluation framework 9
Criteria and indicators 9
Ranking system 9
Compilation of evaluation framework 11
2.3.3. Data collection 20
2.3.4. Application of evaluation framework to Canadian climate policy 20
2.3.5. Limitations 21

Chapter 3. Description of Canadian Climate Policy and Evaluation Results 22
3.1. General criteria 22
3.1.1. Emission trends 22
Historic emission trends (2005-2022) 23
Projected emission trends (2021-2030) 24
3.1.2. Emissions reduction targets 25
2030 target 26
2050 target 26
Interim targets 26
3.1.3. Climate action planning 27
Climate action plan 27
Plan to meet 2030 UN target 28
Plan to meet net-zero 2050 29
3.1.4. Climate accountability and governance 29
Legislative certainty 30
Independent accountability 31
Monitoring and reporting 32

3.1.5. Climate adaptation 33
Adaptation plan 33
3.1.6. Reconciliation 34
Legislated UNDRIP 34
3.1.7. Equity 35
Plan to address equity impacts 35
3.1.8. Clean economy transition 37
Plan for a clean economy transition 37
3.1.9. Carbon price 39
End-use carbon price 40
Price on industrial emitters 41
3.1.10. Summary of general criteria 42
3.2. Sector-specific criteria 43
3.2.1. Buildings 44
New buildings 44
Existing buildings 45
3.2.2. Transportation 46
Light-duty vehicles 47
Medium- and heavy-duty vehicles 48
Public transit and active transportation 49
3.2.3. Electricity 51
Electricity generation 51
Coal phase-out 52
3.2.4. Oil and gas 53
Methane 53
Emissions cap 54
3.2.5. Summary of sector-specific criteria 55
3.3. Evaluation Summary 56

Chapter 4. Discussion and Recommendations 57
4.1. Canada's climate headway 59
4.2. Canada's priorities for action 61
4.3. Future research 63

References 65

Appendix A. Inventory of Climate Policy Evaluation Criteria and Indicators ..78

Appendix B. Database of Canadian Climate Policy Information, Including Evaluation Categories, Criteria, Indicators, Rating System, Evaluation Rating and Discussion of Rating Rationale. 100

Appendix C. Canada's fuel charge rates 2024-2030, by type of fuel 155

List of Tables

Table 1: Summary of climate policy evaluation frameworks synthesized and analyzed to create the framework used to evaluate Canadian climate policy. 8

Table 2: Types of climate policy evaluation rating systems and sources in which they were documented. 10

Table 3: General criteria, associated indicators, and ranking system used in the climate policy evaluation framework. 13

Table 4: Sector-specific criteria, associated indicators, and ranking system used in the climate policy evaluation framework. 17

Table 5: Canada's climate policy evaluation ratings for historic and projected emissions trends. 23

Table 6: Canada's climate policy evaluation ratings for emissions reduction targets. 25

Table 7: Canada's climate policy evaluation ratings for climate action planning. 27

Table 8: Canada's climate policy evaluation ratings for climate accountability and governance. 30

Table 9: Canada's climate policy evaluation rating for climate adaptation 33

Table 10: Canada's climate policy evaluation rating for reconciliation 34

Table 11: Canada's climate policy evaluation rating for equity 35

Table 12: Canada's climate policy evaluation rating for clean economy transition 37

Table 13 Canada's climate policy evaluation ratings for carbon price 39

Table 14: Canada's climate policy evaluation ratings for buildings 44

Table 15: Canada's climate policy evaluation ratings for transportation 47

Table 16: Canada's climate policy evaluation ratings for electricity 51

Table 17: Canada's climate policy evaluation ratings for oil and gas 53

Table 18: Summary of ratings received by Canada across nine sector-specific climate policy evaluation criteria 55

List of Figures

Figure 1: Climate policy evaluation research and analysis teams, including individuals' names, affiliations, and responsibilities in the project. 6

Figure 2: Flowchart of methods used to build climate policy evaluation framework and evaluate Canadian climate policy. 7

Figure 3: Canada's total GHG emissions 2005-2022 (excluding LULUCF). The dashed line indicates the overall trend, and the two orange points indicate the years where emissions were affected by the pandemic (2020 and 2021).....24

Figure 4: Canada's projected total GHG emissions 2021-2030 under the 2023 Reference Case and Additional Measures Scenarios (including LULUCF) 25

Figure 5: Canada's emissions profile by economic sector. 43

Figure 6: Canada's energy production profile in 2005, 2015, and 2022, by energy source 52

Figure 7: Summary of the proportion of colour ratings received by Canada across 23 climate policy evaluation criteria and indicators 56

List of Acronyms

CAT	Climate Action Tracker
CEPA	Canadian Environmental Protection Act
CER	Canada Energy Regulator
CERRC	Clean Energy in Rural and Remote Communities
CNZEAA	Canadian Net-Zero Emissions Accountability Act
COP	Conference of the Parties
ECCC	Environment and Climate Change Canada
EDGAR	Emissions Database for Global Atmospheric Research
EEA	European Environmental Agency
ERP	Emissions Reduction Plan
FAO	Food and Agriculture Organization of the United Nations
GBA+	Gender-based Analysis Plus
GHG	Greenhouse gas
IEA	International Energy Agency
iMHDZEV	Incentives for Medium- and Heavy-Duty Zero-Emission Vehicles
IODI	Indigenous Off-Diesel Initiative
IPCC	Intergovernmental Panel on Climate Change
iZEV	Incentives for Zero-Emission Vehicles
LULUCF	Land use, land-use change, and forestry
MHDV	Medium- and heavy-duty vehicle
MOU	Memorandum of Understanding
MHDZEV	Medium- and heavy-duty zero emission vehicle
NIR	National Inventory Report
NBCS	Nature-based climate solutions
NDC	Nationally determined contribution
NRC	National Research Council
NRCan	Natural Resources Canada
NZAB	Net Zero Advisory Body
OBPS	Output-Based Pricing System

OECD	Organisation for Economic Co-operation and Development
PPTP	Permanent Public Transit Program
REACHE	Responsible Energy Approach for Community Heat and Electricity
SFU	Simon Fraser University
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
WCI	Western Climate Initiative
ZEV	Zero-emission vehicle

Glossary

Additional Measures Scenario	Emissions projection modelling based on policies that are implemented, in development, announced, and planned
CO_2 eq	Carbon dioxide equivalents
Ex ante	Pre-emptive policy evaluation focused on the early stages of policy making and impacts of prospective policies prior to implementation
Ex nunc	Interim and ongoing climate policy evaluation based primarily on determining whether the current policy meets best practices in content and the process
Ex post	Retrospective, results-based policy evaluation that looks specifically at the impacts, outputs, and outcomes of policies that have been fully developed and implemented
Mt	Million tonnes
Reference Case Scenario	Emissions projection modelling based only on existing, implemented policies

Chapter 1.

Introduction

Global greenhouse gas (GHG) emissions from human activity have been rising since the mid-sixteenth century, and increasing exponentially over recent decades, resulting in unprecedented anthropogenic climate change (Intergovernmental Panel on Climate Change (IPCC), 2023). As the climate warms, the negative impacts of increasing temperatures and severe weather patterns are being increasingly felt across the globe (IPCC, 2023). At the Conference of the Parties (COP) 21 in 2015, the *Paris Agreement* was signed by 196 parties and stands as a worldwide commitment to limit global average temperature increase 'well below 2°C' compared to pre-industrial levels – with the aim of limiting it to 1.5°C – through the reduction of GHG emissions to net zero by the middle of the 21st century (United Nations Framework Convention on Climate Change (UNFCCC), 2015). In 2023, average global temperatures on land were the hottest on record, and more than half the world's population were exposed to warming greater than 1.5°C (Food and Agriculture Organization (FAO) of the United Nations, 2024).

It is becoming clear that ensuring a sustainable, equitable future for the planet will require immediate and urgent curbing of GHG emissions through ambitious climate action, a sentiment echoed at COP28 in December 2023, where parties concluded we have reached "the beginning of the end" of fossil fuels (UNFCCC, 2023). Even with worldwide expansion of existing and announced climate policies, plans, and legislation in recent years, the world is projected to fall significantly short of its target of net-zero emissions by 2050 (IPCC, 2023; International Energy Agency (IEA), 2023). But while the pathway to net-zero by 2050 continues to narrow, the window remains open (IEA, 2023a, 2023b), and advancement in clean energy policies, acceleration of clean energy deployment, and the technology and capacity for innovation provide reason for hope (IEA, 2023b). The coming years will be crucial in the effort to meet the global net-zero 2050 target, and countries will need to substantially strengthen their implementation of climate policies (IEA, 2021; Nascimento et al., 2022; Rogelj et al., 2021), and rachet up

their commitments when they deliver new nationally determined contributions (NDCs) under the *Paris Agreement* in 2025[1] (UNFCCC, 2015, 2023).

Canada was an original signatory of the *Paris Agreement* in 2015 (UNFCCC), committing to be a global leader in the fight against climate change. Canada has been, and continues to be, a significant contributor to GHG emissions globally (Emissions Database for Global Atmospheric Research (EDGAR), 2023; Organisation for Economic Co-operation and Development (OECD), 2024), and is currently the 12th-highest emitting country in the world - responsible for 1.4% of global emissions – with the second-highest per capita emissions among G7 nations (EDGAR, 2023). Furthermore, Canada is disproportionately affected by climate change, with temperatures rising in Canada at twice the rate of the global average (and up to three times the global average in the arctic) (Environment and Climate Change Canada (ECCC), 2022, 2024). Thus, Canada has a responsibility to be a global climate leader in the race to net-zero (ECCC, 2021).

Robust and ambitious emission reduction policies are key in reducing GHG emissions (Black et al., 2021; Höhne et al., 2015; Roelfsema et al., 2018). If executed effectively, national climate policies and legislation have proven to significantly reduce GHG emissions across all sectors and gases (Eskander & Fankhauser, 2020; Gupta et al., 2007). Policy evaluation is a crucial step in good governance and the climate policy cycle (OECD, 2020). The term 'evaluation' can be defined in many different ways. At its simplest form, the verb 'evaluation' means to "determine the merit, worth, or value of something" (Mickwitz, 2003). Similarly, in the Government of Canada, evaluation is defined as "the systematic and neutral collection and analysis of evidence to judge merit, worth or value" (Treasury Board of Canada Secretariat, 2016). Policy evaluation provides the opportunity to strengthen and improve climate policies (European Environment Agency (EEA), 2016; Schoenefeld & Jordan, 2019), identify policy gaps, help replicate and reinforce good practices, (Nascimento et al., 2022), improve decision-making (National Research Council (NRC), 2010), offer insight into the paradigms and lenses of government officials and stakeholders (Huitema et al., 2011), and be used to hold governments accountable to their climate commitments (Schoenefeld & Jordan, 2019). In addition, climate policy evaluation increases government transparency and

[1] As of 2020, countries are required under the Paris Agreement (2015) to submit progressively more ambitious GHG reduction targets to the UNFCCC every five years.

thus helps build public trust in government, as it ensures policies and decisions are based on reliable evidence and are delivering on their intended outcomes (OECD, 2020).

The purpose of this research is to outline a comprehensive and transparent framework that can be applied to evaluate completeness and robustness of climate policy, and to apply this evaluative framework to Canada's suite of climate policy instruments. This research will help develop new methods for climate policy evaluation and highlight the areas in which Canada is demonstrating climate leadership, and what areas the government needs to focus more climate policy effort. Furthermore, this research will provide a framework that can be applied to climate policy suites in other jurisdictions and nations. It could help other governments know where to focus their climate efforts, and if applied at a broader scale to countries across the globe, could help determine which countries are global climate leaders and which countries need to rachet up their climate action. This research is also part of a larger project in which federal and provincial climate policies are being evaluated, and rankings compared among jurisdictions. This project helps paint a part of the bigger picture of the provincial and federal climate policy landscape in Canada by highlighting jurisdictions that are climate leaders, and those that need to rachet up their climate action.

Following the introduction, this manuscript is organized into the following sections: Chapter 2 (Methods) outlines the formal process used to conduct this research, including the research context and scope, development and application of the evaluation framework, collection of data and policy information, and study limitations. Chapter 3 (Description of Canadian Climate Policy and Evaluation Results) is divided into 'general criteria' and 'sector-specific criteria' and provides detailed descriptions of Canadian climate policy relevant to each criterion, assigns Canada a rating for each criterion, and specifies the rationale behind each rating. Finally, Chapter 4 (Discussion and Recommendations) summarizes the general findings of the evaluation, highlights areas where Canada has made climate headway, emphasizes Canada's priorities for climate action, and offers insights into where this research could be taken in the future.

Chapter 2.

Methods

This chapter outlines the context and scope of the research, the methodologies used to develop the evaluation framework and collect information, how the evaluation framework was applied to Canada's suite of climate policies, and finally describes the limitations of the evaluation.

2.1. Research context

There is a vast body of literature around environmental and climate policy evaluation which vary widely in terms of their methods, criteria, and interpretation of the term of "evaluation" (e.g. Black et al., 2021; Crabbé & Leroy, 2008; Fujiwara et al., 2019; Huitema et al., 2011; Schoenefeld & Jordan, 2019). Evaluation of climate policy can occur at any stage of the policy cycle and will take on very different criteria and indicators depending upon the stage at which it is implemented (Crabbé & Leroy, 2008). *Ex ante* (pre-emptive) evaluation focuses on the early stages of policy making and impacts of prospective policies prior to implementation, *ex nunc* (interim and ongoing) evaluation focuses on current and recently introduced policy and takes place before the majority of outcomes and unanticipated effects are apparent (Mickwitz, 2003), and *ex post* (retrospective) evaluation looks specifically at the impacts of policies that have been fully developed and implemented (Black et al., 2021; Crabbé & Leroy, 2008; Schoenefeld & Jordan, 2019).

This research focuses on *ex nunc* climate policy evaluation, which is based primarily on determining whether the current policy meets best practice criteria for good, robust climate policy in both policy content and the process for developing the policy. It will also be considering *ex post* results-based evaluative criteria in a limited way by assessing overall trends in GHG emissions, and *ex ante* pre-emptive evaluative criteria in a limited way by assessing overall projections of GHG emissions.

2.2. Scope of research

The policies, plans, and legislation evaluated in this research are specifically restricted to those put forth by the federal Government of Canada. This research does not evaluate policies, plans, and legislation at a provincial, regional, or municipal level. Temporally, this research evaluates all current policies, plans, and legislation up to June 1, 2024. Any new policies, plans, or legislation published after this date are mentioned in a footnote, but not included in the evaluation process.

2.2.1. Research roles and responsibilities

This research is part of a bigger collaborative project between Simon Fraser University (SFU) and the Pembina Institute involving the evaluation and comparison of federal and provincial climate policies. SFU's team of three researchers were primarily responsible for conducting climate policy research and evaluation, while the Pembina Institute team of eight expert policy analysts reviewed the research for completeness, comprehensiveness, and accuracy. A complete breakdown of individuals involved, and their associated responsibilities, can be found in Figure 1. Expert analysts with a wide range of expertise were chosen by the Pembina Institute in order to maximize coverage of the range of policies and criteria that were being evaluated.

Research data and policy information from the SFU team underwent expert review at various stages throughout the evaluation process (Figure 2). The review process included the SFU research team and members of Pembina Institute analyst team, and involved measures such as online group and subgroup meetings, individual review and provision of feedback on data and information collected on spreadsheets and documents contained in shared SharePoint files, and group discussions to reach consensus on decisions around final criteria and ratings.

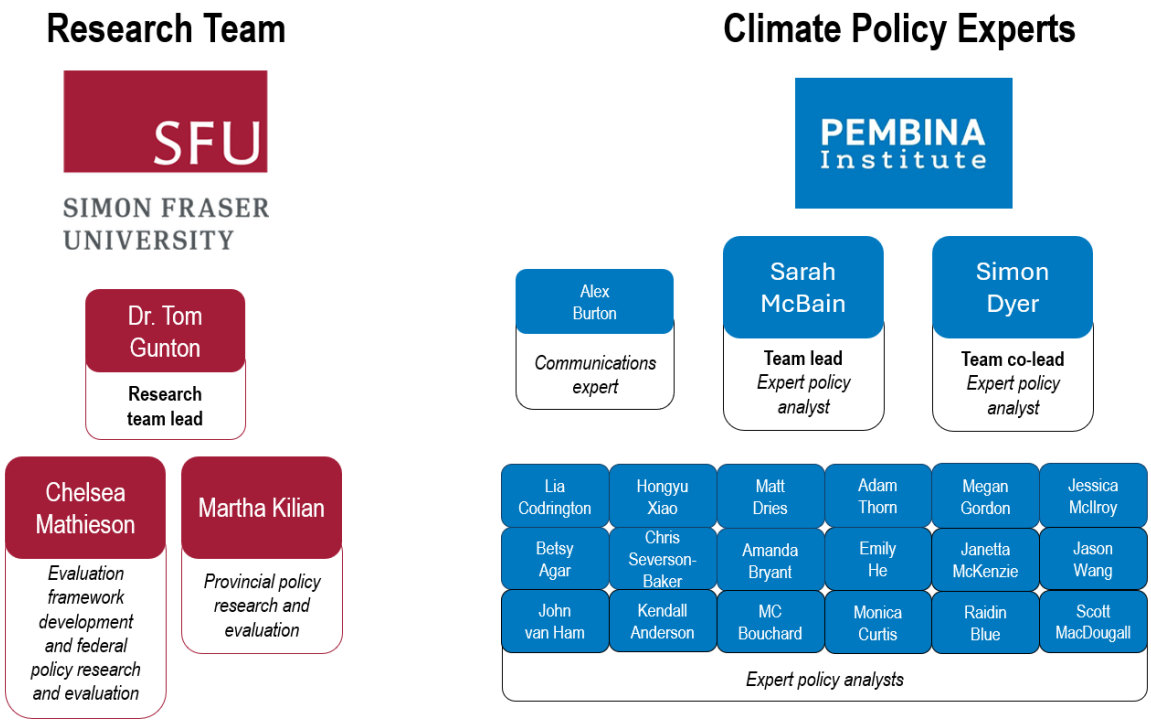

Figure 1: Climate policy evaluation research and analysis teams, including individuals' names, affiliations, and responsibilities in the project.

2.3. Research methodology

The following section outlines the methodologies used to build the evaluation framework for Canadian climate policy, collect data on Canadian climate plans, policies, and legislation, and apply the framework to the data collected. A flowchart of the research process can be seen in Figure 2.

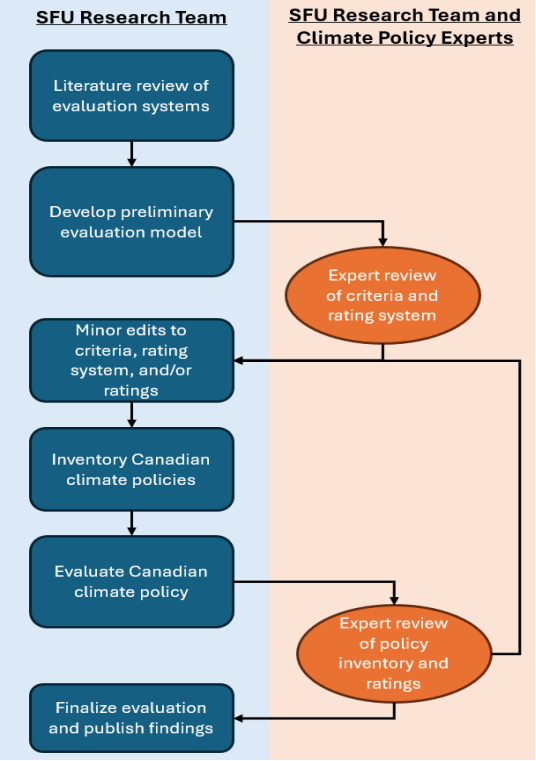

Figure 2: Flowchart of methods used to build climate policy evaluation framework and evaluate Canadian climate policy.

2.3.1. Literature review

The evaluation framework used in this research was built from methods used in a number of relevant studies. The first step was to conduct a literature review to identify current best practices in climate policy evaluation frameworks, including criteria and indicators. This involved an initial search of internet databases and websites (including the Simon Fraser University Library site, Google, GoogleScholar, DuckDuckGo, and ResearchGate) for the following key terms: “climate policy evaluation”, “environmental policy evaluation”, “energy policy evaluation”, “climate policy analysis”, and “climate change policy evaluation”. This initial search was supplemented by ‘snowballing’ (i.e. reviewing the References sections of the initial papers selected), until the same resources were repeatedly being seen in the References section, and thus felt there was a comprehensive overview of current best practices in climate policy evaluation. A total of 20 climate and environmental policy evaluation documents were analyzed from scholarly articles, grey literature, and white papers ranging from 2003 to 2022, encompassing publications from across the globe (Table 1).

Table 1: Summary of climate policy evaluation frameworks synthesized and analyzed to create the framework used to evaluate Canadian climate policy.

Author(s)	Title	Year
Black et al.	Taking stock: A global assessment of net zero targets	2021
Burck et al.	Climate change performance index	2022
Climate Action Tracker (CAT)	Evaluation methodology for national net zero targets	2021
Dusyk et al.	All hands on deck: An assessment of provincial, territorial and federal readiness to deliver a safe climate	2021
Ellis et al.	A methodology for evaluating environmental planning systems: A case study of Canada	2010
EEA	Environment and climate policy evaluation	2016
Fujiwara et al.	The practice of climate change policy evaluations in the European Union and its member states: results from a meta-analysis	2019
Höhne et al.5	Progress towards good practice policies for reducing greenhouse gas emissions: Initial results from an analysis of the status of climate related policies in 30 countries	2015
Holmes	All over the map 2012: A comparison of provincial climate change plans	2012
Huitema et al.	The evaluation of climate policy: theory and emerging practice in Europe	2011
Levin et al.	Designing and communicating net zero targets. Working paper	2020
Mickwitz	A framework for evaluating environmental policy instruments: Context and key concepts	2003
Nascimento et al.	Twenty years of climate policy: G20 coverage and gaps	2022
NRC	Designing, implementing, and evaluating climate policies	2010
Natural Resources Canada (NRCan)	Evaluation of the energy and climate change policy (ECCP) program	2020
Roelfsema et al.	Taking stock of national climate policies to evaluate implementation of the Paris Agreement	2018
Rogelj et al.	Three ways to improve net-zero emissions targets	2021
Sawyer et al.	Independent assessment: 2030 Emissions Reduction Plan, and Setting up Canada for success: A framework for Canada's emissions reduction plans	2022
UNFCCC	Race to zero: Starting line and leadership practices	2021
Zeiger et al.	Toward sustainable development: A methodology for evaluating environmental planning systems	2018

2.3.2. Development of evaluation framework

Criteria and indicators

A comprehensive list of all climate policy evaluation criteria and indicators was compiled from all the criteria and indicators found in the 20 publications reviewed. Criteria were defined as overarching policy components, with a series of indicators for each criterion to determine the degree to which each criterion was met. For standardization, indicators were phrased in the form of an affirmative statement: "The jurisdiction has…". The initial list was divided into 'general' and 'sector-specific' criteria, grouped into thematic categories of criteria with similar attributes, and organized in table format, indicating the sources which referenced each criterion and indicator. It consisted of 11 categories of general criteria with 49 associated indicators, and 8 categories of sector-specific criteria with 56 associated indicators (Appendix A). The themes which formed the categories of the preliminary list of 'general' criteria included Climate Action Plan/Strategy, Targets, Trends, Transparency and Accountability, Equity and Justice, Flexibility, Leadership, Coordination, Carbon Pricing, Climate Adaptation, and Reconciliation. Category themes within the 'sector-specific' criteria included General Sectoral, Buildings, Electricity and Heat, Transportation, Government, Land Use, Oil and Gas, and Heavy Industry.

The list of criteria and indicators was then refined and synthesized to minimize redundancies while maximizing comprehensiveness. This process involved combining criteria and indicators with similar meanings, integrating categories with similar themes, and removing criteria that were vague or unclear. The list was then submitted to the team of senior climate policy analysts with subject matter expertise (listed in Figure 1) for further review of completeness and comprehensiveness. The list was condensed down to nine categories of general criteria with 19 associated indicators and four categories of sector-specific criteria and 10 associated indicators (Appendix B); and indicators were rephrased into the form of a question.

Ranking system

Rating systems are used in policy evaluation to see how well a jurisdiction meets the criteria and indicators. Several different strategies that can be used to evaluate climate policy, and often more than one rating system is used in each evaluation

framework. Of the 20 publications that were analyzed, 18 used or referenced at least one form of raking system, with most using a combination of rating systems to best suit their criteria and indicators. A total of nine different types of rating systems were documented, included colour codes, letter grades, points, policy matrices, ranked options, sliding scales, historic/projected trends, weighted percentages, and binary (yes/no) ratings (Table 2).

Table 2: **Types of climate policy evaluation rating systems and sources in which they were documented.** Sources in which rating systems appeared are marked with and 'x'.

Rating System	Source																	
	Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	EEA, 2016	Ellis et al., 2010	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
Colour codes			x	x				x			x		x	x	x	x		
Letter grades																		x
Points		x				x												x
Policy matrices								x					x					
Ranked options	x		x	x	x	x			x		x					x	x	x
Sliding scales		x																
Tends (historic/ projected)	x	x		x	x		x						x	x	x	x		x
Weighted percents		x																
Binary (yes/no)	x		x	x					x	x	x					x		x

For the purpose of this research, a combination of different rating systems was used to suit the criteria being evaluated. For emissions trend criteria, increasing or decreasing trend ratings were used, including an upward-pointing arrow to indicate increasing emissions, and a downward-pointing arrow to indicate decreasing emissions. For some criteria, a binary yes/no rating system was used based on whether or not the criteria were met, including red and green colour coded circles (with *green* meaning yes and *red* meaning no). For the more complex criteria, and the majority of the criteria in the framework, a three-tier rating system of ranked options was used, including *green*, *yellow*, and *red* colour coded circles. For each criterion, *green* generally indicates fully meeting or exceeding the criterion, and thus showing strong climate leadership in that area; *yellow* indicates somewhat meeting the criterion, and thus showing moderate climate leadership in that area; and *red* indicates not meeting the criterion, and thus not showing climate leadership in that area. The detailed definitions and thresholds of the colour coded ratings for each criterion and indicator can be found in Table 3 and Table 4.

Where possible, major findings from the IEA's *Net Zero RoadMap* (2021, 2023a) report, Canada Energy Regulator's (CER) *Canada Energy Future* (2023) report, and the IPCC's *Climate Change 2023: Synthesis Report* were used to help determine indicators and thresholds for the rating system. These publications were chosen to help guide this framework because they map out specific measures, targets, and steps necessary to reach net zero emissions by 2050. The IEA's *Net Zero RoadMap* shares details on how the global energy sector can reach net zero emissions by 2050, the CER's *Canada Energy Future* outlines measures needed for Canada to reach net zero emissions by 2050, and the IPCC's *Climate Change 2023: Synthesis Report* provides projections on climate trends and impacts based on different global emissions scenarios.

Compilation of evaluation framework

Upon completing the draft criteria, indicators, and rating system, the full evaluation framework was again submitted to the team of senior climate policy analysts listed in Figure 1 for review of completeness, comprehensiveness, efficacy. Intermittent meetings were held with the expert analysts until consensus was reached on the final evaluation framework. The criteria and indicators used in the framework consisted of best practices in planning process (e.g. setting quantifiable objectives and targets with

timelines, developing a plan to meet the objectives, monitoring results and making revisions, and engaging with the public); best practices in tools for effective climate policy (e.g. carbon pricing, decarbonizing the electricity sector, decarbonizing the transportation sector); and outcome criteria (e.g. GHG emissions). The final evaluation framework consisted of eight categories within ‘general criteria’ with 17 associated indicators (Table 3) and four categories within ‘sector-specific criteria’ with nine associated indicators (Table 4).

It should be noted that the development of the evaluation framework was an iterative process, and some minor changes were made to a small subset of the criteria, indicators, and rating system throughout the policy data collection and evaluation processes based on gleaned information and new insights.

Table 3: General criteria, associated indicators, and ranking system used in the climate policy evaluation framework.

Category	Criteria	Indicators	Ratings
Emission Trends	Change in Emissions (2005-2022)	What is the historic emissions trend in the jurisdiction from 2005 to 2022?	↓ Decreased emissions ↑ Increased emissions
	Projected Emissions (2021-2030)	What is the projected emissions trend in the jurisdiction from 2021 to 2030?	↓ Decreasing emissions projected ↑ Increasing emissions projected
Emissions Reduction Targets	2030 Target	Does the jurisdiction have a 2030 target that aligns with the IPCC target of 43% emissions reduction from 2019 levels?	● Target is greater than or equal to 43% ● Target is 30% to 42% reduction ● No target, or target is less than 30% reduction
	2050 Target	Does the jurisdiction have a legislated target for net-zero emissions by 2050?	● Legislated (or in the process of legislating) a net-zero target ● Unlegislated net-zero target ● No net-zero target
	Interim Targets	Does the jurisdiction have interim targets for emissions reductions to supplement 2030 and targets?	● Interim targets from 2022 to 2030 and interim targets or a commitment to set interim targets from 2030 to 2050 ● Interim targets from 2022 to 2030 ● No interim targets
Climate Action Planning	Climate Action Plan	Does the jurisdiction have a climate action plan?	● Has published or updated a plan within the last five years ● Has a plan but plan was not published or updated within the last five years ● No plan

Category	Criteria	Indicators	Ratings
	Plan to Meet 2030 UN Target	Does the jurisdiction have a plan to meet the UN target of 43% emissions reduction by 2030?	🟢 Modelling shows jurisdiction will meet 80% to 100% of UN 2030 reduction target with existing and planned measures 🟡 Modelling shows jurisdiction will meet 60% to 80% of UN 2030 reduction target with existing and planned measures 🔴 No modelling, or modelling shows jurisdiction will meet less than 50% of UN 2030 reduction target with existing and planned measures
	Plan to Meet Net-Zero 2050	Does the jurisdiction have a plan to meet net-zero emissions by 2050?	🟢 Yes 🔴 No
Climate Accountability and Governance	Legislative Certainty	Does the jurisdiction have legislation to enshrine the following major components of its climate plan: • Requirement to prepare climate plan • Requirement to set GHG reduction targets and/or have targets in legislation • Reporting and monitoring requirements on a regular specified schedule that assess outcomes relative to plan objectives	🟢 All three major components of climate plan are enshrined in legislation 🟡 One or two major components of the climate plan are enshrined in legislation 🔴 None of the major components are enshrined in legislation

Category	Criteria	Indicators	Ratings
	Monitoring and Reporting	Does the jurisdiction's public monitoring program contain these features: • Public reporting on a regular specified schedule • Assessing progress in implementing plan components • Assessing progress in meeting targets • Identifying measures to address gaps • Is independently reviewed	🟢 Has all five features 🟡 Has two to four of the features 🔴 No public monitoring program, or has a public monitoring program that has none or one of the features
Climate Adaptation	Adaptation Plan	Does the jurisdiction have a climate adaptation plan?	🟢 Has a comprehensive climate adaptation plan that identifies major geographic, demographic and sectoral vulnerabilities and outlines measures to address major vulnerabilities 🟡 Has a general framework and commitment to develop a comprehensive climate adaptation plan 🔴 No framework for a climate adaptation plan, or no commitment to develop a comprehensive climate adaptation plan
Reconciliation	Legislated United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)	Has the jurisdiction legislated UNDRIP?	🟢 Jurisdiction has legislated UNDRIP 🟡 Jurisdiction has committed to legislating UNDRIP 🔴 No commitment to legislate UNDRIP

Category	Criteria	Indicators	Ratings
Equity	Plan to Address Equity Impacts	Does the jurisdiction have a plan that: • Assesses the distribution of climate impacts and policies by key stakeholders and equity-deserving groups • Addresses and mitigates inequities in the distribution of impacts	🟢 Assesses impacts and addresses inequities 🟡 Partially assesses impacts and/or partially mitigates inequities 🔴 Does not assess impacts and does not mitigate inequities
Clean Economy Transition	Plan for a Clean Economy	Has the jurisdiction: • Assessed the economic impact of climate change and climate policies to estimate changes in employment, by employment type • Developed and implemented training policies to meet the demand for new employment opportunities created by climate impacts and policies and to mitigate adverse impacts on workers	🟢 Both measures are implemented 🟡 At least one measure is implemented or in the process of being implemented 🔴 Neither measure is implemented or is in the process of being implemented
Carbon Price	End-Use Carbon Price	Does the jurisdiction have a carbon price that achieves the IEA's 2050 net-zero target price of USD $130 per tonne by 2030?	🟢 Price achieves or exceeds USD $130 per tonne by 2030 🟡 Price achieves less than the target price and/or excludes some emissions covered by the federal benchmark 🔴 The jurisdiction does not have a price on end-use carbon
	Price on Industrial Emitters	Does the jurisdiction have a carbon price on industrial emitters that achieves the IEA's 2050 net-zero target price of USD $130 per tonne by 2030?	🟢 Price achieves or exceeds USD $130 per tonne by 2030 🟡 Price achieves less than the target price and/or excludes some emissions covered by the federal benchmark 🔴 The jurisdiction does not have a price on end-use carbon

Table 4: Sector-specific criteria, associated indicators, and ranking system used in the climate policy evaluation framework.

Category	Criteria	Indicators	Ratings
Buildings	New Buildings	Has the jurisdiction adopted the target of zero-carbon-ready[2] requirements into building code by 2030 for all new buildings?	🟢 Has committed to zero-carbon-ready buildings by 2030 🟡 Has committed to zero-carbon-ready buildings but has no specified implementation date 🔴 Has not committed to zero-carbon-ready buildings
	Existing Buildings	Does the jurisdiction have: • Targets and a plan to retrofit existing buildings to zero-carbon ready by at least 20% by 2030; 35% by 2035 and 50% by 2040 • Incentives for the installation of heat pumps to replace fossil fuel heating • A ban on or commitment to ban installation of standalone new fossil fuel heating systems by 2030	🟢 Has at least two of these measures 🟡 Has one of these measures 🔴 Has none of these measures
Transportation	Light-Duty Vehicles	Does the jurisdiction have: • A legislated zero-emission vehicle (ZEV) sales regulation equal to or greater than CER and IEA targets of 60% new zero-emission vehicle sales by 2030 and 100% by 2035 • Incentives for the purchase of a zero-emission vehicle and infrastructure	🟢 Has a legislated ZEV sales regulation equal to or greater than CER and IEA targets with penalties for non-compliance and has ZEV purchase and infrastructure incentives 🟡 Has either a legislated ZEV sales regulation or ZEV purchase and infrastructure incentives 🔴 Has no legislated ZEV sales regulation and no ZEV purchase and infrastructure incentives

[2] Zero-carbon-ready is defined by the IEA (2023a) as "a building is highly energy efficient and either uses renewable energy directly, or an energy supply that can be fully decarbonized, such as electricity or district heat."

Category	Criteria	Indicators	Ratings
Transportation	Medium- and Heavy-Duty Vehicles	Does the jurisdiction have: • A legislated zero-emission vehicle (ZEV) sales regulation equal to or greater than CER targets of 35% new zero-emission vehicle sales by 2030 and 100% by 2040 • Incentives for the purchase of a zero-emission vehicle and infrastructure	🟢 Has a legislated ZEV sales regulation equal to or greater than CER targets with penalties for non-compliance and has ZEV purchase and infrastructure incentives 🟡 Has or is in the process of developing a legislated ZEV sales regulation and/or ZEV purchase and infrastructure incentives 🔴 Has no legislated ZEV sales regulation and no ZEV purchase and infrastructure incentives
	Public Transit and Active Transportation	Does the jurisdiction have: • Public transit and active transportation policies included in its climate plan • Targets for significantly increasing public transit and active transportation trips • Initiatives to increase public transit and active transportation to meet the targets • An estimate of the impact of the initiatives on public transit and active transportation trips • A plan to make public transit carbon neutral no later than 2040	🟢 Has four or more measures in place or in development 🟡 Has two to three measures 🔴 Has one or no measures
Electricity	Electricity Generation	Does the jurisdiction have a plan to decarbonize its electricity sector by 2035?	🟢 Electricity generation is decarbonized, or there is a plan to decarbonize the electricity sector by 2035 🟡 Electricity generation is not decarbonized, but there is a commitment and a plan under development to decarbonize the electricity sector by 2035 🔴 Electricity generation is not decarbonized and there is no plan to decarbonize by 2035

Category	Criteria	Indicators	Ratings
	Coal Phase-Out	Does the jurisdiction have a plan to phase out unabated coal-fired electricity generation by 2030?	🟢 Has phased out or is committed to phasing out coal by 2030 and has a comprehensive plan for the phase-out 🟡 Has committed to 2030 coal phase-out but does not have a comprehensive plan for the phase out 🔴 No commitment to or plans for 2030 coal phase-out
Oil and Gas	Methane	Does the jurisdiction have a plan consistent with CER and IEA targets to reduce methane emissions from 2012 levels by 40% by 2025 and 75% by 2030?	🟢 Has legislated requirements to meet the 40% by 2025 reduction target and has legislated requirements or is in the process of developing legislative requirements to meet the 2030 target 🟡 Has methane reduction targets but has not legislated them and is not in the process of developing legislative requirements to meet the 2030 target 🔴 Has not adopted methane reduction targets
	Emissions Cap	Does the jurisdiction have a plan consistent with the CER targets to reduce emissions from the oil and gas sector from 2005 levels by 31% by 2030, 60% by 2040 and net-zero by 2050?	🟢 Has adopted or is in the process of adopting legislated reduction targets consistent with the CER targets 🟡 Has adopted or is in the process of adopting reduction targets, but the targets will not reduce emissions at the specified rate and/or are supportive of the federal government's initiative to adopt reduction targets for the oil and gas sector 🔴 Has not adopted and is not in the process of adopting reduction targets for the oil and gas sector

2.3.3. Data collection

Information on Canadian climate plans, policies, and legislation was collected by conducting internet reviews of the Government of Canada and non-government websites searching for climate legislation, policies, reports, and plans. Searches were guided using the keywords from the criteria, indicators, and ranking system from the evaluation framework. Relevant information was compiled in a table organized by each of the evaluation categories, criteria, and indicators. The compiled table of information was sent to a team of climate policy analysts with subject matter expertise for review of completeness and accuracy, and feedback was incorporated. Upon completion of expert review, the compiled table of information was sent to government officials at the Ministry of Environment and Climate Change Canada (ECCC), who were asked to further review the completeness and accuracy of the information. Feedback was provided by government officials at ECCC and incorporated into the information table. The complete table of compiled policy information and sources can be found in Appendix B.

2.3.4. Application of evaluation framework to Canadian climate policy

To complete the ratings for each criterion and indicator, all relevant information collected for each criterion and indicator was compared to the associated rating system. Ratings were initially assigned based on personal evaluation, and then discussed among members of the research team. Some ratings were more straightforward, for example determining whether or not the jurisdiction had a climate action plan, while others were more complicated and involved more subjectivity, for example determining whether equity impacts from climate change and climate policies were fully or partially addressed and mitigated. Ratings were compiled in the same table used to collect data and outline criteria and indicators (see Appendix B). For a select few indicators (equity and plan for a clean economy transition), application of the evaluation framework was also partially informed by comparing the relative performance of different governments on the criteria.[3]

Ratings were then submitted to the team of senior climate policy analysts listed in Figure 1 for review of completeness, comprehensiveness, and accuracy. Intermittent

[3] This process was part of the bigger collaborative project between SFU and the Pembina Institute involving the evaluation and comparison of federal and provincial climate policies.

meetings were held with the review team until consensus was reached on all of the rankings. The indicators, ratings, and a narrative text summarizing major findings from the evaluation were then sent to government officials at ECCC for a final review of accuracy and completeness. Further feedback was provided by government officials at ECCC and incorporated into the information table, as deemed appropriate. Finally, the major findings were summarized, and recommendations were developed.

2.3.5. Limitations

Several qualifications should be noted in reviewing the results of this evaluation. First, climate policy is not constant and always changing, and the results of this study are current up until June 1, 2024. Policies, plans, and legislation announced between June 1, 2024, and the publication of this research will be added in a footnote but will not be included in any part of the analysis and evaluation process. Second, personal judgement was required in defining the criteria, indicators, rating system, and ratings. Although there has been an effort to reduce subjectivity and increase transparency by subjecting the evaluation framework, data, and ratings to review by expert policy analysts and government officials, and by thoroughly describing all methodologies to ensure transparency, different assessors performing the same methodologies may reach different conclusions. Third, some criteria and indicators are more recently emerging in importance, and thus were underrepresented in the literature (e.g. equity, clean economy transition, and climate adaptation planning). While every effort was made to represent these criteria and indicators in the evaluation framework in a comprehensive and meaningful way, it would be beneficial to have further research conducted on best practices in these policy areas. In addition, this evaluation considers only policies encompassed by the evaluation framework and may therefore neglect to mention climate-relevant policies that fall outside the areas covered by the framework. Finally, it should be noted that some criteria may be more important than others in terms of impacting outcomes on GHG emissions, but the evaluation framework used in this study does not attempt to weigh the relative significance of the various criteria.

Chapter 3.

Description of Canadian Climate Policy and Evaluation Results

Canada's suite of climate policies was evaluated across 25 criteria and indicators: 16 'general' and nine 'sector-specific'. Of the 25 criteria evaluated, 23 of were rated using colour codes (*green* showing Canada fully meets the criteria, *yellow* showing Canada somewhat meets the criteria, and red showing Canada does not meet the criteria) and two were rated using trends (increasing or decreasing). Individual ratings are discussed in detail in the rest of this section. For each category, a brief summary and table of the ratings is provided, followed by more details on the criteria, indicators and relevant policies in that category divided up individually. For individual criteria and indicators, the rating is provided, followed by a detailed description of the relevant climate policies, plans, and legislation, followed by a justification for the rating.

3.1. General criteria

Canada was evaluated across 16 general criteria: 14 colour coded ratings and two emission trend ratings. The 16 criteria were divided into nine categories: emission trends, emission reduction targets, climate action plan, climate accountability and governance, climate adaptation, reconciliation, equity, clean economy transition, and carbon price.

3.1.1. Emission trends

Canada's historic and projected emission trends were both rated as *decreasing* in the emission trends category (Table 5).

Table 5: Canada's climate policy evaluation ratings for historic and projected emissions trends.

Criteria	Indicators	Rating
Historic emission trends (2005-2022)	What is the historic emissions trend in the jurisdiction from 2005 to 2022?	↓
Projected emission trends (2021-2030)	What is the projected emissions trend in the jurisdiction from 2021 to 2030?	↓

Historic emission trends (2005-2022): ↓

Decreasing emissions

Between 2005 and 2022, Canada's emissions showed a decreasing trend, going from 761 million tonnes (Mt) of carbon dioxide equivalents (CO_2 eq) in 2005 to 708 Mt CO_2 eq in 2022 (Government of Canada, 2024d). This represents a 7.1% decrease in GHG emissions since 2005 (Government of Canada, 2024d) (Figure 3**Error! Reference source not found.**) – the baseline year used by Canada to set climate targets, and against which progress on Canada's international climate commitments is measured. Emissions were notably reduced in 2020 and 2021 due to the industrial slowdown caused by the pandemic (ECCC, 2024b). While a slight rebound in emissions was observed in 2022 as economic activity returned to normal, 2022 emissions remained lower than the 2019 pre-pandemic emissions (ECCC, 2024)

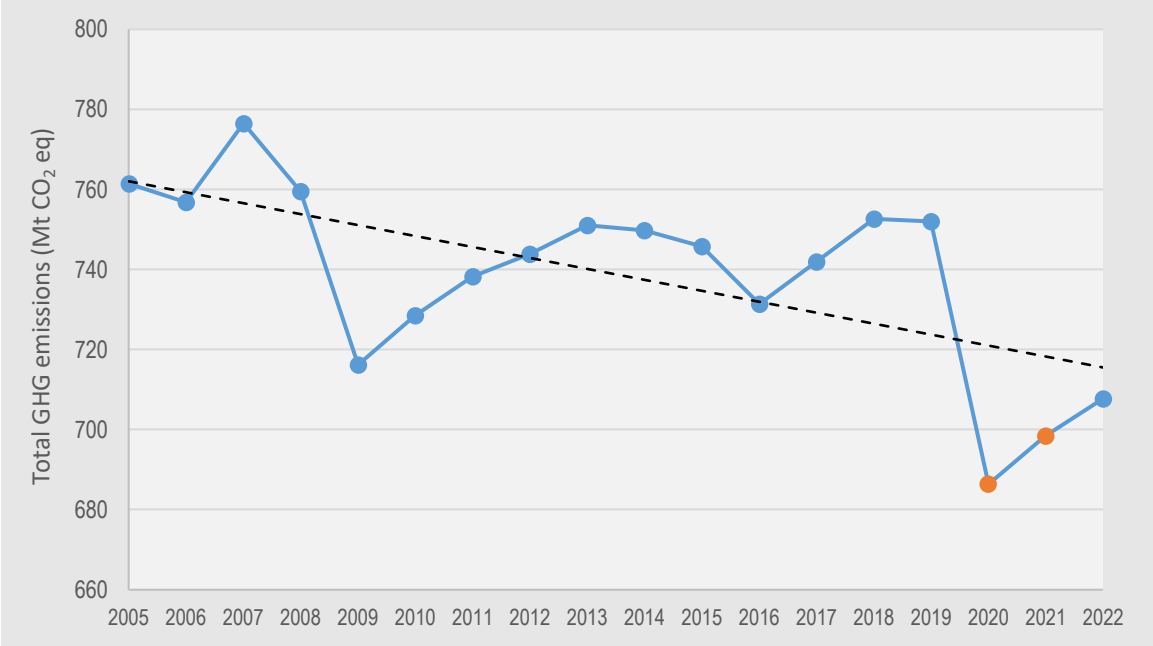

Figure 3: Canada's total GHG emissions 2005-2022 (excluding LULUCF). The dashed line indicates the overall trend, and the two orange points indicate the years where emissions were affected by the pandemic (2020 and 2021).

Created using data from the Government of Canada's National Inventory Report (NIR) (2024)

Projected emission trends (2021-2030): ↓

Decreasing emissions

Projected emissions in Canada showed a decreasing trend from 2021[4] to 2030, decreasing from 637.5 Mt CO_2 eq in 2021 to between 560.2 Mt CO_2 eq (under the Reference Case Scenario) and 467.2 Mt CO_2 eq (under the 2023 Additional Measures Scenario) in 2030 (including LULUCF) (Government of Canada, 2024c). This represents a decrease of between 15% and 32% (Figure 4). The 2023 Reference Case Scenario projections are made based on all federal, provincial and territorial policies and measures that were implemented up to the end of August 2023, and assume no further government action after this time; while the 2023 Additional Measures Scenario projections also consider policies and measures that have been announced but not yet implemented in addition to the policies and measures from the 2023 Reference Case Scenario, as well as emissions impacts from other sources including Nature-based climate solutions (NBCS), Agriculture Measures, and credits purchased under the Western Climate Initiative (WCI) (ECCC, 2023).

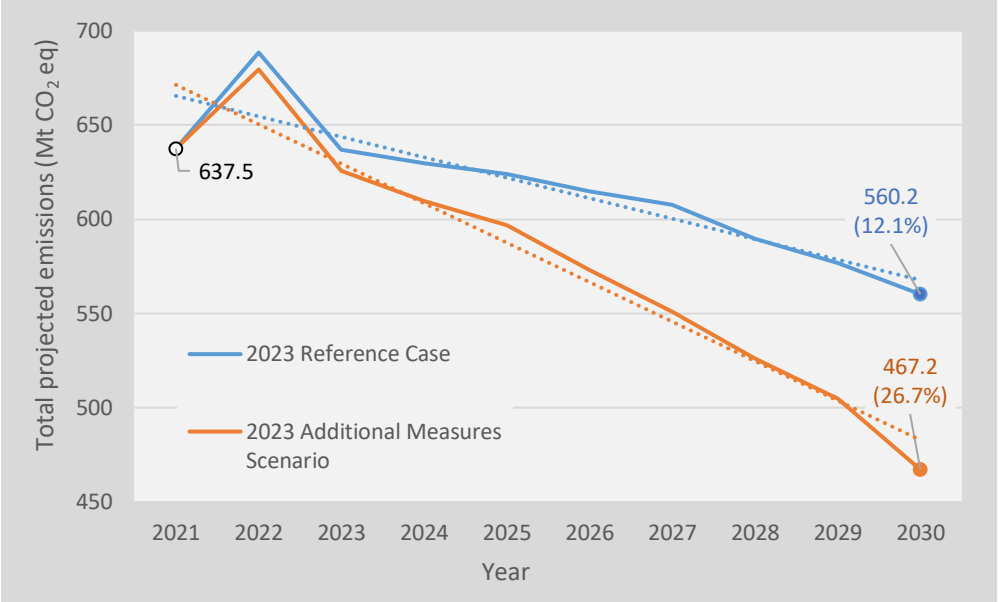

Figure 4: Canada's projected total GHG emissions 2021-2030 under the 2023 Reference Case and Additional Measures Scenarios (including LULUCF). The dashed lines indicate the overall trends

Created using data from Environment and Climate Change Canada's (2023b) NIR 2023[4].

3.1.2. Emissions reduction targets

Canada received two *green* ratings and one *yellow* rating for emissions reduction targets. Canada was rated *yellow* for its 2030 target, and *green* for its 2050 and interim targets (Table 6).

Table 6: Canada's climate policy evaluation ratings for emissions reduction targets.

Criteria	Indicators	Rating
2030 target	Does the jurisdiction have a 2030 target that aligns with the IPCC target of 43% emissions reduction from 2019 levels?	●
2050 target	Does the jurisdiction have a legislated target for net-zero emissions by 2050?	●
Interim targets	Does the jurisdiction have interim targets for emissions reductions to supplement 2030 and targets?	●

[4] GHG projection modelling uses data from the 2023 NIR. Projection modelling from the most recent NIR 2024 is not currently available and is expected to be published later this year.

2030 target: 🟡

Target is 30% to less than 43% reduction

Canada uses a baseline year of 2005 to set its climate targets (ECCC, 2024). The IPCC's most recent target of 43% emissions reduction from 2019 levels (IPCC, 2023) translates into an of 44% emissions reduction from 2005 levels. The *Canadian Net-Zero Emissions Accountability Act* (CNZEAA) (2021) requires the Canadian Minister of the Environment and Climate Change to set Canada's 2030 GHG emissions target, which must also be its NDC for that year under the Paris Agreement. Canada's 2030 emissions reduction target is 40 to 45% below 2005 levels (ECCC, 2022, 2023a).

Given that the majority of Canada's 2030 emissions reduction target range falls within the *yellow* rating category of 30% to 43% below 2019 levels (i.e. 39% to 44% below 2005 levels), Canada received a *yellow* rating for this criterion.

2050 target: 🟢

Legislated (or in the process of legislating) a net-zero target.

In 2021, Canada passed the *CNZEAA,* which requires Canada to have a net-zero GHG emissions target for 2050. The Government of Canada has repeatedly reaffirmed its commitment to this target (ECCC, 2022, 2023a; Government of Canada, 2024c).

Given that Canada has legislated a target of net-zero emissions by 2050, Canada received a *green* rating for this criterion.

Interim targets: 🟢

Interim targets from 2022 to 2030 and interim targets or a commitment to set interim targets from 2030 to 2050

The *CNZEAA* (2021) requires Canada's *2030 Emissions Reduction Plan* (ERP) to include an emissions target for 2026, and requires the Canadian Minister of the Environment and Climate Change to set interim targets for 2035, 2040, and 2045 no later than 10 years before the target year. Canada has set the objective of reducing emissions by 20% from 2005 levels by 2026 (equal to a target of 586 Mt CO_2 eq) (ECCC, 2022, 2023a).

Given that Canada has an interim target from 2022 and 2030, and the legislated requirement to set interim targets between 2030 and 2050, Canada received a *green* rating in this category.

3.1.3. Climate action planning

In the category of climate action planning, Canada received one *green* rating and one *red* rating. Canada received a *green* rating for its climate plan and a *red* rating for its plan to meet net-zero by 2050 (Table 7).

Table 7: Canada's climate policy evaluation ratings for climate action planning.

Criteria	Indicators	Rating
Climate plan	Does the jurisdiction have a climate action plan?	
Plan to meet 2030 UN target	Does the jurisdiction have a plan to meet the 2030 UN target?	
Plan to meet net-zero by 2050	Does the jurisdiction have a plan to meet net-zero emissions by 2050?	

Climate action plan: 

Has published or updated a plan within the last five years

The *CNZEAA* (2021) requires the Minister of Environment and Climate Change Canada ('the Minister') to publish an emissions reduction plan within six months of the Act coming into effect. The plan was mandated to detail the effects of the measures contained in the plan on Canada's GHG emissions trajectory (CNZEAA, 2021). Furthermore, the *CNZEAA* requires the Minister to prepare at least one progress report

detailing advancements made towards the measures and targets in the emissions reduction plan relating to each milestone year contained in the Act (2021).

The *2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a Strong Economy* ('*2030 ERP*') (ECCC) was published in 2022, and in December of 2023 the *2030 Progress Report on the 2030 Emissions Reduction Plan* (ECCC, 2023a) was published, providing the first updates on progress made towards the measures and targets laid out in the *2030 ERP*.

Given that Canada published its climate action plan, the *2030 ERP*, in 2022 and released a progress report for the plan in 2023, Canada was rated *green* for this criterion.

Plan to meet 2030 UN target: 🟡

Modelling shows jurisdiction will meet 60% to 80% of UN 2030 reduction target with existing and planned measures.

The IPCC's latest emissions reduction target for 2030 is a 43% reduction in GHG emissions below 2019 levels (IPCC, 2023). For Canada to meet this target, its emissions must drop from 697.1 Mt CO_2 eq in 2019 to 397.2 Mt CO_2 eq by 2030 (ECCC, 2023b). Currently, Canada's 2030 projected emissions (including LULUCF) are forecast to reach between 560.2 Mt CO_2 eq (under the 2023 Reference Case Scenario, considering only policies that are currently implemented) and 467.2 Mt CO_2 eq (under the 2023 Additional Measures Scenario, which also considers policies that are planned and under development) (ECCC, 2023b). This represents an estimated decrease of between 19.6% and 33.0% below 2019 levels, meaning Canada is currently projected to achieve 45.6% to 76.7% of the IPCC's 2030 target reductions.[5]

[5] Projection modelling from Canada's 2024 NIR is not yet available. Therefore, to ensure consistency, all calculations made for this criterion used data from Canada's 2023 NIR (ECCC, 2023b).

Given that Canada is projected to achieve at maximum 76.7% of the IPCC 2030 target when considering both implemented and planned policies, Canada was rated *yellow* for this criterion.

Plan to meet net-zero 2050: 🔴

No plan to meet net-zero by 2050.

While Canada has a legislated target of net-zero emissions by 2050 (CNZEAA, 2021), it does not mandate that this target be achieved, and no federal government modelling was found to demonstrate how plans to actually Canada meet its net-zero 2050 target. Modelling from the CER's *Report on Canada's Energy Future* (2023) using the Current Measures scenario projects Canada's emissions in 2050 to be 566 Mt CO_2 eq, a reduction of just 22.7%, and well short of the net-zero target. Climate Action Tracker's 2022 modelling projects Canada's existing policies, actions, and climate financing (i.e. Current Measures scenario) are highly insufficient in the pursuit of net-zero emissions, and even if Canada were to implement all measures in development, its efforts would still be insufficient. Finally, the Office of the Auditor General of Canada (2023a, 2023b) found that Canada does not measure or release updates on the impacts of GHG reduction measures towards emissions targets, and urgently recommends the Government of Canada thoroughly identify and prioritize implementation of all key measures that need to be taken for Canada to meet its emissions reduction targets.

Given that there is no credible modelling showing that or how Canada will reach its net-zero 2050 target and given that the credible modelling from the CER shows that Canada's current trajectory will only reduce emissions by 22.7%, Canada was rated *red* for this criterion. This was the only criterion for which Canada received a *red* rating.

3.1.4. Climate accountability and governance

In the category of climate accountability and governance, Canada received three *green* ratings – for the criteria of legislative certainty, independent accountability, and monitoring and reporting (Table 8).

Table 8: Canada's climate policy evaluation ratings for climate accountability and governance.

Criteria	Indicators	Rating
Legislative certainty	Does the jurisdiction have legislation to enshrine major components of its climate plan: • Requirement to prepare a plan • Requirement to set GHG reduction targets • Reporting and monitoring requirements	
Independent accountability	Does the jurisdiction have an entity in place to provide accountability?	
Monitoring and reporting	Does the jurisdiction's public monitoring program contain these features: • Reports on a regular specified schedule • Assesses progress in implementing plan components • Assesses progress in meeting targets • Identifies measures to address gaps • Is independently reviewed	

Legislative certainty: 

All three major components of climate plan are enshrined in legislation (requirement to prepare a plan, requirement to set GHG reduction targets, and reporting and monitoring requirements)

The *CNZEAA* (2021) contains legislated requirements to prepare a climate plan, set targets, and legislated requirements to monitor and report on some of the progress and outcomes achieved by the plan. Section 9 of the *CNZEAA* requires the Canadian government to establish GHG emissions reductions plans to meet its targets for "milestone years" (2030, 2035, 2040, 2045, and 2050), and each of these plans must be published at least five years prior to the start of the year to which it relates. Section 6 of the *CNZEAA* requires Canada to have a 2050 target of net-zero emissions. Section 7 of the *CNZEAA* requires Canada to set progressively more ambitious GHG emissions reduction targets for each milestone year at least 10 years in advance, with the goal of achieving net-zero emissions by 2050. Finally, Section 14 of the *CNZEAA* requires Canada to prepare progress reports relating to each milestone year. These progress reports must include information on the latest GHG projections, progress made towards achieving GHG emissions reduction targets, an inventory of GHG emissions, and

updates on progress made towards implementing measures laid out in the latest ERP. The first progress report under the *CNZEAA* was published in 2023 (ECCC, 2023a)

Given that Canada has the legislated requirements to prepare a climate plan, set GHG emissions reduction targets, and monitor and report progress, Canada was rated *green* for this criterion.

Independent accountability: 

Has an independent legislated body that is indirectly or directly appointed by and reports to the legislature and is mandated to provide advice and evaluate the climate plan.

Canada currently has two independent entities in place responsible for providing advice and feedback on Canada's emissions reduction efforts: Commissioner of the Environment and Sustainable Development ('the Commissioner') (Office of the Auditor General of Canada, 2024), and the Net-Zero Advisory Body (NZAB) (Government of Canada, 2024e). The Commissioner, currently Jerry V. DeMarco, is appointed by the Auditor General of Canada for a 7-year term (Office of the Auditor General of Canada, 2024). The Commissioner is responsible for objectively and independently reporting and providing recommendations to the Canadian government on the implementation of federal climate change mitigation measures including the climate action plan (CNZEAA, 2021; Office of the Auditor General of Canada, 2024). The latest report from the Commissioner analyzing Canada's *2030 ERP* was published in 2023 (Office of the Auditor General of Canada, 2023b). The NZAB, legislated by the Canadian Net-Zero Emissions Accountability Act (2021) and appointed by the Governor General, is an independent group of up to 15 experts from a diverse range of backgrounds and expertise. The NZAB is required to submit annual reports to the Minister of the Environment and Climate Change providing independent advice on the development of measures and policies aimed at achieving net-zero emissions by 2050 – which includes climate action planning (Government of Canada, 2024e). The latest report from the NZAB was published in 2023 (Net-Zero Advisory Body, 2023).

Given that Canada's Commissioner of the Environment and Sustainable Development is appointed by and mandated to report to the legislature, to provide advice and evaluate the climate plan, and that the NZAB is mandated to provide independent advice to the government on achieving net-zero emissions by 2050, Canada was rated *green* for this criterion.

Monitoring and reporting: 

Public monitoring program has all five features (reports on a regular specified schedule, assesses progress in implementing plan components, assesses progress in meeting targets, identifies measures to address gaps, and is independently reviewed).

Under the *CNZEAA* (2021), Canada is mandated to monitor and report on measures legislated within the Act. This includes scheduled public reporting, assessing progress towards targets and implementing measures, and identifying and addressing any gaps. Sections 14 and 15 of the *CNZEAA* require the Minister of Environment and Climate Change to prepare **progress reports** and **assessment reports**. **Progress reports** must be published at least two years ahead of each milestone year, and **assessment reports** within 30 days of Canada submitting its official greenhouse gas emissions inventory report. Canada's complete schedule for monitoring, reporting, and setting targets can be found in Appendix C (ECCC, 2022). All **progress reports** must provide updates on progress Canada has made towards achieving its GHG emissions reduction target ahead of the milestone year (s.14(2)(b)), and on the implementation of measures and strategies described in the relevant ERP (s.14(2)(b)). If Canada is projected to fall short of meeting its GHG emissions reduction target, progress reports must also describe additional measures Canada could take to help further reduce GHG emissions (CNZEAA, 2021, s.14(2)(b.2)). All **assessment reports** are retrospective and must provide updates on whether Canada successfully achieved its GHG emissions reduction target for the relevant year (s.15(2)(b)) and outline how the measures and strategies described in the ERP contributed to Canada reaching its relevant GHG emissions target (CNZEAA, 2021, s.15(2)(c)). Finally, all of Canada's climate action measures, its monitoring and reporting program, are required to be independently

reviewed by the Commissioner of the Environment and Sustainable Development minimum every five years (CNZEAA, 2021, s.24(1)).

Given that Canada's monitoring program publicly reports on its climate action measures and progress towards its targets on a regular schedule, identifies measures to address gaps, and is independently reviewed, Canada received a *green* rating for this criterion.

3.1.5. Climate adaptation

This category contains only one criterion and indicator: adaptation plan. For this criterion, Canada rated *green* (Table 9)

Table 9: Canada's climate policy evaluation rating for climate adaptation

Criterion	Indicator	Rating
Adaptation plan	Does the jurisdiction have a climate adaptation plan?	●

Adaptation plan: ●

Has a comprehensive climate adaptation plan that identifies major geographic, demographic and sectoral vulnerabilities and outlines measures to address major vulnerabilities.

In 2023, Canada released two important climate adaptation publications: *Canada's National Adaptation Strategy: Building Resilient Communities and a Strong Economy* (ECCC, 2023c), and the *Government of Canada Adaptation Action Plan* (ECCC, 2023d).

The *National Adaptation Strategy* identifies geographic vulnerabilities, such as the impacts of sea level rise and storm surge on coastal communities, and the impact of thawing permafrost and receding sea ice on northern communities; demographic vulnerabilities, such as the amplification of existing inequities already vulnerable populations, and the unique and severe way climate change impacts the culture and identity of Indigenous Peoples; and sectoral vulnerabilities, such as the forestry sector

the impact of changing weather and increased pests on the forestry sector, and the impact of ocean acidification and marine heatwaves on the fisheries sector (ECCC, 2023c). The *Adaptation Action Plan* outlines 78 new, existing, and expanded measures Canada is taking towards climate adaptation, targeted across eight different categories: disaster resilience, health and well-being, nature and biodiversity, infrastructure, economy and workers, knowledge and understanding, tools and resources, and governance and leadership (ECCC, 2023d).

Given that Canada has both a comprehensive climate adaptation strategy and action plan which combine to identify major geographic, demographic and sectoral vulnerabilities, and outline a comprehensive suite of measures to address major climate vulnerabilities, Canada was rated *green* for this criterion.

3.1.6. Reconciliation

This category contains only one criterion and indicator: legislated UNDRIP. For this criterion, Canada rated *green* (Table 10).

Table 10: Canada's climate policy evaluation rating for reconciliation

Criterion	Indicator	Rating
Legislated UNDRIP	Legislated United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)	●

Legislated UNDRIP: ●

Has legislated UNDRIP.

The United Nations (UN) General Assembly adopted the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007 (United Nations, 2007), but it wasn't until nine years later that the Government of Canada endorsed UNDRIP, without providing any conditions to its commitment (Department of Justice Canada, 2023). Finally, on June 21, 2021, the United Nations Declaration on the Rights of Indigenous Peoples Act came into force, and in 2023, Canada published an action plan to help achieve the objectives of UNDRIP (Department of Justice Canada, 2023).

Given that Canada has legislated UNDRIP, and bolstered this with an UNDRIP action plan, Canada received a *green* rating for this criterion.

3.1.7. Equity

This category contains only one criterion and indicator: plan to address equity impacts. For this criterion, Canada rated *green* (Table 11).

Table 11: Canada's climate policy evaluation rating for equity

Criterion	Indicator	Rating
Plan to address equity impacts	Does the jurisdiction have a plan that: • Assesses the distribution of climate impacts and policies by key stakeholder and equity-deserving groups • Addresses and mitigates inequities in the distribution of impacts	

Plan to address equity impacts: 

Assesses impacts and addresses inequities.

Canada has made efforts to assess, address, and mitigate the impacts of climate change and climate policies. The *2030 ERP* includes measures to identify, assess, and acknowledge groups that could be disproportionately burdened by climate impacts and policies on (ECCC, 2022)[6]. The *2030 ERP* identifies several groups likely to be disproportionately burdened, for example how impacts on food and water availability are likely to further marginalize the most vulnerable populations; how the transition to a low-carbon economy will disproportionately impact regions and workers in hard-to-abate sectors; how decarbonizing the energy sector will have a disproportionate effect on some regions depending on the composition of their energy grids; and how Indigenous Peoples experience disproportionate impacts of climate change due in part to their statistically lower socio-economic outcomes, the legacy of colonization, and the connection between the land and Indigenous culture (ECCC, 2022). Measures in the *2030 ERP* that are aimed at helping mitigate these inequities include providing funding

[6] This was specifically mentioned by the Commissioner of the Environment and Sustainable Development as one of the strengths of the *2030 ERP* (Office of the Auditor General of Canada, 2023b).

for clean energy projects in the north, providing funding to help support public transportation in rural communities, providing some carbon pricing exemptions and targeted support for disproportionately affected groups such as farmers, fishers, and rural resident, and supporting Indigenous climate leadership (ECCC, 2022).

Indigenous communities were identified to be at high risk of being disproportionately affected by climate change (ECCC, 2022). Canada has several initiatives specifically designed to help mitigate and address these impacts. The Wah-ila-toos Clean Energy Initiatives in Indigenous, Rural and Remote Communities provides an umbrella for funding Indigenous clean energy initiatives, including the Clean Energy in Rural and Remote Communities (CERRC) program, Northern Responsible Energy Approach for Community Heat and Electricity (REACHE) program, and Indigenous Off-Diesel Initiative (IODI) (Government of Canada, 2024i). The CERCC program has committed $453 million to help fund renewable energy and energy efficiency projects in rural and remote Indigenous communities (NRCan, 2024). In the Northern REACHE program, Canada has allotted almost $ 400 million to support Indigenous and northern communities in transitioning to renewable energy through funding projects that build capacity, provide relevant training, expand opportunity for clean energy (Crown-Indigenous Relations and Northern Affairs Canada, 2023). The IODI offers climate solutions in remote Indigenous communities currently relying on fossil fuels through the provision of a clean energy training program (Government of Canada, 2023c). In addition to the Wah-ila-toos Clean Energy Initiatives, in its Budget 2022 (Department of Finance Canada, 2022), Canada committed almost $30 million to its Partnership with Indigenous Peoples on Climate to go towards indigenous climate priorities through the advancement of an Indigenous Climate Leadership Agenda (ECCC, 2024c), and in its Budget 2024 (Department of Finance Canada, 2024), Canada launched the Indigenous Loan Guarantee Program, guaranteeing up to $ 5 billion in loans to help advance Indigenous equity and remove barriers to Indigenous access to natural resources and clean energy projects (Canada Development Investment Corporation, 2024).

In addition to Indigenous communities, Canada has further initiatives to support additional equity-deserving groups. For instance, the Canada Carbon Rebate ensures the carbon tax is fully returned to Canadians, aiding in a more equitable redistribution of wealth by ensuring most households will see a net gain, receiving more in rebates than the cost of the federal pollution pricing, especially for residents in low- and middle-

income households and those in small and rural communities (Canada Revenue Agency, 2024; Office of the Parliamentary Budget Officer, 2023). The Government of Canada also uses a tool called Gender-based Analysis Plus (GBA+) to explore the changing realities and inequalities of diverse groups of people and help Canada develop inclusive, equitable policies and measures. Finally, Canada has developed measures to help mitigate impacts on workers, which can be found in section 3.1.8: Clean economy transition.

Given Canada's extensive efforts to assess the distribution of climate impacts and policies by key stakeholder and equity-deserving group, and the several initiatives taken to help mitigate inequities in the distribution of climate impacts and policies, Canada received a *green* rating for this criterion.

3.1.8. Clean economy transition

This category contains only one criterion and indicator: plan for a clean economy transition, for which Canada received a *yellow* rating (Table 12).

Table 12: Canada's climate policy evaluation rating for clean economy transition

Criterion	Indicator	Rating
Plan for a clean economy transition	Has the jurisdiction: • Assessed the economic impact of climate impacts and policies to estimate changes in employment, by employment type • Developed training policies to meet the demand for new employment opportunities created by climate impacts and policies and to mitigate adverse impacts on workers	

Plan for a clean economy transition: 

Has implemented or is in the process of implementing at least one of the measures (partially assessed the economic impact of climate impacts and policies to estimate changes in employment, by employment type; and developed training policies to meet the demand for new employment opportunities created by climate impacts and policies and to mitigate adverse impacts on workers).

Canada has demonstrated its commitment to transition to a clean economy in recent years with the release of the *Sustainable Jobs Plan* early in 2023 (Government of Canada, 2023f) followed by the tabling of Bill C-50: An Act Respecting Accountability, Transparency and Engagement to Support the Creation of Sustainable Jobs for Workers and Economic Growth in a Net-Zero Greenhouse Gas Emissions Economy (2023). (a.k.a. the *Canadian Sustainable Jobs Act*) later that year[7]. In addition, the overarching goal of the *2030 ERP* is to help Canada curb its GHG emissions while building and expanding a decarbonized economy and workforce (ECCC, 2022), and new investments in sustainable jobs training in Budget 2024 further demonstrate Canada's intent to foster a just transition (Department of Finance Canada, 2024).

The effects of climate change and climate policies in the coming years will have a profound impact on Canada's economy and workforce. According to the *Sustainable Jobs Plan*, the increase in sustainable jobs is likely to far exceed job losses from the fossil fuel sector, as jobs are being created in emerging energy sources across the country, and building a net-zero grid will create significant employment opportunities for construction workers (Government of Canada, 2023f). This is supported by analysis from the *2030 ERP*, which proposes that Canada's clean economy has the potential to create between 235,000 and 400,000 new jobs for Canadians by 2030 (ECCC, 2022). While Canada has taken steps to estimate potential for new employment in some areas, it has yet to produce a comprehensive, publicly available economic impact assessment that fully estimates the changes in employment by sector or occupation resulting from climate impacts and climate policies, especially related to estimating potential job losses. However, an independent report by Clean Energy Canada (2023) provides comprehensive job projections for the energy sector. They estimate a net job loss in the fossil fuel sector of 1.47 million jobs, decreasing from 2.25 million in 2025 to 776,000 in 2050, while jobs in clean energy are set to increase at a rate of 7% per year – from 508,800 jobs in 2025 to 2.68 million jobs in 2050 – a net job gain of 2.17 million jobs (Clean Energy Canada, 2023a). This equates to an net gain of over 700,000 jobs (Clean Energy Canada, 2023a).

[7] The *Canadian Sustainable Jobs Act* received Royal Ascent and became law on June 20, 2024 (Government of Canada, 2024j).

Canada has voiced its commitment to ensuring all workers have the skills and knowledge to thrive in clean economy (ECCC, 2022). To support the changing workforce, Canada has developed and implemented a broad suite of training programs and policies to help support a diversity of workers from a variety of age groups and socio-economic backgrounds, as well as employers, unions and training providers (ECCC, 2023a). These programs include the Sectoral Workforce Solutions Program (Government of Canada, 2023i), the Canadian Apprenticeship Strategy (ECCC, 2023a), the Skills and Partnership Fund (Government of Canada, 2023h), the Youth Employment and Skills Strategy (Government of Canada, 2023j), and the Foreign Credential Recognition Program (Government of Canada, 2023g). Canada bolstered its commitment to a clean economy in Budget 2024 (Department of Finance Canada, 2024) by providing funding for new and ongoing programs, including the Apprenticeship Fund, the Sustainable Jobs Training Fund, Indigenous-led training, and the Union Training and Innovation Program. To guide these initiatives, Canada has its interim Sustainable Jobs Plan for 2023 to 2025, and is expecting its first official Sustainable Jobs Action Plan to be released in 2025 (Government of Canada, 2023f).

Given that Canada has estimated employment increases in some sectors but has not fully assessed the economic impact of climate impacts and policies on changes in employment, and given that Canada has developed and implemented an array of training programs, and backed these commitments with substantial funding, Canada received a *yellow* rating for this criterion.

3.1.9. Carbon price

For the category of carbon price, Canada received two *yellow* ratings for provincial end-use carbon price and for price on industrial emitters (Table 13).

Table 13 Canada's climate policy evaluation ratings for carbon price

Criteria	Indicators	Rating
End-use carbon price (fuel charge)	Does the jurisdiction have a carbon price that achieves the IEA's 2050 net zero target price of USD $130 per tonne by 2030?	
Price on industrial emitters	Does the jurisdiction have a carbon price on industrial emitters that achieves the IEA's 2050 net zero target price of USD $130 per tonne by 2030?	

End-use carbon price: 🟡

Price achieves less than the IEA's target, and price excludes some emissions covered by the federal benchmark.

Enacted in 2018 and first applied in 2019, the *Greenhouse Gas Pollution Pricing Act* (2018) is used to require provincial and territorial governments to impose a levy on GHG emissions. This can be accomplished through the development of their own carbon pricing system, or through the adoption of the federal carbon pricing system laid out in the *Greenhouse Gas Pollution Pricing Act* (2018). The federal system's fuel charge applies to the purchase of 21 different fuels burned to produce electricity or heat. These include aviation gasoline, butane, ethane, gasoline, light fuel oil, methanol, petroleum coke, and propane (*Fuel Charge Regulations*, 2018). Canada's fuel charge rates in 2024 were $80[8] per tonne CO_2 eq, and will incrementally increase by $15 per tonne annually until it reaches $170 per tonne in 2030 (Department of Finance Canada, 2021). This translates into different prices for different fuels based on the amount of emissions produced during combustion; for example, in 2024 the fuel price on methanol purchases was $0.07 per litre, while the fuel price on petroleum coke purchases was $0.24 per litre (*Greenhouse Gas Pollution Pricing Act*, 2018, Schedule 2). A complete list of fuels covered by Canada's fuel pricing and the associated benchmark prices each year can be found in Appendix C.

The IEA's 2050 net-zero target for end-use carbon price is USD $130 per tonne by 2030, increasing incrementally to USD $250 per tonne by 2050 (IEA, 2021). Given today's exchange rate of USD $0.73 to CAD $1.00[9], Canada's 2030 carbon price of $170 per tonne equates to USD $124 per tonne, just short of the IEA's target price of USD $130 per tonne. However, if Canada continues to increase its carbon price at the current rate of $15 per year, it can surpass the IEA's 2050 target of USD $250 per tonne in 2042. Canada has continued to its policy of incrementally increasing the federal carbon price benchmark since it was first applied in 2019. But in late 2023, Canada

[8] All currency is expressed in Canadian dollars unless otherwise specified.

[9] Exchange rate was calculated on August 11, 2024 using the Bank of Canada's currency converter (2024).

made an amendment to its *Fuel Charge Regulations* (2018) under the *Greenhouse Gas Pollution Pricing Act* (2018), providing an exemption to the carbon price for home heating oil (Department of Finance Canada, 2023).

Given that Canada's carbon price falls slightly shot of the IEA net zero target and exempts home heating oil from the fuel charge, Canada was rated *yellow* for this criterion.

Price on industrial emitters: 🟡

Price achieves federal benchmark requirements.

Bigger businesses, termed 'covered facilities' with bigger carbon footprints are exempt from paying the carbon price on fuel used for their operations. Rather, they are charged based on Canada's *Output-Based Pricing System (OBPS) Regulations* (2019) under the *Greenhouse Gas Pollution Pricing Act*. The federal OBPS is a trading system designed to incentivize industrial emitters to decrease their GHG emissions (ECCC, 2024d). The OBPS establishes annual emissions thresholds limits for covered facilities. Under the OBPS, firms must provide detailed reports on their quantified GHG emissions. Facilities that surpass the threshold have to pay the benchmark fuel price only on the proportion of emissions that exceed the threshold (*OBPS Regulations*, 2019). (The current fuel price is $80 per tonne CO_2 eq, and will increase annually at a rate of $15 per tonne per year until 2030 (ECCC, 2023e)). Companies that maintain their emissions below the threshold receive performance credits (*OBPS Regulations*, 2019). Proceeds from the OBPS are reinvested into clean technology and innovation funds to help further reduce industrial emissions (ECCC, 2024b).

The IEA's 2021 *Net Zero 2050 Roadmap* sets a target carbon price of USD $130 per tonne by 2030 and USD $250 per tonne by 2050 across the energy production, industry, and electricity sectors. Since the 2030 federal fuel charge of $170 per tonne (which equates to USD $124 per tonne) is slightly short of this target, and the OBPS reduces the price on emissions for heavy emitters, the OBPS falls short of the IEA's international recommendations (2021).

Given that Canada has its OBPS on heavy emitters, but its price on heavy emitters falls short of the IEA target, Canada received a *yellow* rating for this criterion.

3.1.10. Summary of general criteria

For general evaluation criteria, Canada received a total of nine *green* ratings, five *yellow* ratings, and one *red* rating. The emissions trends ratings were both *decreasing* (Table 14). Canada received *yellow* ratings for the criteria of 2030 target, plan to meet 2030 IPCC target, plan for a clean economy transition, end-use carbon price, and price on industrial emitters, and received a *red* rating for the criterion of plan to meet net zero by 2050. For all remaining general criteria, Canada was rated *green*.

Table 14: Summary of ratings received by Canada across 16 general climate policy evaluation criteria

Category	Criteria	Rating
Emission Trends	Historic emission trends (2005-2022)	↓
	Projected emission trends (2021-2030)	↓
Emissions Reduction Targets	2030 target	🟡
	2050 target	🟢
	Interim targets	🟢
Climate Action Plan	Climate plan	🟢
	Plan to meet 2030 UN target	🟡
	Plan to meet net-zero by 2050	🔴
Climate Accountability and Governance	Legislative certainty	🟢
	Independent accountability	🟢
	Monitoring and reporting	🟢
Climate Adaptation	Adaptation plan	🟢
Reconciliation	Legislated United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)	🟢
Equity	Plan to address equity impacts	🟢
Clean Economy Transition	Plan for a clean economy transition	🟡
Carbon Price	Provincial end-use carbon price (fuel charge)	🟡
	Price on industrial emitters	🟡

3.2. Sector-specific criteria

Canada's emissions profile is disproportionately distributed among economic sectors (ECCC, 2024a) (Figure 5). The oil and gas sector produces significantly higher emissions (31%) followed by the transportation sector (22%) and building sector. The sectors with policies evaluated in this report account for 72% of Canada's total emissions.

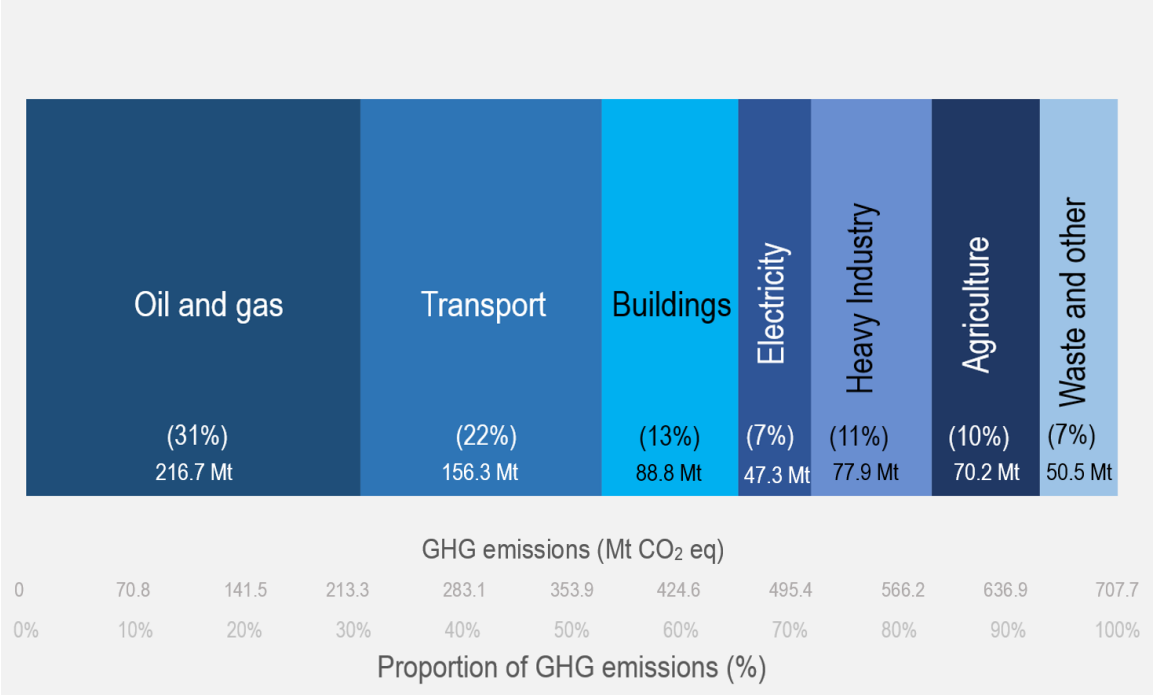

Figure 5: Canada's emissions profile by economic sector.
Created using data from ECCC, 2024a

Canada's climate policy was evaluated using nine sector-specific criteria divided into four categories: buildings, transportation, electricity, and oil and gas. All criteria were evaluated using colour coded ratings. Most indicators for the sector-specific criteria were chosen using information from the IEA's *Net Zero Roadmap* (2021, 2023a) and/or the CER's *Canada's Energy Future* report (2023a). Individual ratings are discussed in detail it the rest of this section. For each category, a brief summary and table of the ratings is provided, followed by more details on the criteria, indicators and relevant policies for each category. For individual criteria and indicators, the rating is provided, followed by a detailed description of the relevant climate policies, plans, and legislation, followed by a justification for the rating.

3.2.1. Buildings

Canada received one *green* rating and one *yellow* rating in the category of buildings. Canada received a *green* rating for new buildings and a *yellow* rating for existing buildings (Table 14).

Table 14: Canada's climate policy evaluation ratings for buildings

Criteria	Indicators	Rating
New buildings	Has the jurisdiction adopted the CER and IEA target of zero-carbon-ready requirements into building code by 2030 for all new buildings?	
Existing buildings	Does the jurisdiction have: • Targets and a plan consistent with IEA targets to retrofit existing buildings to zero-carbon ready by at least 20% by 2030; 35% by 2035 and 50% by 2040 • Incentives for the installation of heat pumps to replace fossil fuel heating • A ban on or commitment to ban installation of standalone new fossil fuel heating systems by 2030	

New buildings: 

Has committed to zero-carbon-ready[10] buildings by 2030.

Canada has taken strides in recent years towards decarbonizing new buildings. Canada acknowledges that all new buildings need to be net-zero carbon-ready by 2032, preferably as soon as 2027 (NRCan, 2022). For the first time, Canada's *National Building Code* (Canadian Commission on Building and Fire Codes, 2022a) and *National Energy Code for Buildings* (Canadian Commission on Building and Fire Codes, 2022b) both include a 'zero-carbon-ready' tier, with the goal that, by 2030, this tier has been adopted by all provinces, and all new buildings are zero-carbo-ready (Climate Action Tracker, 2022b). While Canada does not have jurisdiction to enforce building codes, provinces and territories have agreed to harmonize their building codes with national codes under the *Canadian Free Trade Agreement* (Government of Canada, 2021). Additionally, Canada is in the final stages of developing the Canada Green Building

[10] Zero-carbon-ready is defined by the IEA (2023a) as "a building is highly energy efficient and either uses renewable energy directly, or an energy supply that can be fully decarbonized, such as electricity or district heat."

Strategy, aimed at supporting the transition to a resilient, carbon-neutral building sector (ECCC, 2023a)[11].

Given that Canda has a zero-carbon-ready tier in its latest building and energy codes, has the goal of this tier being adopted by 2030, and is preparing a strategy to help achieve net-zero emissions in the building sector, Canada was rated *green* for this criterion.

Existing buildings: 🟡

Has one of these measures (targets and a plan to retrofit existing buildings to zero-carbon ready by at least 20% by 2030; 35% by 2035 and 50% by 2040; incentives for the installation of heat pumps to replace fossil fuel heating; or a ban on or commitment to ban installation of standalone new fossil fuel heating systems by 2030).

Most buildings have a lifespan exceeding 30 years, meaning achieving net-zero emissions in the building sector will require Canada to retrofit the vast majority of its current building stock (NRCan, 2022). The CER (2023) and IEA (2021, 2023a) conclude that in order to meet net-zero emissions by 2050, at least 20% of existing buildings need to be zero-carbon ready by 2030, 35% by 2035, and 50% by 2040. This translates to over 11 million homes and 32 million square metres of commercial buildings (ECCC, 2022). To meet these targets, Canada's current retrofit rate of under 1% will need to significantly increase to between 3% and 5% by 2025 (NCan, 2022). While Canada acknowledges the need to increase retrofit rates across the country, it currently has no concrete targets nor a retrofit plan[11].

Over 78% of the building sector's operational emissions is generated by space and water heating devices, which mainly run on fossil fuel (NRCan, 2022). Despite its lack of retrofit targets, Canada has an array of incentives to help with the installation of heat pumps, including the Canada Greener Homes Grant (NRCan, 2024b), Oil to Heat

[11] The Canada Green Building Strategy was publicly released on July 16, 2024, but not included in this evaluation (NRCan, 2024a).

Pump Affordability Program (NRCan, 2024c), and Low Carbon Economy Fund (ECCC, 2024d). In addition, Budget 2024 included over $1 billion in funding towards new retrofit programs, including the new Greener Affordable Housing stream of the Canada Greener Homes Loan program and the new Canada Greener Homes Affordability Program (Department of Finance Canada, 2024).

While Canada is providing incentives to install energy-efficient heat pumps, it has no explicit targets for heat pump installations and has not yet to committed to a date for banning the installation of new standalone fossil fuel heating systems. Canada has acknowledged the urgent need to transition away from fossil fuel heating systems, but still needs to set out a phased timeline to make this happen (NRCan, 2022). The latest building and energy codes contain stringent performance standards for fossil fuel heating systems, but fall short of introducing an outright ban (Canadian Commission on Building and Fire Codes, 2022b, 2022a).

Given that Canada has a broad suite of incentives to help with the installation of heat pumps to replace fossil fuel heating, but lacks retrofit target rates and has not yet committed to implement a ban on fossil fuel heating systems, Canada received a *yellow* rating for this criterion.

3.2.2. Transportation

Canada received two *yellow* ratings and one *green* rating in the transportation category. Canada received a *green* rating for light-duty vehicles, and *yellow* ratings for medium- and heavy-duty vehicles (MHDVs) and public transit and active transportation (Table 15).

Table 15: Canada's climate policy evaluation ratings for transportation

Criteria	Indicators	Rating
Light-duty vehicles	Does the jurisdiction have: • A legislated zero-emission vehicle (ZEV) sales regulation equal to or greater than the CER and IEA targets of 60% new zero-emission vehicle sales by 2030 and 100% by 2035 • Incentives for the purchase of a zero-emission vehicle and infrastructure	
Medium- and heavy-duty vehicles (MHDVs)	Does the jurisdiction have: • A legislated zero-emission vehicle (ZEV) sales regulation equal to or greater than the CER targets of 35% new zero-emission vehicle sales by 2030 and 100% by 2040 • Incentives for the purchase of a zero-emission vehicle and infrastructure	
Public transit and active transportation	Does the jurisdiction have: • Public transit and active transportation policies included in its climate plan • Targets for significantly increasing public transit and active transportation trips • Initiatives to increase public transit and active transportation to meet the targets • An estimate of the impact of the initiatives on public transit and active transportation trips • A plan to make public transit carbon neutral no later than 2040	

Light-duty vehicles: 

Has legislated zero-emission vehicle (ZEV) sales mandate equal to or greater than IEA targets, with penalties for non-compliance, and has ZEV sales and infrastructure incentives.

In the *2030 ERP*, Canada committed to reach 100% ZEV sales by 2035 for all new light-duty vehicles (ECCC, 2022). In December 2023, the Government of Canada came through on its commitment, amending its *Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations* (2010) under the *Canadian Environmental Protection Act* (CEPA) (1999) to mandate at least 20% ZEV of new light-duty vehicle sales by 2026, at least 60% by 2030 and 100% by 2035 (Government of Canada, 2023k). With ZEV sales increasing every year since 2019, Canada's targets are within reach from its 8.9% ZEV sales in 2022 12.5% in Q1 of 2024 (Transport Canada, 2024a), and in line with the CER (2023) and IEA (2021, 2023a) targets of 60% new ZEV sales by 2030 and 100% by 2035. The amended *Passenger Automobile and Light Truck*

Greenhouse Gas Emission Regulations allow companies to earn compliance credits for exceeding these targets, which can be carried forward and put towards targets in subsequent years (Government of Canada, 2023k). Companies that fail to meet the ZEV sales targets are subject to enforcement measures under CEPA (1999), which can include penalties ranging from a warning to criminal prosecution (Clean Energy Canada, 2023b).

To support Canada's ZEV transition and remove barriers to the adoption of ZEVs, the Canadian government has implemented incentive programs for both ZEV sales (Transport Canada, 2024c) and infrastructure (NRCan, 2024d). The Incentives for Zero-Emission Vehicles (iZEV) Program offers Canadian individuals and businesses up to $5,000 at the point of sale on the purchase or lease of a wide range of eligible light-duty ZEVs (Transport Canada, 2024c). The iZEV program was bolstered by Budget 2024, which commits a further $607.9 million to the program over the next two years (Department of Finance Canada, 2024). The Zero Emission Vehicle Infrastructure Program (ZEVIP) aims to increase electric vehicle charging station and hydrogen refuelling station infrastructure (NRCan, 2024d). The government's initial investment of $280 million over five years in 2019 was complemented by Budget 2022, which committed an additional $400 million to ZEVIP, and extended the program an additional five years (Department of Finance Canada, 2022). These investments are further enhanced by a $500 million investment in large-scale ZEV charging and refuelling infrastructure by Canada's Infrastructure Bank (NRCan, 2024d)

Given that Canada's ZEV sales mandate aligns with the IEA targets for ZEV sales and has penalties for noncompliance, and given Canada's extensive commitment to provide ZEV sales and infrastructure incentives, Canada received a *green* rating for this criterion.

Medium- and heavy-duty vehicles: 🟡

Has or is in the process of developing a legislated ZEV sales regulation and/or ZEV purchase and infrastructure incentives.

Canada will need to significantly reduce emissions from MHDVs in order to meet its GHG emissions reduction targets (ECCC, 2021b). The Canada Energy Regulator (2023) recommends MHDV sales targets of 35% new ZEV sales by 2030 and 100% by 2040 in order to meet net-zero emissions by 2050. In Canada's *2030 ERP*, the government set the goal to achieve 35% ZEV sales for MHDVs by 2030, and committed to developing a medium- and heavy-duty zero emission vehicle (MHDZEV) sales regulation (ECCC, 2022). In November 2022, Canada signed an international Memorandum of Understanding (MOU) on MHDVs in which it commits to working with other nations to achieve 30% ZEV sales on MHDVs by 2030 and 100% ZEV sales by 2040. Since then, Canada has continued to reaffirm its commitment to develop a MHDV regulation to require 100% of MHDV sales to be ZEVs by 2040 (for a subset of vehicle types, based on feasibility) (NRCan, 2024d). However, as of yet, no such regulations have been enacted.

In order to reduce barriers and encourage the adoption of MHDZEVs by Canadian businesses, the Government of Canada launched the Incentives for Medium- and Heavy-Duty Zero-Emission Vehicles (iMHZEV) Program in July 2022 (Transport Canada, 2024b). The iMHZEV program offers incentives of up to $200,000 to purchase or lease eligible MHDV ZEVs (Transport Canada, 2024b). In addition, Canada is exploring opportunities to support the deployment of ZEV charging infrastructure and hydrogen stations for MHDVs (ECCC, 2023a), and does not specifically exclude infrastructure projects for MHDZEVs from the ZEVIP program (Department of Finance Canada, 2022).

Given that Canada's goal for 2035 and 2040 MHDZEV sales targets are not legislated but that Canada offers purchase incentives for MHDZEVs and ZEV infrastructure incentives, Canada was rated *yellow* for this criterion.

Public transit and active transportation: 🟡

Has two measures in place or in development (public transit and active transportation policies included in its climate plan, and initiatives to increase public transit and active transportation to meet the targets).

Transitioning away from personal vehicles to public transit and active transportation can decrease GHG emissions by as much as 2.2 tonnes CO_2 eq per capita per year (United Nations, n.d.). The *2030 ERP* acknowledges the importance of utilizing public transit and active transportation to help decarbonize the transportation sector, and to support this commitment, the government announced the Permanent Public Transit Program (PPTP) in 2021(ECCC, 2022). In its *National Active Transportation Strategy*, Canada acknowledges the need for to set targets that prioritize modal share (Infrastructure Canada, 2021). While Canada currently does not have targets for public transit or active transportation trips, an independent study from Environmental Defence and Équiterre (2024) describes how Canada could double its public transit ridership by 2035 and have public transit account for more than 30% of travel in major cities, 20% overall across Canada. They project these changes in ridership could reduce GHG emissions in Canada by up to 65 million tonnes CO_2 eq: 42% of Canada's current transportation emissions (Environmental Defence & Équiterre, 2024). In addition, in the *2030 ERP Progress Report*, Canada expresses interest in exploring opportunities to develop a roadmap for building a net-zero transportation system by 2050, although this is still in the early stages of consideration (ECCC, 2023a).

Despite its lack of targets for public and active transportation, Canada has developed a suite of programs and incentives aimed at increasing trips by public transit and active transportation. Under the PPTP, Canada is providing billions of dollars in funding distributed across the Active Transportation Fund, the Rural Transit Solutions Fund, and the Zero Emission Transit Fund, and will be providing $3 billion per year of long-term funding starting in 2026-2027 to support sustainable public transit and active transportation infrastructure (ECCC, 2023a). The Active Transportation Fund provides $400 million in funding to support expanding active transportation networks and infrastructure, as well as planning activities (Government of Canada, 2024a). The Rural Transit Solution Fund provides $250 million in funding for flexible and innovative locally-driven public transit solutions in rural and remote communities (Government of Canada, 2024g). The Zero Emission Transit Fund provides $2.75 billion in funding to support the transition to zero emission buses and school buses (Government of Canada, 2024h). The aim is to fund the purchase of 5,000 zero emission buses and help build supporting infrastructure (Government of Canada, 2024h).

Given that Canada's climate plan includes policies and funding for public and active transportation and funding programs to support increased public and active transportation trips, but given that Canada does not have any targets for public transit and active transportation, does not have an estimate of the impact of its initiatives on public transit and active transportation, and has no plan to make public transit carbon neutral by 2040, Canada was rated *yellow* for this criterion.

3.2.3. Electricity

Canada received one *green* rating and one *yellow* rating in the electricity category. Canada received a *green* rating for coal phase-out, and a *yellow* rating for electricity generation (Table 16).

Table 16: Canada's climate policy evaluation ratings for electricity

Criteria	Indicators	Rating
Electricity generation	Does the jurisdiction have a plan consistent with CER and IEA targets to decarbonize its electricity sector by 2035?	
Coal phase-out	Does the jurisdiction have a plan to phase out unabated coal-fired electricity generation by 2030?	

Electricity generation: 

Electricity generation is not decarbonized, but there is a plan under development to decarbonize electricity sector by 2035.

Currently, Canada's energy production profile is 70% renewable, an increase of 9% since 2005 (CER, 2023b) (Figure 6). The Canadian government aims to fully decarbonize its energy sector by 2035, and in 2023 released an interim plan for energy decarbonization entitled Powering Canada Forward: Building a Clean, Affordable, and Reliable Electricity System for Every Region of Canada (NRCan, 2023). Canada is currently developing a Clean Electricity Standard to provide a roadmap for the transition to a net-zero electricity grid (ECCC, 2022b), and in August 2023, Canada released its new proposed *Clean Electricity Regulations* (Government of Canada, 2023a). The final regulations are set to come into effect later this year (Government of Canada, 2024b),

along with Canada's Clean Energy Strategy, a more comprehensive plan to decarbonize the energy sector with official decarbonization targets (ECCC, 2023a; NRCan, 2023).

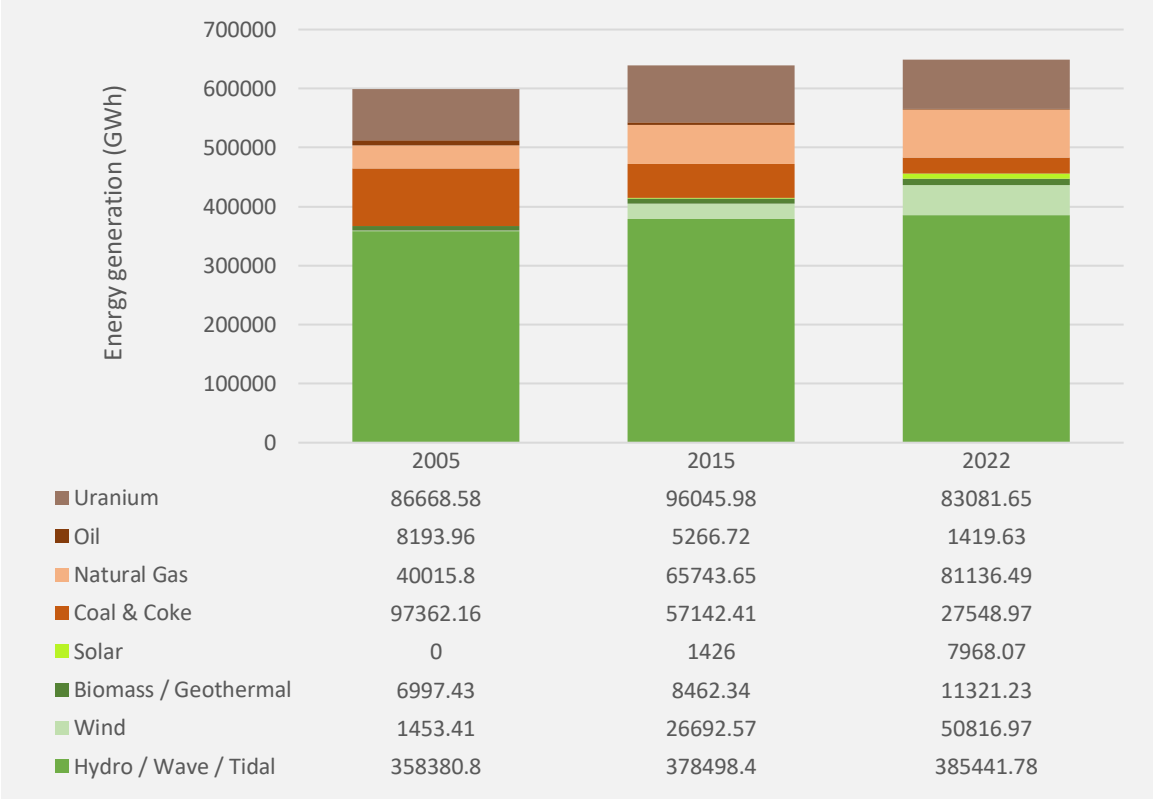

Figure 6: Canada's energy production profile in 2005, 2015, and 2022, by energy source. Shades of green represent renewable energy sources while shades of orange represent non-renewable energy sources.
Created using data from (Canada Energy Regulator, 2023b)

Given that Canada's energy sector is not currently decarbonized and has not published a plan to decarbonize by 2035, but that Canada has a goal and is in the process of developing a plan for electricity decarbonization, Canada received a *yellow* rating for this criterion.

Coal phase-out: ●

Does the jurisdiction have a plan to phase out unabated coal-fired electricity generation by 2030.

Combustion of coal and coke is currently responsible for approximately 4% of Canada's power generation, down from over 16% in 2005 and 9% in 2015 (CER, 2023b). In 2017, Canada joined the Powering Past Coal Alliance, an international coalition of governments, businesses, and organizations aiming to phase out unabated coal-fired power (Government of Canada, 2023d; Powering Past Coal Alliance, 2024). Shortly thereafter, Canada has amended its *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations* (2012) to accelerate the phase-out of unabated coal-fired electricity, with a mandatory phase-out deadline of 2030 (Government of Canada, 2018). To support this coal phase-out, Canada is investing $21.9 billion into renewable energy and infrastructure (Government of Canada, 2023d).

Given that Canada has passed regulations mandating the phase-out of unabated coal-fired electricity generation by 2030 and has made significant financial commitments towards this phase-out, Canada was rated *green* for this criterion.

3.2.4. Oil and gas

Canada received two *green* rating in the oil and gas category: one for methane, and one for emissions cap (Table 17).

Table 17: Canada's climate policy evaluation ratings for oil and gas

Criteria	Indicators	Rating
Methane	Does the jurisdiction have a plan consistent with CER and IEA targets to reduce methane emissions from 2012 levels by 40% by 2025 and 75% by 2030?	●
Emissions cap	Does the jurisdiction have a plan consistent with the CER targets to reduce emissions from the oil and gas sector from 2005 levels by 31% by 2030, 60% by 2040 and net-zero by 2050?	●

Methane: ●

Has legislated requirements to meet the 40% by 2025 reduction target and has legislated requirements or is in the process of developing legislative requirements to meet the 75% reduction by 2030 target.

Reducing Canada's methane emissions is key for Canada in reaching its GHG emissions reduction targets (ECCC, 2022a), as methane has 28 times the warning potential of CO_2 (ECCC, 2024a). In 2021, Canada signed the Global Methane Pledge,

which has the goal of reducing all anthropogenic methane emissions by at least 30% by 2030, relative to 2020 (Climate and Clean Air Coalition Secretariat, 2024; ECCC, 2021a). One year later, the government released *Faster and Further: Canada's Methane Strategy*, a comprehensive plan to help Canada reduce emissions across economic sectors (Government of Canada, 2022). Within *Canada's Methane Strategy*, Canada commits to both of the IEA methane reduction targets relative to 2012 levels: of 40 to 45% reduction of methane emissions by 2025, and at least 75% reduction of methane emissions by 2030 (Government of Canada, 2022). Canada's existing *Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector*) (2018) fulfill its commitment to reduce methane emissions from the oil and gas sector by 40% to 45% below 2012 levels by 2025, and Canada is currently proposing amendments to these regulations intended to help Canada achieve further methane emission reductions in the oil and gas sector and thus help meet the 2030 methane target (Government of Canada, 2023b). Canada is currently projected to meet its 2025 methane target (ECCC, 2021).

Given that Canada has adopted the CER and IEA methane emissions reduction target of 40% by 2025 and is in the process of adopting regulations to meet the 75% reduction target by 2030 from 2012 levels, and Canada has a specific Methane Reduction Strategy with regulations to support it, Canada received a *green* rating for this criterion.

Emissions cap:

Has adopted or is in the process of adopting legislated reduction targets consistent with the CER net-zero targets.

The oil and gas sector is Canada's highest-emitting sector, accounting for 31% of national emissions (ECCC, 2024b) (Figure 5). To meet Canada's target of net-zero GHG emissions by 2050, in their net zero scenario the CER (2023a) uses a GHG emissions reduction target for the oil and gas sector of 31% by 2030, 60% by 2040, and net zero by 2050 compared to 2005 levels. The Canadian government has committed to implement an emissions cap in the form of a cap-and-trade system in the oil and gas sector through new regulations applied under CEPA (1999). The new regulations propose to set a 2030

emissions cap of between 106 and 112 Mt CO_2 eq – which equates to a reduction of 33% to 37% below 2005 levels in 2030 – and a target of net-zero by 2050, and are set to come into effect in 2025 (Government of Canada, 2023e).

Given that Canada is in the process of adopting regulations to put a cap on emissions from the oil and gas sector, and that the thresholds in the proposed cap are consistent with the CER net zero target, Canada was rated *green* for this criterion.

3.2.5. Summary of sector-specific criteria

Overall, Canada received five *green* ratings, four *yellow* ratings, and no *red* ratings (Table 18).

Table 18: Summary of ratings received by Canada across nine sector-specific climate policy evaluation criteria

Category	Criteria	Rating
Buildings	New buildings	●
	Existing buildings	●
Transportation	Light-duty vehicles	●
	Medium- and heavy-duty vehicles	●
	Public transit and active transportation	●
Electricity	Electricity generation	●
	Coal phase-out	●
Oil and Gas	Methane	●
	Emissions cap	●

3.3. Evaluation Summary

Of the 24 colour coded criteria, Canada ranked 58.3% *green* (strong climate leadership), 37.5% *yellow* (some climate leadership), and 4.2% *red* (no climate leadership) (Figure 7). The two criteria rated using trends both showed decreasing trends.

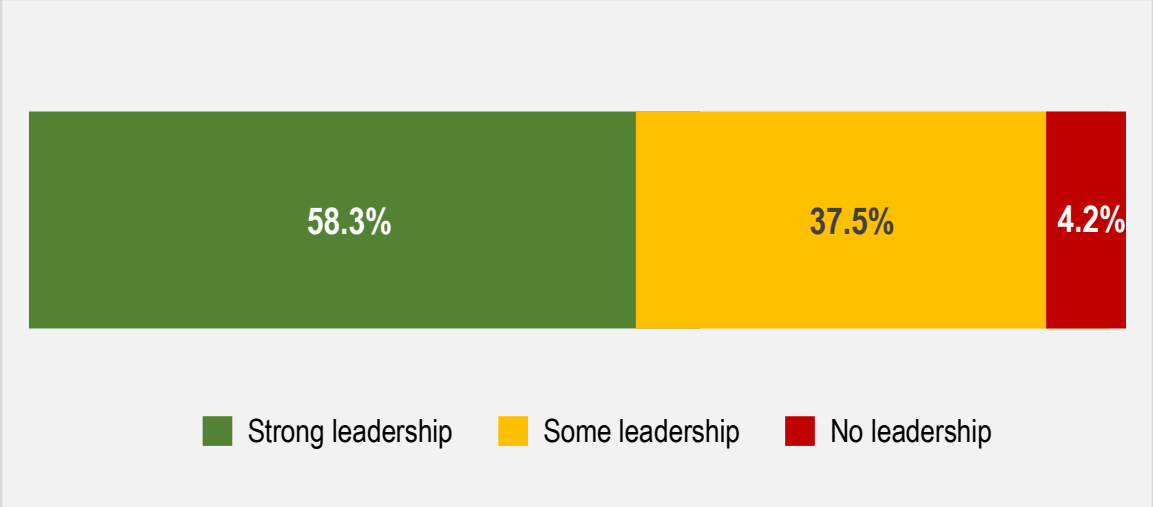

Figure 7: **Summary of the proportion of colour ratings received by Canada across 23 climate policy evaluation criteria and indicators.** Green indicates the criterion was fully met, showing strong climate leadership; yellow indicates the criterion was partially met, showing moderate climate leadership; and red indicates the criterion was not met, showing no climate leadership

Chapter 4.

Discussion and Recommendations

Climate change is arguably the biggest challenge humanity has ever faced. Meeting this challenge and will require governments around the world to implement robust, cohesive suites of climate policies. The purpose of this research was to outline a comprehensive and transparent framework for evaluating climate policy and to apply this evaluative framework to Canada's suite of climate policy instruments. While several other climate policy evaluation frameworks exist, the strength of the framework developed in this study is that it integrates best practices criteria from literature and other evaluation frameworks into a single overarching framework and utilizes detailed indicators and a rating system based on best practices in climate policy and net zero pathways to assess the degree to which the criteria are met in an efficient and transparent way. This framework includes 26 general and sector-specific criteria and indicators, compared to the average 12 criteria per framework found in the 20 papers that were analyzed (Appendix B). Many of the indicators and rating thresholds of in the framework incorporate major findings from the IEA's *Net Zero RoadMap* (2021, 2023a), CER's *Canada Energy Future* (2023) report, and the *IPCC's Climate Change 2023: Synthesis Report*, ensuring this evaluation framework is guided by the latest research on policy requirements to achieve a path to net-zero emissions. Furthermore, several of the indicators in this framework combine multiple measures into one rating (see Table 3 and Table 4), further enhancing the breadth of the framework without making it exceedingly complex.

The results of the analysis in this study illustrate the strengths of this new climate policy evaluation framework. The application of the framework to Canadian climate policy establishes the framework's feasibility and transparency by clearly identifying policy strengths, weaknesses, and areas for improvement, and demonstrates how the evaluation framework can be used both as a diagnostic and remedial tool for improving and strengthening climate policies.

The evaluation of Canada's climate policy yielded a total of 23 *green* and *yellow* ratings (14 and nine, respectively) across 24 climate policy criteria and indicators, while

receiving just one *red* rating. These results show Canada is taking a leadership role in climate policymaking, especially within the past two years, and demonstrates Canada's commitment to preparing its economy for the transition to clean energy, now underway globally (IEA, 2024). Further leadership is demonstrated in Canada's international commitments to reduce emissions by 40% to 45% below 2005 levels by 2030, and reach net-zero by 2050, which are supported by the *2030 ERP*, published in 2022. The *2030 ERP*, which is the first climate plan published under the *Canadian Net-Zero Emissions Accountability Act* (2021), contains more than 80 measures designed to help Canada reach its emissions reduction targets while fostering decarbonized economic development (ECCC, 2022a); and in December 2023, the federal government released its first progress report on the *2030 ERP* (ECCC, 2023a). Notable measures mentioned in the *2030 ERP* and progress report include the commitment to increasing Canada's carbon price to $170/tonne by 2030; implementing an emissions cap on the oil and gas sector; strengthening regulations on light-, medium-, and heavy-duty vehicles; and phasing out coal-fired power generation by 2030 (ECCC, 2022a, 2023a). The plan also commits to developing Canada's first-ever green building strategy[12] and Canada's first-ever clean electricity strategy (ECCC, 2022a, 2023a). Canada's additional climate-forward plans include the *National Adaptation Plan* (ECCC, 2023d), *Sustainable Jobs Plan* (Government of Canada, 2023f), *National Active Transportation Strategy* (Infrastructure Canada, 2021), and *Canada's Methane Strategy* (Government of Canada, 2022). Canada's climate plans, policies, and commitments are bolstered by billions of dollars in investments (Department of Finance Canada, 2022, 2024; ECCC, 2023a). However, despite its recent advancements in climate policymaking and leadership, in 2022 Canada approved Bay du Nord, a new major oil and gas development project (Canadian Impact Assessment Registry, 2022), and has invested more than $34 billion into the completion of the Trans Mountain oil pipeline expansion since 2018 (The Fraser Institute, 2024); actions that are misaligned with Canada's climate targets and building a clean economy.

[12] Canada's Green Building Strategy was released on July 16, 2024 (NRCan, 2024a)

4.1. Canada's climate headway

Based on the results of this evaluation, the federal government is supporting Canadians in the transition to a prosperous, decarbonized Canada, and overall, Canada is making significant progress towards its climate goals. Canada has made substantial improvements to its suite of climate action measures in recent years, and this appears to be making a notable dent in the country's overall emissions. Even as the economy returned to normal after the pandemic in 2022, emissions were down nearly 6% from pre-pandemic (2019) levels (Government of Canada, 2024d), and projections forecast a decline in GHG emissions from 2005 to 2030 of 23% under the 2023 Reference Case Scenario and 36% reduction under the 2023 Additional Measures Scenario (including LULUCF) (ECCC, 2023b). This is a substantial improvement from pre-pandemic (2019) projections, which forecast a decline between 2005 and 2030 of just 8% under the 2019 Reference Case Scenario and 18% under the 2019 Additional Measures Scenario (ECCC, 2020)

Canada has utilized the 'carrot and stick' approach to its climate action policies. From a regulatory angle, Canada has employed enforceable regulations in areas such as methane emissions (Government of Canada, 2023b), unabated coal-fired power (Government of Canada, 2018), industrial carbon pricing (ECCC, 2024g), fuel charges (Department of Finance Canada, 2021), *Clean Fuel Regulations* (2022), and ZEV sales mandate (Transport Canada, 2024a), supported by a host of other policies such as its net-zero energy ready tier in the latest national buildings codes (Canadian Commission on Building and Fire Codes, 2022b, 2022a), *Sustainable Jobs Plan* (Government of Canada, 2023f), and *National Adaptation Strategy* (ECCC, 2023c), and *Adaptation Action Plan* (ECCC, 2023d). These are complemented by an assortment of 'carrots' (i.e. incentives) in areas including deep home retrofits and heat pump installation (NRCan, 2024c), ZEV purchase and infrastructure (NRCan, 2024e; Transport Canada, 2024b, 2024c), public transit and active transportation, and carbon tax rebate (Canada Revenue Agency, 2024). Canada's policies in development will help further reduce Canada's emissions, including the oil and gas emissions cap, expected to take effect in 2025 (Government of Canada, 2023e), the proposed clean electricity standards, expected to come out later this year (ECCC, 2022b; Government of Canada, 2024b), and the proposed stringent amendments to Canada's methane regulations to increase

stringency, put forward by the government in December 2023 (Government of Canada, 2023b). Canada is also expected to come out with its first sustainable jobs action plan in 2025, a promising start for Canada in aligning economic and clean energy transition objectives with climate objectives (Government of Canada, 2023f).

A driving force behind Canada's progress has been the *Canadian Net-Zero Emissions Accountability Act* (2021) and *2030 Emissions Reduction Plan* (ECCC, 2022a), which provide pathways for emissions reductions for all major sectors, improve transparency through monitoring progress, identifying gaps, and modelling projections, and take strides towards deepening understanding and mitigating impacts of climate change and climate policies on equity-deserving groups.

While directly comparing the results of this study to other similar evaluations is not possible, broader conclusions can be compared at a coarser scale. The climate strengths found in this evaluation largely coincide with those from similar studies. For example, the Commissioner of the Environment and Sustainable Development's independent 2023 assessment report on the *Canadian Net-Zero Emissions Accountability Act* and the *2030 ERP* notes that strengths of Canada's climate plan include the plan's broad range of climate and economic mitigation measures that have been implemented or are under development, and Canada's effort to identify and mitigate impacts of climate change and climate policy on disproportionately burdened groups (Office of the Auditor General of Canada, 2023b). The Canadian Climate Institute's independent assessments of both the *2030 ERP* and the *2030 ERP Progress Report* find that Canada has progressed significantly in its efforts to reduce GHG emissions, and remarks on the number of measures contained in Canada's climate plan, and comment on the enhanced government transparency and accountability provided by *2030 ERP* and progress report (Sawyer et al., 2022; 2023). Conversely, while Climate Action Tracker's (CAT) acknowledges Canada's downward trend in emissions and potential impacts of implementing planned policies on future emissions levels, overall, they rate Canada's climate policies, actions, targets, and financing as 'highly insufficient' (CAT, 2022a, 2022b). This discrepancy in findings could be the result of differences in evaluation methodologies, criteria, indicators, and/or scope. For example, their evaluation is based largely on modeling projections that include policy measures in place as of November 2021 and therefore do not include current and announced policies

(CAT, 2022a), and thus many of the policies included in this evaluation were not included in CAT's assessment.

4.2. Canada's priorities for action

While Canada has made significant progress in its climate action, significantly more effort is needed if Canada wants to be on track to meet its 2026 interim objective and 2030 target. Canada's emissions in 2022 were 7% lower than 2005 levels (Government of Canada, 2024d), and 2030 projections based on current policies in place forecast a reduction of just 23% below 2005 levels (including LULUCF), well short of Canada's target (ECCC, 2023b), meaning there is still a considerable amount of work to do to ensure Canada achieves a 40–45% emissions reduction by 2030 compared to 2005 levels.

The federal government has several policies and plans that it has committed to or are currently under development; it is now essential that these plans be implemented. More stringent methane regulations (Government of Canada, 2023b), clean electricity regulations (Government of Canada, 2024b), an oil and gas emissions cap (Government of Canada, 2023e), a green buildings strategy (NRCan, 2022), ZEV sales requirement for MHDVs (ECCC, 2021c), and the *Sustainable Jobs Act* and action plan — all of which have been promised by the government — will be crucial in Canada's climate progress moving forward[13]. The federal government's interim *Sustainable Jobs Plan* begins to provide a strong foundation for supporting workers in the transition to a clean economy (Government of Canada, 2023f); however, it is critical that the 2025 action plan provides the governance structure and labour market analysis that supports clear pathways for the creation of sustainable jobs. Overall, Canada should work towards implementing policies in development and coming through on its commitments.

In addition to the need for implementation, many of Canada's existing policy actions still lack clear goals, targets, and projected impact. For example, while there are several incentives for building retrofits (NRCan, 2024c), Canada has no concrete targets for retrofit rates; and while the federal government has developed policies and

[13] The Sustainable Jobs Act became law on June 20, 2024 (Government of Canada, 2024j), and Canada's Green Building Strategy was released on July 16, 2024 (NRCan, 2024a)

committed funding towards public transit and active transportation (Government of Canada, 2024a, 2024g, 2024h), it has no targets or estimates for the impacts of these policies. The federal government needs to work towards adding targets and indicators to help determine if implemented policies are having the desired effect and how they can be improved, as well as modelling the projected impact of individual and suites of policies on overall emissions. Furthermore, Canada would benefit from prioritizing policy cohesion. While Canada's onslaught of climate policies in recent years show promise for the future, Canada's suite of climate policies appears to be disjointed and somewhat piecemeal, with many different branches of government involved (Office of the Auditor General of Canada, 2023b). Canada would benefit from having one overarching entity responsible for overseeing the responsibility of emissions reductions and ensuring cohesion among all of Canada's climate measures. Finally, despite having the 2050 net-zero target enshrined in legislation, Canada does not yet have plans and modelling in place showing how it intends to meet that target. With 2050 just 26 years away, it is crucial for Canada to start thinking and planning long-term.

As previously stated, while directly comparing the results of this study to other similar evaluations is not possible, broader conclusions can be compared at a coarser scale, and Canada's priorities for action from the evaluation largely coincide with those from similar studies. For example, the Commissioner of the Environment and Sustainable Development finds that Canada's current measures – both implemented and under development – are not sufficient for Canada to reach its 2030 target, and further action is needed (Office of the Auditor General of Canada, 2023b). They recommend Canada prioritize adding targets, timetables, and emissions reduction estimates to its policies and measures; identifying and implementing key measures needed to meet 2030 and 2050 emission reduction targets; and reducing fragmentation for climate accountability to maximize emission reduction potential and minimize policy overlap (Office of the Auditor General of Canada, 2023b). They also express extreme concern around Canada's ability to achieve meaningful progress without taking these priority action steps (Office of the Auditor General of Canada, 2023b). The Canadian Climate Institute agrees that while Canada has made significant progress, further efforts are needed for Canada be on track to meet its emissions reduction targets (Sawyer et al., 2023; 2022). They also note Canada's lack of emissions reduction estimates, broken down by policy (Sawyer et al., 2022). They recommend Canada concentrate on

delivering on its existing policy commitments, particularly by continuing to increase the federal carbon price while adding stringency to the large-emitter programs; establishing an emissions cap for the oil and gas sector to complement the forthcoming methane regulations; developing clean electricity regulations that prioritize emissions reductions while expanding support for electrification; and finalizing the *Clean Fuel Regulations* (Sawyer et al., 2023). Lastly, Climate Action Tracker emphasized Canda's need to implement its full climate policy agenda at a speed and scale proportional to the urgency of the climate crisis, asserting that Canada's priorities for action should be stronger climate targets and faster policy implementation (Climate Action Tracker, 2022b)

4.3. Future research

This report develops a comprehensive evaluation framework and applies it to evaluate climate policy in Canada. The framework is based on current best practices in climate policy combined with projected pathways to reach net-zero emissions by 2050. However, climate policy is a dynamic and ever-changing environment, and therefore this framework should be updated as new best practices come to light. Specifically, some criteria and indicators, such as clean economy transition and equity, are still emerging in the climate policy space, and current best practices are not yet well understood and underrepresented in the literature. These criteria and indicators should be amended as more information on best practices in these areas becomes available. Furthermore, the criteria of equity should be expanded to consider not just equity within the jurisdiction, but also internationally. This should involve considering *how* a jurisdiction achieves its emissions reductions and specify the minimization of the use of offsets outside the jurisdiction. Additionally, as 2050 approaches, the framework should be adjusted to include criteria for targets and plans that reach beyond the 2050 threshold, ensuring jurisdictions continue to plan long-term.

The evaluation of Canada provides a comprehensive snapshot of current Canadian climate policy through the application of a range of relevant climate policy criteria and indicators. While this is valuable information, it becomes far less meaningful if recommendations are not implemented and progress is not monitored, as it does not provide insight into trends or progress. With 2030 less than six years away, and 2050 just 20 years thereafter, regular evaluation of Canada's climate policies will be imperative if Canada hopes to meet its GHG emissions reduction targets. This research

should be used as a starting point, a baseline for future evaluations of Canadian climate policy. Continuing regular evaluation of Canadian climate policy using a consistent evaluation is crucial for tracking progress, as it allows direct comparison among evaluations and among years.

This evaluation framework was also designed to be versatile and can be universally applied across all jurisdictions. This study is part of a bigger project evaluating Canadian federal and provincial climate policy, and this framework has already been applied to Canada's provincial climate policies. However, this could be further expanded to a global scale through evaluating national climate policy from other nations, providing an international context for Canadian climate policy, and used to compare the relative climate leadership of jurisdictions internationally. In addition, if used at that scale, this evaluation could further help other governments understand their own climate strengths, and what areas need further climate policy effort. The application to other jurisdictions will also test the evaluation framework more broadly, will provide additional data on the strengths and weaknesses of the evaluation framework, and will identify opportunities for improving the framework overtime.

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Appendix A.

Inventory of Climate Policy Evaluation Criteria and Indicators

Table A.1: Inventory of reviewed general climate policy evaluation criteria and indicators, and the sources in which they appeared.

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
Climate Action Plan / Strategy	A single climate action plan or is in the process of developing one.	x	x		x	x			x	x		x	x	x		x			x	x	x
	Legal requirements to have a climate action plan.	x			x																x
	Comprehensive goals for climate action with measurable targets. This includes integrated, comprehensive statement of goals that cover all aspects of climate change mitigation and include scientifically based measurable short, medium and long-term targets with timelines.					x		x										x	x		x

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																			
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
Climate Action Plan / Strategy	Climate action plan that includes modelling, roadmap, pathways, or scenarios to show how jurisdiction will meet its targets.				x	x													x		
	A longer-term intent for either maintaining net zero or reaching net negative emissions.																	x			
	A plan that looks backwards as well as forwards.																		x		
	A plan that identifies data gaps and needs.																		x		
	A plan that considers other aspects of policy performance (such as Indigenous rights, competitiveness, cost-effectiveness, and fairness)																		x		
	A strategy for how targets will be met, such as how financial resources will be allocated to meet goals and objectives.								x										x		x

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																			
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
Targets	A target year for net zero emissions in line with Paris Agreement (net zero CO2 by 2050, net zero emissions by 2070).	x	x	x	x			x	x	x		x	x	x				x		x	
	Interim emissions reduction targets for 2030 that are consistent with Paris Agreement trajectory.	x	x	x	x					x		x	x							x	
	Targets that cover all types of GHG emissions.			x						x		x						x		x	
	Renewable energy targets in line with Paris Agreement		x						x												
	Total primary energy supply (TPES) targets in line with Paris Agreement.		x																		
	Targets specify whether the intent is to reduce, remove or offset the emissions.			x														x			
	National energy efficiency targets.								x												
	Climate targets that are legally binding.			x	x																

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
Trends	Long-term trends of decreasing GHG emissions (past 25 years).				x					x											
	Recent trends of decreasing GHG emissions (past 10 years).				x					x											
	A trend of decreasing emissions in most recent year with data availability.									x											
	Projected trends for decreased emissions that align with Paris Agreement trajectory.				x																
Transparency and Accountability	Clearly stated the status and parameters of emissions reductions targets (i.e. announced by the government, published in an official policy document such as a Nationally Determined Contribution (NDC), in draft legislation, or already in law or already achieved).	x						x				x									
	Regular and legally required monitoring and public reporting on progress using indicators to assess success and identify deficiencies.	x		x	x	x		x		x			x		x			x		x	x

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																			
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	A transparent performance measurement framework to track progress towards targets and to measure effectiveness and efficiency.												x			x					
	A financially and institutionally independent review body responsible for public reporting.				x																x
	Mandatory adjustments to plans and targets to address deficiencies during monitoring.				x						x										
Equity and Justice	Considered equity when setting targets and in making policy.	x	x		x						x	x			x					x	x
	Taken a level of ambition to reduce GHGs that is proportionate to its contribution to the problem.											x									
	Plans to achieve targets in such a way that will not negatively affect others' ability to achieve net zero and/or pursue sustainable development goals.			x																	

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	A plan to address distribution and inequities of impacts of climate change and climate policies stakeholder groups (including income bracket).				x						x		x								x
	Considered the full range of impacts of climate change and climate policy on human well-being and ecosystem integrity.				x										x						
	Engaged stakeholders broadly when making policy, including those at risk from climate change and those that benefit from emitting.										x										x
	Engaged marginalized target audiences and underrepresented groups (such as women, youth, Indigenous peoples...) in the development of climate action policies.												x								
	A plan to minimize the use of offsets, keep offsets within the jurisdiction, and aims to transition offsets to permanent removal by the time net zero is reached.	x		x								x						x		x	

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
Flexibility	Prepared a suite of policy instruments that can adapt and cope with changing conditions.										x		x								
	Targets that are continuously reviewed and updated based on the latest science.			x																	
Leadership	Government officials that are actively engaged in and supporting climate change initiatives (i.e. a designated committee/coordinating body/secretariat for climate strategy).								x					x							x
	Adequate human and financial capital committed to supporting climate change planning and policy development.			x																	
	Demonstrated international climate leadership at UNFCCC conferences and other international conferences and agreements.		x																		
	Passed long term climate mitigation-related legislation.																				x

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																			
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Supports independent research entities to study climate change impacts, mitigation, and public importance.									x											
Coordination	Climate policies that are compatible with legal rules, principles, and other policies within and between government departments/ministries.						x	x			x				x						
	Climate policies that are coordinated with other levels of government governments.						x	x							x						
	Climate policy actions that are in line with climate action strategy.										x										
Carbon Pricing	Has a broad-based carbon pricing policy (carbon tax or cap-and-trade).				x					x				x							
	Has a carbon price on heavy emitters that meets the federal benchmark requirements.				x																
Climate	Has a climate change adaptation plan.				x					x											

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																			
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Has a science advisory body that advises government on adaptation to climate change.									x											
Reconciliation	Legislated United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).				x																

Table A.2: Inventory of reviewed sector-specific climate policy evaluation criteria and indicators, and the sources in which they appeared.

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
Sectoral (General)	Emissions reduction targets for each sector.				x						x								x		
	Specific plans to addresses emissions from sector with highest emissions and fastest-growing emissions.									x											
	Strong policies to address energy efficiency and conservation in each sector.				x																
	Sectoral energy taxes, reporting, and audits.								x					x							

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Uses the full suite of policy instruments, including regulations and disincentives.										x										
Buildings	Strong building code for energy efficiency.				x					x							x				
	Committed to having GHG intensity limits integrated into building code by 2025.				x																
	Committed to adopting net-zero energy ready requirements into its building code by 2035.				x																

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	A target and plan to retrofit a minimum of 3–4% of community building stock per year or to meet sectoral carbon reduction targets for the building sector.				x				x					x							
	Urban planning strategies to address sprawl.								x	x				x							
	Policies to support efficient construction.													x							
	Policies to support efficient heating, cooling, hot water, cooking, appliances, and lighting.				x				x					x							

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																			
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Mandatory energy and carbon labelling/ benchmarking and disclosure,				x																
	Retrofit financing (e.g. PACE enabling legislation or on-bill financing).				x																
Electricity and Heat	Policies to support and targets for renewable energies.		x						x	x				x			x				
	Energy tax.								x					x							
	Policies to support energy efficiency.		x						x					x							

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Energy reporting and audits.			x																	
	Committed to support grid infrastructure development.								x												
	Strong policies to support highly efficiency power plants.								x												
	Performance and equipment standards.			x																	
	Support for carbon capture storage								x												

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	A plan to phase out unabated coal-fired electricity generation.				x															
	A plan to decarbonize the energy sector.				x															
Transportation	Investments into urban planning and infrastructure to minimize transport needs.								x				x							
	Net zero targets that fully cover emissions from international aviation and shipping.	x		x																
	Taxes on fuel and/or emissions.								x				x							

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Strong policies to support efficient/electric heavy duty vehicles.				x									x							
	Strong policies to support efficient/electric light duty vehicles.				x				x					x			x				
	Committed to charging electric vehicles with renewable energy.																x				
	Strong policies and targets for biofuels.								x					x							
	Strong policies to support low-emissions land transportation and e-mobility.								x					x							

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Strong policies to support modal share switch.								x					x							
	Strong policies to support public transit.				x																
Government	A program to address emissions from government.									x											
Land Use (incl. Agriculture and Forestry)	Policies to protect natural carbon stores in forests and peatlands.		x							x											
	Sustainable standards for biomass use.								x					x							

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Policies to reduce GHG emissions.								x					x							
	Policies to reduce deforestation and support afforestation and reforestation.		x						x					x			x				
	Policies to support sustainable agriculture.								x					x							
Oil and Gas	No provision of fossil fuel subsidies.								x					x							
	Policies to reduce GHG emissions associated with extraction/transportation.								x								x				

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Commitment to achieve short- (40-45% by 2025) and mid-term (75% by 2030) methane reduction targets, and policies/initiatives to improve data and understanding of oil and gas methane emissions.				x																
	Plan for reaching net zero in the energy sector, backed by modelling, including a diversification strategy, support for oil and gas workers, and transition plan for the sector.				x																
	A climate mitigation team within the department of energy.			x																	

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																			
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Financial security to cover legacy infrastructure.				x																
Industry	Strong policies to address emissions from industry.									x				x							
	A strategy for material and energy efficiency.								x					x			x				
	Emissions-related performance and equipment standards.								x					x							
	Strong policies to support energy efficiency and reduce emissions in industrial production.								x	x				x							

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																		
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Support for low- and negative-emission research, development, and demonstration.								x					x							
	Support strategy for carbon capture storage.													x							
	Support strategy for fuel switch.													x							
	Policies to reduce GHG emissions associated with process and fuel production.								x					x							
	Policies to reduce fluorinated gases.								x					x			x				

Category	Criteria and Indicators: *"The jurisdiction has…"*	Sources																			
		Black et al., 2021	Burck et al., 2022	CAT, 2021	Dusyk et al., 2021	Ellis et al., 2010	EEA, 2016	Fujiwara et al., 2019	Höhne et al., 2015	Holmes, 2012	Huitema et al., 2011	Levin et al., 2020	Mickwitz, 2003	Nascimento et al., 2022	NRC, 2010	NRCan, 2020	Roelfsema et al., 2018	Rogelj et al., 2021	Sawyer et al., 2022a, 2022b	UNFCCC, 2021	Zeiger et al., 2018
	Policies to reduce landfill methane.								x					x							

Appendix B.

Database of Canadian Climate Policy Information, Including Evaluation Categories, Criteria, Indicators, Rating System, Evaluation Rating and Discussion of Rating Rationale.

Table B.1: Evaluation criteria, indicators, rating system, summary of Canadian climate policy, evaluation rating and discussion of ratings for Canada's general climate policy evaluation.

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
A. Emission Trends				
Change in emissions (2005-2021)	↑ Emissions increased (percent) ↓ Emissions decreased (percent)	Between 2005 and 2022, Canada's emissions showed a decreasing trend, going from 761 Mt in 2019 to 708 Mt in 2022 (7.1%) (NIR 2024)		↓ -8.5%
Emissions projection (2021-2030)	↑ Emissions increased (percent) ↓ Emissions decreased (percent)	Decreasing from 637.5 Mt in 2021 to between 479.9 Mt (Reference Case) and 560.2 Mt (Additional Measures) = 15% to 32% (NIR projections 2023)		↓ -15 to 32%
B. Emission Reduction Targets				

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
2030 Target: Does the jurisdiction have a target that aligns with the IPCC target of 43% emissions reduction from 2019 levels by 2030?	🟢 Target is greater than or equal to 43% reduction from 2019 🟡 Target is 30% to 43% reduction 🔴 No target, or target is less than 30% reduction	Canadian Net-Zero Emissions Accountability Act*: "*The national greenhouse gas emissions target for 2030 is Canada's nationally determined contribution for that year, communicated under the Paris Agreement; *and* Each greenhouse gas emissions target must be as ambitious as Canada's most recent nationally determined contribution communicated under the Paris Agreement." Target from the 2030 ERP and 2030 ERP Progress Report: 40 to 45% below 2005 levels by 2030 (which equals 403 to 439 Mt) 2019 levels: 711.60 Mt (ECCC 2023 National Inventory Report) This translates to an emissions reduction target of 38% to 43% below 2010 levels.	Canada's target equates to 38% to 43% reduction below 2010 levels by 2030. This is within the Yellow range, and therefore Canada ranks Yellow.	🟡
2050 Target: Does the jurisdiction have a legislated target for net-zero emissions by 2050?	🟢 Legislated (or in the process of legislating) a net-zero target 🟡 Net zero target, not legislated 🔴 No net-zero target	Canadian Net-Zero Emissions Accountability Act *requires national greenhouse gas emissions target for 2050 to be net-zero emissions.* 2030 ERP and 2030 ERP Progress Report target for 2050 is net-zero.	Canadian Net-Zero Emissions Accountability Act *requires national greenhouse gas emissions target for 2050 to be net-zero emissions.* 2030 ERP and 2030 ERP Progress Report target for 2050 is net-zero.	🟢

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
Interim Targets: Does the jurisdiction have interim targets for emissions reductions to supplement 2030 and targets?	🟢 Has interim targets from 2022 to 2030 and has interim targets or a commitment to set interim targets from 2030 to 2050 🟡 Has interim targets from 2022 to 2030 🔴 No interim targets	Canadian Net-Zero Emissions Accountability Act *requires* the Minister to set the following interim national greenhouse gas emissions target: • for the 2035 milestone year, no later than December 1, 2024; • for the 2040 milestone year, no later than December 1, 2029; and • for the 2045 milestone year, no later than December 1, 2034. and requires the 2030 ERP include a target for 2026 From the 2030 ERP and 2030 ERP Progress Report: 2026 objective: 20% reduction from 2005 levels (which equals 586 Mt). This interim objective is not an official target akin to the 2030 NDC	Canada has an interim 2026 objective to 20% reduction from 2005 levels (though not an "official target"), and a legislated requirement to set interim targets for 2035, 2040, and 2045. Given that Canada has an unofficial interim target between 2022 and 2030, and the legislated requirement to set interim targets between 2030 and 2050, we have ranked Canada Green in this category.	🟢
C. Climate Action Plan				
Climate Action Plan: Does the jurisdiction have a climate plan?	🟢 🟡 🔴	The 2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a Strong Economy ("2030 ERP") was published in 2022. The 2030 ERP Progress Report was just published in December 2023, providing updates on the progress made towards the 2030 ERP.	Canada has a current, published climate action plan: the 2030 Emissions Reduction Plan (2022)	🟢
Will meet 2030 UN target	🟢 🟡 🔴	ECCC 2023 National Inventory Report 2010 levels: 711.60 Mt CO2 eq **Required levels to meet UN target (45% decrease): 391.4 Mt**	ECCC's latest modelling shows Canada will reduce emissions by between 19.1% (reference case, excluding LULUCF, NBCS, agriculture, and WCI credits) and 36.2%	🟡

<table>
<tr><th>Indicator</th><th>Rating System</th><th>Current Policy Summary</th><th>Discussion of Rating</th><th>Rating</th></tr>
<tr>
<td></td>
<td></td>
<td>
ECCC Greenhouse gas and air pollutant emissions projections – 2023
<table>
<tr><th></th><th colspan="2">Reference Case</th><th colspan="2">Additional Measures</th></tr>
<tr><th></th><th>2030</th><th>% Change</th><th>2030</th><th>% Change</th></tr>
<tr><td>Excl. LULUCF/NBCS/ Agriculture/WCI Credits</td><td>592</td><td>-16.8 %</td><td>512</td><td>-28.0 %</td></tr>
<tr><td>Incl. LULUCF</td><td>560</td><td>-21.3 %</td><td>480</td><td>-32.5 %</td></tr>
<tr><td>Incl. LULUCF/NBCS/ Agriculture/WCI Credits</td><td>n/a</td><td>n/a</td><td>467</td><td>-34.4 %</td></tr>
</table>
Calculations:
<table>
<tr><th></th><th colspan="2">Reference Case</th><th colspan="2">Additional Measures</th></tr>
<tr><th></th><th>% Change</th><th>% of UN</th><th>% Change</th><th>% of UN</th></tr>
</table>
</td>
<td>(additional measures, including LULUCF, NBCSF, agriculture, and WCI credits). This means Canada is on track to meet between 37% and 76% of the UN 2030 reduction target of 45% below 2005 levels by 2030.

Canada’s rank was dependent on which projections we decided to use. For the purpose of this evaluation, we have chosen to use the Additional Measures scenario, including everything (LULUCF etc). This projection sees Canada meeting 76% of the UN target, and therefore Canada ranks Yellow</td>
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Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating

		target met		target met
Excl. LULUCF/NBCS/ Agriculture/WCI Credits	-16.8%	37 %	-28.0 %	62%
Incl. LULUCF	-21.3%	47 %	-32.5 %	72%
Incl. LULUCF/NBCS/ Agriculture/WCI Credits	n/a	n/a	-34.4 %	76%

These projections were also published in the 2030 ERP Progress Report. Also within the progress report is a detailed description on the main drivers of change for latest projections. For modeling moving forward, "ECCC held a two-phase process to fulfill [their] commitment [to "both maximize transparency and address the inherent uncertainties in all modelling processes, ECCC will convene an expert-led process to provide independent advice in time for the 2023 Progress Report, ensuring a robust and reliable modelling regime to inform the basis of future ERPs"]. In Phase 1, ECCC commissioned Dr. Paul Boothe and his associates Mike Beale and Chris Frankel to lead an initial consultation process seeking input on objectives, scope, and key

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		milestones for a formal consultation process which took place between October and November 2022. From the recommendations put forward in the resulting report, ECCC developed a modelling improvement action plan. The action plan contains both measures to be implemented by the end of 2023 as well as longer-term improvements. In Phase 2, ECCC commissioned Mike Beale to facilitate a second round of expanded consultation, which took place in April and May 2023, on the proposed action plan and the report produced following the first phase. This consultation process informed the final report and final version of the action plan." (pg 83) According to the Commissioners report, Environment and Climate Change Canada found that the measures in the 2030 Emissions Reduction Plan were not expected to reduce emissions to the extent needed to meet the target. It projected that the 2030 plan would decrease Canada's total emissions to about 470 **megatonnes of carbon dioxide equivalent (Mt CO_2 eq)** in 2030. To meet the target from the 2030 plan, emissions should be reduced to no more than 443 Mt CO_2 eq. As a percentage, the plan projected 2030 emissions to be reduced to 36.4% below the 2005 level. In December 2022, the projected emissions from the implementation of the plan for 2030 were updated to 491 Mt CO_2 eq. This is a larger shortfall than the plan originally expected (**a shortfall of 46 Mt CO_2 eq** rather than the originally expected 27 Mt CO_2 eq). **As a percentage, the reduction would be 34%** below 2005 levels (https://www.oag-bvg.gc.ca/internet/English/att__e_44374.html) According to the 2030 ERP (Chapter 3) Projections for the 2030 Emissions Reduction Plan uses a combination of two modelling approaches – a "bottom-up" approach— as well as a "back-casting" approach. The bottom-up approach provides a floor for projected		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		emissions reduction achievable from existing climate measures, including some new measures contained in the ERP. This accounts for about 470 Mt or 36% below 2005 levels. The 2030 ERP also uses a back-casting approach to help account for policies and measures that are included in the plan, but are still under development (e.g., Canada Green Buildings Strategy, work to develop a Buy Clean Strategy to support and prioritize the use of made-in-Canada low carbon products). Under this approach Canada's total emissions are capped at the level needed to achieve the 2030 target of 40% below 2005 levels. However, it does not fully take into account other uncertain factors that could have an impact on the path to the 2030 target, such as labour availability, technology and infrastructure requirements.		
Plan to meet net-zero 2050: Does the jurisdiction have a plan to meet net-zero by 2050?	🟢 🟡 🔴	Canada Energy Regulator's Report on Canada's Energy Future (2023) "In the Current Measures Scenario, we project emissions to be 566 MT by 2050, 13% lower than 2021 levels. This projection of GHG emissions in the Current Measures Scenario only includes policies currently in place during the analysis and does not reflect recently announced policies that are in development." Current Measures Scenario 2050 projection: 566 Mt 2005 levels: 732 Mt Percent change: -22.7% Commissioner's Report 5: • Key values and assumptions were captured in modelling approach to estimate the long-term impacts of the Reduction	No modelling within the 2030 ERP showing how it will meet net zero 2050. Credible modelling from the CER projects Canada's emissions to decrease by 22.7% compared to 2005 levels based on existing policies (Current Measures Scenario). However, the CER does not have any modelling showing the Additional Measures Scenario. Independent modelling from CAT shows Canada's climate plan is highly insufficient in	🔴

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		of Carbon Dioxide Emissions From **Coal-Fired Generation of Electricity** Regulations. • The information published in the regulatory impact analysis statements for the **transportation regulations** was less comprehensive. Modelling for light- and heavy-duty vehicles did not explain the reference scenarios or the extent to which the analysis considered policy interactions. • Gaps in estimating the long-term impacts of the amended Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations and the Heavy-Duty Vehicle and Engine Greenhouse Gas Emission Regulations • Did not include sufficient sensitivity analyses in some of the models (https://www.oag-bvg.gc.ca/internet/English/att__e_44248.html) Commissioner's Report 6: • the plan did not include a target or expected emission reductions for 76 (95%) of its 80 measures • Without expected emission reductions transparently available in the plan, it is not possible to know which of the mitigation measures to reduce emissions were key. Without milestones and deadlines, it is not possible to know whether all measures had been implemented on time. • Recommendation 6.57: Environment and Climate Change Canada, in coordination with implementing federal organizations and the interdepartmental climate plan implementation committees, should systematically identify the key measures needed to meet Canada's 2030 and 2050 emission reduction targets and prioritize their implementation. (https://www.oag-bvg.gc.ca/internet/English/att__e_44374.html)	regard to meeting 2050 targets. Given that there is no credible modelling showing the plan will meet at least 50% of its 2050 net-zero target, and given that the credible modelling from the CER shows that Canada is on track to only decrease emissions by 22.7% compared to 2005, Canada should be ranked Red.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		2030 ERP Progress Report "In September 2023, ECCC held the Net-Zero Modelling Workshop…The workshop included roughly 70 participants including academics and government officials from the United States, Europe, and Canada…Key takeaways: • There was significant support for a multi-model comparison exercise (e.g., Canadian Emissions Modelling Forum or EMF – North) that would further enhance the Canadian modelling ecosystem based partly on the U.S. approach. • While ECCC models are "good" and "robust", there is a need for greater transparency in terms of publishing more model information, at the same time there was recognition that there are challenges with making the models open source, as models are complex and would require significant resources for training for open-source users. • ECCC should continue its focus on using a suite of models as different models can bring different perspectives. At the same time, to support industrial/sectoral transformation ECCC should continue to benefit from the work of more detailed engineering/process models. • ECCC models should continue to be enhanced with the focusing on increasing sector disaggregation and expanding the availability of technologies represented in the models. This would improve model resolution, which should, in turn, lead to more accurate forecasts. • ECCC should continue to develop a forward-looking computable general equilibrium model for a more detailed analysis of the energy and economic transition required to		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		achieve net zero to incorporate forward-looking decision making that is not in the current suite of models." (pg. 84) Climate Action Tracker's modelling found Canada's policies and actions to be "highly insufficient". "Canada's emissions are finally starting to trend downwards as the government continues to implement its climate policy agenda, but there remains a significant gap between current policies and Canada's NDC target. Implementing planned policies will go some way to closing that gap, but further action is needed. Our rating of Canada's policies and action is unchanged at "Highly Insufficient"; however, Canada is inching towards a rating improvement as emissions start to fall. That said, it is still far from 1.5°C compatibility on a global least cost basis as illustrated by the large blue 'domestic action gap' in the graph above. If all countries were to follow Canada's approach, warming could reach over 3°C and up to 4°C. If Canada can successfully implement all of the measures it has planned, it would go a long way to closing this ambition gap and its rating would improve to "Insufficient". The emission levels resulting from planned policies are higher than in our previous assessment, resulting in a downgrade, as we assume some of the proposed measures to be less likely to actually deliver the emissions reductions ascribed to them.		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
D. Climate Accountability and Governance				
Legislative Certainty: Does the jurisdiction have legislation to enshrine the following major components of its climate plan: 1. Requirement to prepare climate plan, 2. Requirement to set GHG reduction targets and/or have targets in legislation, and 3. Reporting and monitoring requirements on a regular specified schedule that assess outcomes relative to plan objectives	🟢 All three major components of climate plan are required by legislation 🟡 One or two of the major components of the climate plan are enshrined in legislation 🔴 None of the major components of the climate plan are enshrined in legislation	1. Canadian Net-Zero Emissions Accountability Act (CNZEAA) Section 9(1) The Minister must establish a greenhouse gas emissions reduction plan for achieving the target set by section 6 and each target set under section 7. (2) The Minister must establish an emissions reduction plan for 2030 within six months after the day on which this Act comes into force. (4) The Minister must establish each subsequent emissions reduction plan at least five years before the beginning of the year to which it relates. 2. Canadian Net-Zero Emissions Accountability Act 6 The national greenhouse gas emissions target for 2050 is net-zero emissions. 7 (1) The Minister must set a national greenhouse gas emissions target for each milestone year with a view to achieving the target set out in section 6. 7 (1.1) Each greenhouse gas emissions target must represent a progression beyond the previous one. 7 (2) The national greenhouse gas emissions target for 2030 is Canada's nationally determined contribution for that year, communicated under the Paris Agreement, as amended from time to time. 7 (4) The Minister must set the national greenhouse gas emissions target (a) for the 2035 milestone year, no later than December 1, 2024; (b) for the 2040 milestone year, no later than December 1, 2029; and (c) for the 2045 milestone year, no later than December 1, 2034. 3. Canadian Net-Zero Emissions Accountability Act **Progress report.** Section 14 (1) In consultation with the ministers referred to in section 12, the Minister must prepare at least one progress	1. Yes – Canada has a legislative requirement to prepare a climate plan in under the CNZEAA (section 9). 2. Yes - Canada has a legislative requirement to set GHG reduction targets under the the CNZEAA (section 7(4)), and has its 2050 target in legislation (section 6). 3. Yes - Canada has a legislative requirement to monitor and report on outcomes under the the CNZEAA (section 14). The CNZEAA contains legislated requirements to prepare a climate plan, set targets, and legislated requirements to monitor and report on some of the progress and outcomes achieved by the plan (although I feel the language around this could be stronger).	🟢

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		report relating to each milestone year and to 2050 no later than two years before the beginning of the relevant year. (2) A progress **report must contain** • (a) an update on the **progress that has been made towards achieving the greenhouse gas emissions target**; • (a.1) Canada's most recent published greenhouse gas emissions projections for the next milestone year; • (a.2) a summary of Canada's most recent official greenhouse gas emissions inventory and the information, relevant to the report, that Canada submitted under its international commitments with respect to climate change; • (b) an **update on the implementation of the federal measures, sectoral strategies and federal government operations strategies** described in the relevant emissions reduction plan and, if available, updated projections of annual greenhouse gas emission reductions resulting from those combined measures and strategies; • (b.1) an **update on the implementation of the key cooperative measures or agreements with provinces** or other governments in Canada described in the relevant emissions reduction plan; • (b.2) if the projections indicate that the plan's greenhouse gas emissions target will not be met, details of any additional measures that could be taken to increase the probability of achieving that target; and (c) any other information that the Minister considers appropriate.	Since Canada has all three components enshrined in legislation, Canada should score Green.	

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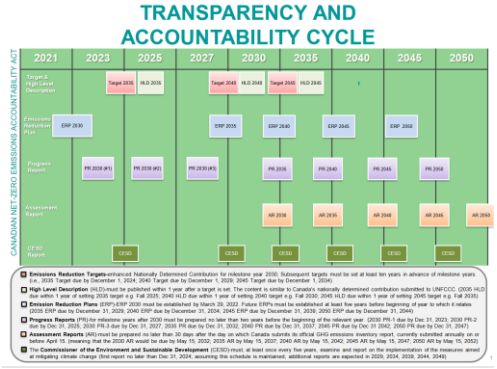
Independent accountability: Does the jurisdiction have an entity in place to provide accountability?	● Has an independent legislated body that is indirectly or directly appointed by and reports to the legislature and is mandated to evaluate the climate plan on a regular basis ● Has a multi-stakeholder or expert advisory body to evaluate the climate plan on a regular basis but the multi-stakeholder body is appointed by the Lieutenant Governor or Minister, not appointed by the legislature	The Net-Zero Advisory Body (NZAB), legislated by the Canadian Net-Zero Emissions Accountability Act, is mandated to provide the Minister with independent advice with respect to achieving net-zero emissions by 2050. The Commissioner for the Environment and Sustainable Development, currently Jerry V. DeMarco, is appointed by the Auditor General of Canada for a 7-year term. The Commissioner provides parliamentarians and Canadians with objective, independent analysis and recommendations on the federal government's efforts to protect the environment, mitigate the effects of climate change, and foster sustainable development. The Commissioner audits the federal government's management of environmental and sustainable development issues. The Commissioner's legislated responsibilities are • monitoring the implementation of sustainable development strategies • assessing the fairness of the federal government's sustainable development progress reports • overseeing the environmental petitions process • monitoring federal progress toward sustainable development • examining and making recommendations on the implementation of federal measures aimed at mitigating climate change • reporting on these and other issues • commenting on the draft federal sustainable development strategy (https://www.oag-bvg.gc.ca/internet/english/au_fs_e_370.html)	The Net Zero Advisory Board (NZAB) and the Commissioner for the Environment and Sustainable Development are independent bodies appointed by the government. The NZAB is responsible for providing independent advice on achieving net-zero emissions by 2050, which includes the climate plan. The Commissioner is responsible for reporting to the government on the implementation of federal measures aimed at mitigating climate change, which includes the climate plan. Given that Canada has these two separate independent legislated bodies appointed by and reporting to the legislature to evaluate the climate plan on a regular basis, Canada should rank Green.	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
	🔴 No independent multi-stakeholder advisory body to evaluate climate policy			
Monitoring and reporting: Does the jurisdiction's public monitoring program include these features: 1. Public reporting on a regular specified schedule, 2. assessing progress in implementing plan components, 3. assessing progress in meeting targets, 4. identifying measures to address gaps, and 5. be independently reviewed	🟢 Monitoring program has all five features 🟡 Monitoring program has two to four features 🔴 No public monitoring program, or the public monitoring program has one or none of the features	The Canadian Net Zero Accountability Act (CNZEAA) requires progress and assessment reports at regular intervals. The 2030 ERP (Annex 6) contains the schedule for monitoring and reporting (pasted below).  1. The plan indicates a regular and specified schedule for setting emission reduction targets, high level description, emission reduction plans, progress reports, assessment reports, and Commissioner of the Environment reports. 2. Progress reports, per section 14(2)(b) of the Net Zero Accountability Act must contain "an update on the implementation of the federal measures, sectoral strategies and federal government operations strategies described in the relevant emissions reduction plan and, if available, updated	Criteria: 1. Yes – Canada's monitoring and reporting program includes public reporting on a regular specified schedule. The CNZEAA requires progress reports as assessments at regular intervals, and this schedule can be found in the 2030 ERP. 2. Yes – Canada's monitoring and reporting program includes assessing progress in implementing plan components, which is required by the CNZEAA. 3. Yes – Canada's monitoring and reporting program includes	🟢

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		projections of annual greenhouse gas emission reductions resulting from those combined measures and strategies." Assessment reports, per section 15(2)(c) of the Net Zero Accountability Act, must contain "an assessment of how the federal measures, sectoral strategies, and federal government operations strategies described in the relevant emissions reduction plan contributed to Canada's efforts to achieve the national greenhouse gas emissions target for that year" 3. Progress reports, per section 14(2)(a) the Net Zero Accountability Act must contain "update on the progress made towards achieving GHG reduction target." Assessment reports, per section 15(2)(b) of the Net Zero Accountability Act, must contain "a statement on whether Canada has achieved its national greenhouse gas emissions target for that year" 4. Section 14 (2)(b.2) of the Net Zero Accountability Act states that a progress report must contain "if the projections indicate that the plan's greenhouse gas emissions target will not be met, details of any additional measures that could be taken to increase the probability of achieving that target". The 2030 ERP (pg 110) mentions the assessment report of how measures have contributed to Canada's emissions reduction targets, and how future plans can be modified to ensure their success. Section 24(1) of the Net Zero Accountability Act: "The Commissioner of the Environment and Sustainable Development must, at least once every five years, examine and report on the Government of Canada's implementation of the measures aimed at mitigating climate change, including those undertaken to achieve its most recent greenhouse gas emissions target as identified in the relevant assessment report." (also can be found in the 2030 ERP (pg 204)).	assessing progress in meeting targets. This is required by the CNZEAA. 4. Yes – Canada's monitoring and reporting program includes identifying measures to address gaps. This is required by the CNZEAA. 5. Yes – Canada has a monitoring program that is independently reviewed by the Commissioner of the Environment Canada has a monitoring and reporting program that meets all five features. Therefore, Canada should rank Green.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
E. Climate Adaptation				
Adaptation plan: Does the jurisdiction have a climate adaptation plan?	● Jurisdiction has a comprehensive climate adaption plan that identifies major geographic, demographic, and sectoral vulnerabilities and is in the process of identifying mitigative measures to address major vulnerabilities ● Jurisdiction has a general framework and commitment to develop a comprehensive climate adaption plan	Canada's National Adaptation Strategy – Building Resilient Communities and a Strong Economy (2023) This Strategy addresses the key climate change risks in Canada, including those identified by the Canadian Council of Academies, and the recent Canada in a Changing Climate reports: • Physical infrastructure from extreme weather events, such as damage to homes, buildings, and critical infrastructure such as roads and power distribution. • Coastal communities, such as infrastructure, property, and people, from inundation, saltwater intrusion, and sea-level rise and storm surges. • Northern communities' widespread impacts including those related to thawing permafrost, reduced sea ice, and increased marine traffic, are affecting infrastructure, harvesting and food security, safe travel and access to critical facilities, security and way of life. • Human health and wellness from hazards accompanying increased extreme weather events, heatwaves, lower ambient air quality, and increased ranges of vector-borne pathogens. • Ecosystems and species including threats to biodiversity and ecosystems such as water supply shortages in summer months. • Canada's economy and increasing economic costs through impacts on production, operations and/or disruption to supply chains, including food production and security. This is intrinsically connected to the risks related to international geopolitics affecting Canada, such as immigration and humanitarian aid or loss and damages.	I found the Canada's National Adaptation Strategy and Adaptation Action Plan to be comprehensive in their identification and addressing of vulnerabilities to climate change. They identified major geographic, social, and sectoral vulnerabilities, and provided measures to help address these vulnerabilities. The ranking descriptions for this criterion are quite subjective, but based on my rereview of the adaptation strategy and the adaptation action plan, I would give Canada a ranking of Green.	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
	● Jurisdiction has no framework for a climate adaption plan, or no commitment to develop a comprehensive climate adaption plan	• Fisheries and fish stocks from changing marine and freshwater conditions, ocean acidification, invasive species and pests. • Canadian forestry due to changing weather patterns, increased frequency of extreme weather events, including those that increase prevalence of wildfires, and increased range of invasive species and pests. • Governance capacity to provide public services, manage and respond to climate risks, and maintain the public's trust. The Adaptation strategy also acknowledges "Disproportionate Climate Impacts: Climate change affects some people and communities more than others. It amplifies existing vulnerabilities and socio-economic inequities, resulting in some populations including Indigenous, Black, Racialized, low-income, 2SLGBTQI+ and women experiencing climate change impacts more severely. People with health conditions and disabilities, the very young or older adults, people who experience structural inequity, poverty, isolation, or discrimination are particularly vulnerable to the impacts of climate change. Marginalized and underserved populations have limited capacity and resources to prepare for climate change and are more likely to live in places that experience higher exposure to climate impacts like flood risk zones, or in neighbourhoods and buildings with limited cooling options during heat waves." "Indigenous Peoples experience climate impacts in unique and serious ways that challenge their identity and culture. First Nations, Inuit and Métis have deep relationships and cultural connections with the land, waters, ice, animals, and plants. They also have long histories of living on, adapting to, and stewarding their environments. Indigenous Knowledge Systems, which include intergenerational knowledge, legal systems, governance, values, worldviews, and relations are a source of strength and resilience for Indigenous Peoples, and position them as leaders in adapting to climate change. First Nations (both on and off-reserve), Inuit and Métis experience disproportionate impacts from		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		climate change compounded by historic and ongoing traumas associated with colonization, including cultural suppression, disruption of families, forced displacement from traditional territories, and degradation of ecosystems. The resulting lack of clean and safe drinking water; racism, discrimination, and inequity in Canada's health systems; infrastructure, housing, and service gaps; lower socio-economic status; and food and energy insecurity, all affect the capacity of Indigenous Peoples to adapt to climate change impacts. First Nations, Inuit and Métis' close relationships to the natural environment mean that climate change impacts can have deep and serious effects on their individual and collective well-being. Changes to the environment (e.g., loss of important species, shifting landscapes, and limited access to land and water) disrupt culture, language and knowledge-sharing activities. These changes also undermine First Nations, Inuit and Métis' abilities to exercise their rights, impacting traditional livelihoods, food security, and mental health outcomes." The Government of Canada Adaptation Action Plan (2023) is the policy and program framework that shows how the Government of Canada contributes to achieving the goals, objectives, and targets laid out in the National Adaptation Strategy. "While all people in Canada are at-risk from the health impacts of climate change, the risk is not shared equally. Those already facing inequity in our society are among those most likely to be impacted when climate-related events occur. Climate change is also likely to create new inequities that impact health and well-being. Older adults, those living with pre-existing physical and mental health conditions, people facing financial hardship, Indigenous peoples and racialized populations are among those most at-risk. The national climate change and health science assessment highlights that the health impacts of climate change on First Nations, Inuit and Métis peoples are far-reaching, with disproportionate impacts on their		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		communities, including food and water security and safety, air quality, infrastructure, personal safety, mental health and wellness, livelihoods, culture and identity." (pg 24) Annex 4 of the Government of Canada Adaptation Action Plan (pg. 84) shows a table of 78 new, existing, and expanded climate adaptation measures the government is taking in the categories of Disaster Resilience, Health and Well-being, Nature and Biodiversity, Infrastructure, Economy and Workers, Knowledge and Understanding, Tools and Resources, and Governance and Leadership.		
F. Reconciliation				
Legislated United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP): Has the jurisdiction legislated UNDRIP?	● Jurisdiction has legislated UNDRIP ● Jurisdiction has committed to legislating UNDRIP ● No commitment to legislate UNDRIP	The United Nations Declaration on the Rights of Indigenous Peoples Act became law on June 21, 2021. In addition, Canada has prepared an Action Plan to help achieve the objectives of UNDRIP	Canada has legislated UNDRIP, therefore is ranked Green	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
G. Equity				
Plan to address equity impacts: Does the jurisdiction have a plan that: 1. Assesses the distribution of climate impacts and policies by key stakeholders and equity-deserving groups 2. Addresses and mitigates inequities in the distribution of impacts	🟢 Jurisdiction assesses impacts and mitigates inequities 🟡 Jurisdiction partially assesses impacts and/or partially mitigates inequities 🔴 Jurisdiction does not assess impacts and does not mitigate inequities	From the Commissioner's Report 6 "A strength of the plan [2030 ERP] was Environment and Climate Change Canada and Natural Resources Canada made efforts to identify groups that could be disproportionately burdened by measures in the plan [2030 ERP]. They also identified some measures to provide targeted support for those groups, including • funding for clean energy projects in the North • funding to support public transportation in rural communities • some exemptions from carbon pricing and targeted support for groups such as farmers, fishers, and rural residents" From the 2030 ERP Pg. 26 - **Return of Federal carbon pollution proceeds:** "Ensuring that the direct proceeds of the federal price on carbon pollution remain in the province or territory where they were collected is an important component of the federal pricing system. The federal carbon pollution pricing system returns all direct proceeds back to the jurisdiction where they were collected. Some provinces and territories receive the funds directly and can use them as they see fit. In other provinces, the federal government uses the proceeds to support to individuals, Indigenous Peoples, families, and businesses through direct payments and federal programming. The majority of households in jurisdictions that receive Climate Action Incentive payments under the federal backstop system receive more money than they pay in fuel charges. Direct payments to households work because they help make the price on carbon pollution affordable, and enable households to make investments to increase energy efficiency and further reduce emissions."	The ERP certainly goes a long way in addressing and acknowledging the distribution of climate impacts and policies by key stakeholder group, specifically impacts to the workforce and on Indigenous Peoples. Equity was even mentioned as a strength of the ERP in the Commissioner of the Environment's Report 6. Canda's Climate Action Incentive ensures that the carbon tax is fully returned to Canadians, and that low- and middle-income households get more money back than the costs incurred from the federal carbon pricing system, aiding in a more equitable redistribution of wealth. These payments have increased over time to reflect higher fuel costs. Canada has also introduced the Sustainable Jobs Plan to help the workforce transition to clean energy, and the National Adaptation Strategy and Action Plan identify major	🟢

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		Pg. 84 – **Sustainable jobs, skills, and communities**: "To get to a net-zero future, no individual or region can be left behind. Global clean technology activity is expected to exceed $2.5 trillion by 2022, and Canada is well-positioned to seize the numerous job opportunities this growth presents. By continuing to invest in climate action now, Canada is creating good middle class jobs today, and a clean, healthy world for tomorrow. Canada is committed to ensuring that workers have the skills and opportunity to thrive in a net-zero world, regardless of who they are, where they live, or what they do." "The Government of Canada is supporting sustainable jobs in response to the accelerated phase-out of coal power. In 2018, the federal government established the Task Force on Just Transition for Canadian Coal Power Workers and Communities to engage relevant stakeholder groups, and provincial and municipal governments, in order to provide a series of recommendations on how it can support coal power workers and communities. In response, the Government committed $185 million to support affected workers and communities, including $35 million for the Canada Coal Transition Initiative focused on skills development and economic diversification, as well as $150 million for a dedicated infrastructure fund." "Climate action will create new opportunities for engineers, scientists, farmers, construction workers, tradespeople, resource workers, energy workers, researchers, and more, while strengthening Canada's workforce. The Government of Canada has already taken action to prepare the workforce for a net-zero emissions economy by identifying skills that are in demand now and in the future, developing novel approaches to skills development and training, and providing new opportunities for Canadians. The Government of Canada is making significant investments in training, including supporting Canadians as they build new skills in growing sectors, receive the accreditation they need to succeed, and strengthen their futures, by connecting them to	geographic, demographic and sectoral climate inequities and identify mitigative measures to address major vulnerabilities. The ranking scheme for this criterion is very subjective. I think the 2030 ERP does a very good job at assessing the distribution of climate impacts and policies by key stakeholder and equity-deserving group, and the government has made improvements in this area from previous plans. The main steps Canada has taken to address inequities are: i) the Climate Action Incentive (carbon tax rebate) ii) the Sustainable Jobs Plan, iii) increased climate action support for Indigenous communities, and iv) their Climate Adaptation Strategy and Action Plan. Given that Canada has made efforts to assess the distribution of climate impacts and policies by key	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		employers and good jobs. This includes the following initiatives: • The Sectoral Workforce Solutions Program, a $960 million fund over three years, works primarily with sector organizations and employers to design and deliver training that is relevant to the needs of businesses, especially small- and medium-sized businesses, and to their employees. A portion of this funding will be allocated to clean energy sector businesses, organizations and jobs. • The Skills for Success Program, a $298 million fund over three years, will help create 90,000 job training opportunities for foundational and transferable skills training. • The new Apprenticeship Service, with $470 million over three years, which connects 55,000 first-year apprentices in eligible Red Seal trades with opportunities with small and medium-sized employers, while supporting underrepresented groups. Communities must be at the heart of determining their economic futures. That is why the Government of Canada launched: • The new Community Workforce Development Program, a $55 million fund over three years, to support communities to develop local plans that identify high potential growth organizations and connect these employers with training providers to develop and deliver training and work placements to upskill and reskill jobseekers to fill jobs in demand. Part of this funding will focus on decarbonization efforts and supporting sustainable jobs for workers in transforming sectors like energy." "As the realities of work change, it's important to understand what jobs will be in the highest demand. That is why the Government is investing $72.7 million per year in the Future Skills Centre, to identify emerging skills and workforce trends and to ensure that Canada's skills development policies and programs evolve to align with a rapidly changing labour market, and that Canadians have the tools they need to grow and succeed in high-growth sectors."	stakeholder and equity-deserving groups, and has taken numerous measures to mitigate inequities in the distribution of impacts, I think Canada should rank Green in this category.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		Pg. 99 – **Indigenous Climate Leadership**: "The Government of Canada also supports the United Nations Declaration on the Rights of Indigenous Peoples (UN Declaration) and acknowledges that Indigenous Knowledge systems and ways of doing must be a cornerstone of Canadian climate policy…The Government also acknowledges that Indigenous Peoples experience disproportionate effects of climate change. Lower socio-economic outcomes, the legacy of colonization (including displacement from traditional territories onto reserve lands that are often more prone to flooding or fire), and a unique relationship with the land are factors that compound the effects of climate change, leading to intensified negative cultural, social and economic impacts for First Nations, Inuit and Métis Peoples. At the same time, Indigenous Peoples' leadership is key to Canada achieving its climate objectives." "When engaged on the development of this plan, Indigenous governments and representative organizations collectively stressed the importance of working on a nation-to-nation, Inuit-Crown, and government-to-government basis. Indigenous Peoples noted the urgency of protecting their territories, homelands, resources, languages, traditions and foods for future generations and that lived realities are inseparable from the effects of climate change… To further partnerships on climate, the Prime Minister of Canada and the national leaders of the Assembly of First Nations, Inuit Tapiriit Kanatami and the Métis National Council established three distinction-based, Senior Bilateral Tables on Clean Growth and Climate Change in 2016. More than five years later, these tables continue to demonstrate the benefits of sustained collaboration." "Highlights from Canada's partnership with Indigenous Peoples on climate change include: • More than $1.3 billion in targeted investments since 2020 to support Indigenous communities to transition to clean energy, advance nature-based solutions, build new or retrofit green		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		community buildings, promote resilience of health systems, and undertake major disaster mitigation projects; • Over 20 targeted programs to help support First Nations, Inuit and Métis proponents undertake climate actions, including support for over 800 distinct Indigenous-led climate projects across the country, representing more than $800 million in federal investments" From the ERP 2030 Progress Report: "Climate Action Incentive payments to households have increased since their introduction, reflecting the higher price on carbon pollution. Individuals and families in the provinces where the federal fuel charge applies are receiving these payments on a quarterly basis. The majority of households get more money back in Climate Action Incentive payments than the costs incurred from the federal carbon pricing system, and still have an incentive to reduce emissions." (pg. 30) The Sustainable Jobs Plan (2023) details concrete federal actions to advance economic prosperity and sustainable jobs in every region of the country. Support for Indigenous Communities: • Canada's Partnership with Indigenous Peoples on Climate (Budget 2022) provides "$29.6 million over three years, starting in 2022-23, to advance an Indigenous Climate Leadership Agenda that will support self-determined action in addressing Indigenous Peoples' climate priorities. The funding will also support the phased implementation of distinctions-based climate strategies." • Indigenous Off-Diesel Initiative is a "clean energy training program that supports Indigenous-led climate solutions in		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		remote Indigenous communities that currently use diesel or fossil fuels for heat and power. IODI supports a cohort of participants (called Energy Champions) in their journey from training through to project planning and development." "As of October 2022, the second cohort of the IODI launched and 10 Energy Champions were selected. The Energy Champions will receive up to $1.52M to lead engagement, clean energy planning, and project development within their communities. The IODI team continues to support the first cohort of 14 Energy Champions."(ERP 2030 Progress Report) • Northern REACHE Program (newly gifted the name Wah-ila-toos in a traditional naming ceremony) provides "funding for implementing renewable energy projects in off-grid Indigenous and northern communities that rely on diesel and other fossil fuels to generate heat and power." "In April 2022, the Government of Canada announced $300 million in funding to support communities launching clean energy projects such as wind, solar, geothermal, hydro and biomass along with a new, streamlined service model for communities seeking to access resources and clean energy funding." "From April 2022 to September 2023, the Northern REACHE program has supported a total of 78 projects with an investment of $26.2M. This includes renewable energy projects (e.g., solar panel installations, wind studies, etc.) and capacity building initiatives including workshops, skills development and mentorship/networking programs. Additionally, Northern REACHE supported the feasibility and planning stages of 11 northern hydroelectricity and grid-interconnection projects with an investment of $23.2M." (ERP 2030 Progress Report) • Clean Energy for Rural and Remote Communities Program (newly gifted the name Wah-ila-toos in a traditional naming		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		ceremony) provides "investments, starting in 2021-22, through the Strategic Partnerships Initiative (SPI) to build capacity for local, economically sustainable clean energy projects in First Nations, Inuit, and Métis communities and support economic development opportunities" (ERP 2030 Progress Report). • Budget 2024 "announced the launch of the Indigenous Loan Guarantee Program guaranteed to unlock access to capital for Indigenous communities and help remove historical barriers to Indigenous equity investment in natural resources and energy projects." "Up to $5 billion in loan guarantees to unlock access to capital for Indigenous communities, creating economic opportunities and supporting their economic development priorities." Canada's National Adaptation Strategy – Building Resilient Communities and a Strong Economy (2023) acknowledges the disproportionate impacts of climate change on equity-deserving groups, and the Government of Canada Adaptation Action Plan (2023) (Annex 4) outlines the measures being taken to address these impacts.		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		The Government of Canada also uses a tool called Gender-based Analysis Plus (GBA Plus) to explore the changing realities and inequalities of diverse groups of people. "GBA Plus is an analytical tool used to support the development of responsive and inclusive policies, programs, and other initiatives. GBA Plus is a process for understanding who is impacted by the issue or opportunity being addressed by the initiative; identifying how the initiative could be tailored to meet diverse needs of the people most impacted; and anticipating and mitigating any barriers to accessing or benefitting from the initiative. GBA Plus is an intersectional analysis that goes beyond biological (sex) and socio-cultural (gender) differences to consider other factors, such as age, disability, education, ethnicity, economic status, geography (including rurality), language, race, religion, and sexual orientation. Using GBA Plus involves taking a gender- and diversity-sensitive approach to our work. Considering all intersecting identity factors as part of GBA Plus, not only sex and gender, is a Government of Canada commitment."		
H. Clean Economy Transition				
Plan for a Clean Economy: Has the jurisdiction: 1. Completed an economic impact assessment of the climate plan that estimates the changes in employment, by employment type, resulting from the climate plan.	🟢 Both measures are implemented 🟡 At least one of the measures is implemented or in the process of being implemented	1. From the Sustainable Jobs Plan (2023) • "In 2022, global clean energy technology activity is expected to reach $2.4 trillion USD, and according to the International Energy Agency's (IEA) net-zero emissions by 2050 scenario (NZE), could create almost 40 million new jobs in clean energy by 2030" (pg. 6) • "Clean Energy Canada anticipates that jobs in the clean energy sector in Canada will grow by 3.4% annually over the next decade—nearly four times faster than the Canadian average" (pg. 6) • "Columbia Institute anticipates the transition to net zero and the buildout of a net-zero grid will create a	1. *Is there an economic impact assessment of the climate plan?* Partially, but not fully. While some projections have been made looking at potential for new jobs created by the plan, no full economic impact assessment of the climate plan exists that estimates the changes in employment by sector or	🟡

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
2. Developed and implemented training policies to meet the demand for new employment opportunities created by climate impacts and policies and to mitigate adverse impacts on workers	🔴 Neither measure is implemented or in the process of being implemented	significant number of jobs for Canadian construction workers in electricity supply, smart communities, and transportation" (pg. 6) • "According to numerous studies, rather than a shortage of jobs, in Canada we are much more likely to see an abundance of sustainable jobs with a shortage of workers required to fill them" (pg. 9) • "In addition, low-carbon and non-emitting energy sources are ramping up to meet growing demands. Emerging energy sources present significant opportunities for Canadian workers as jobs are created in sectors across the country. (pg. 9) From the 2030 ERP • "Even though the oil and gas sector is seeing record cash flow, the sector employs 6% fewer people than in 2013, the last time the price of oil was over $90 per barrel. The sector has gone from representing 30% of private sector capital spending in Canada to 11%" (pg. 53) • Good, sustainable jobs: The Royal Bank of Canada (RBC) analysis suggests that the clean economy could create between 235,000 and 400,000 new jobs in Canada by 2030. By 2025, clean tech's contribution to Canada's GDP is expected to grow to $80 billion from $26 billion in 2016. Trends show Canada has been able to grow its economic output while decreasing emissions from some industries. (p. 12)	occupation resulting from the climate plan (specifically, there are no estimates around potential job losses). 2. *Are there training and mitigation policies in place?* Yes – Canada has a number of training policies in place, as well as new legislation forthcoming, both to help mitigate adverse impacts on workers and help support training for new jobs. The legislation creates a framework for governments to lead a more coordinated and integrated climate and workforce readiness strategy. .	

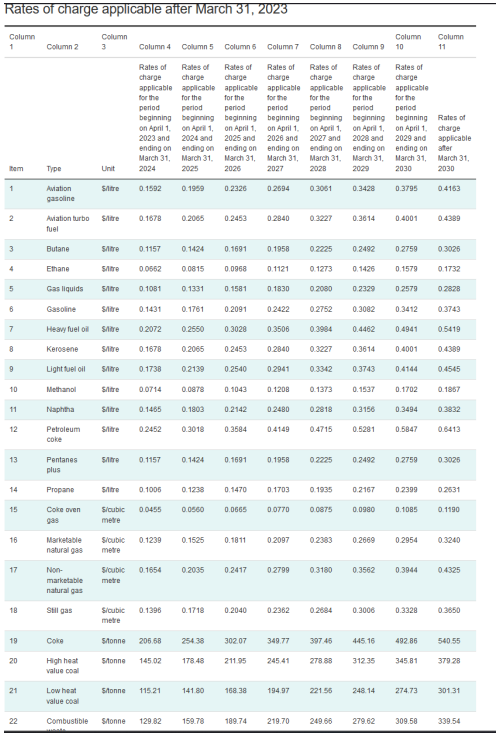
Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		2. The Sustainable Jobs Plan is an interim plan for 2023-2025 that precedes and sets an initial frame for the Sustainable Jobs Action Plans that will be released every five years starting in 2025 to guide and organize efforts to support workers in the economy of the future. In this interim plan, the Government is announcing a federal governance, engagement, and accountability framework to guide the Government's efforts over time, and to help ensure that Canadian workers can keep leading the economy of the future. It outlines federal measures across 10 key action areas: i. Establish the Sustainable Jobs Secretariat ii. Create a Sustainable Jobs Partnership Council iii. Develop economic strategies through the Regional Energy and Resource Tables iv. Introduce a sustainable jobs stream under the Union Training and Innovation Program v. Advance funding for skills development towards sustainable jobs vi. Promote Indigenous-led solutions and a National Benefits-Sharing Framework vii. Improve labour market data collection, tracking and analysis viii. Motivate investors and draw in industry leadership to support workers ix. Collaborate and lead on the global stage x. Establish legislation t n xi. hat ensures ongoing engagement and accountability Canada is in the process of passing legislation around just transition – Bill C-50: An Act respecting accountability,		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		transparency and engagement to support the creation of sustainable jobs for workers and economic growth in a net-zero greenhouse gas emissions economy *(aka Canadian Sustainable Jobs Act*), which was introduced on June 15, 2023. "The purpose of this Act is to facilitate and promote economic growth, the creation of sustainable jobs and support for workers and communities in Canada in the shift to a net-zero economy through a framework to ensure transparency, accountability, engagement and action by relevant federal entities, including those focused — at the national and regional level — on matters such as skills development, the labour market, rights at work, economic development and emissions reduction." (https://www.parl.ca/DocumentViewer/en/44-1/bill/C-50/first-reading) From the ERP 2030 Progress Report: "The Government also offers a broad suite of programming to support jobseekers and workers of all ages and from a variety of socio-economic backgrounds, as well as employers, unions and training providers. Many of these programs, created in consultation with stakeholders, are already helping to advance sustainable jobs. They include: • The Sectoral Workforce Solutions Program, a program that helps key sectors of the economy implement solutions to address their current and emerging workforce needs, recent investments of $145.9 million in nine projects that will help build talent for the green economy. Overall, the nine projects are expected to support over 24,000 Canadians and benefit approximately 2,100 employers across Canada.		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		• The Canadian Apprenticeship Strategy, which provides funding to help pre-apprentices, apprentices, employers, unions, and other organizations and tradespeople participate in apprenticeships and succeed in skilled trades careers. This includes recent investments to develop green skills training for workers in the trades under the sustainable jobs initiative. • The Skills and Partnership Fund, a project-based fund that supports partnerships between Indigenous partners and industry employers to provide skills training for Indigenous Peoples in priority sectors, which include industries that support more efficient use and alternative sources of energy and resources. Through this Fund, Indigenous people are being trained for current and emerging job opportunities in the green economy. • The Youth Employment and Skills Strategy, a horizontal initiative led by Employment and Social Development Canada and delivered in collaboration with 11 other federal departments, agencies and Crown corporations. The YESS provides funding to organizations to deliver a range of activities that help youth overcome barriers to employment and develop a broad range of skills and knowledge to participate in the current and future labour market. Some YESS programs such as Environment and Climate Change Canada's Science Horizons Youth Internship Program, Natural Resources Canada's Science and Technology Internship Program – Green Jobs, and Parks Canada's Young Canada Works Program,		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		focus on connecting young Canadians with careers in the sustainable jobs sector. • The Foreign Credential Recognition Program, to support the labour market integration of skilled newcomers by funding projects that will make credential recognition processes faster and more efficient, and providing loans (up to $30,000), support services, and employment supports to help skilled newcomers acquire Canadian work experience, including within the low-carbon sector. "The 2022 Fall Economic Statement announced funding for the creation of a Sustainable Jobs Training Fund, also an action area under the interim Sustainable Jobs Plan. This initiative will help workers develop skills for jobs in areas that are critical for a net-zero future. It will seek to help 15,000 workers across the country upgrade or gain new skills for jobs in the low-carbon economy. In addition, the 2022 Fall Economic Statement announced funding for a new Sustainable Jobs stream in the Union Training and Innovation Program under the Canadian Apprenticeship Strategy. This stream will aim to support unions in leading the development of green skills training for workers in the trades. It is expected that an additional 20,000 apprentices and journeypersons could benefit from this investment." Canada created a Just Transition Task Force in 2019, which "provided two reports to us on how to make the transition away from coal-fired electricity a fair one for Canadian coal workers and communities", and was made		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		up of a broad range of experts. It has completed its mandate. New investments in Budget 2024, like the apprenticeship fund and investments like the sustainable jobs training fund and UTIP Sustainable jobs stream are a promising start to aligning economic and clean energy transition objectives with climate objectives		
I. Carbon Price				
End-use carbon price (fuel charge): Does the jurisdiction have a carbon price that achieves the IPCC 2030 target?	Price achieves IPCC 2030 target Price does not achieve IPCC target, and/or excludes some emissions covered by the federal benchmark The jurisdiction does not have a fuel charge	"In 2018, Parliament passed the Greenhouse Gas Pollution Pricing Act, which established the legal mechanism under which the federal government requires provinces and territories to either establish a levy on greenhouse gas emissions or adopt the federal system. The legislation was first applied as of April 1, 2019. There are two components to the policy. The first, the "fuel charge," applies to all purchases of 21 different fuels (including combustible waste like asphalt shingles or tires) that is burned to produce heat or electricity. The distributor of the fuel typically pays the levy, with the cost passed down through the supply chain to consumers when they gas up their car, pay the household gas bill or fill a propane tank. It can be felt indirectly in the price of goods. The second component, known as the "output-based pricing system," applies to businesses with bigger carbon footprints, mainly industrial companies such as oil producers, chemical manufacturers, automakers and coal or gas power plants. They are exempted from paying the carbon price on fuel for their operations, instead paying on a portion of the emissions they actually produce." (From CTV News) Canada's Fuel Charge Rates "reflect a carbon pollution price of $65 per tonne of carbon dioxide equivalent (CO_2e) in 2023 (the price currently	The fuel charge rates under Canada's Greenhouse Gas Pollution Pricing Act (GHGPPA) meet the federal benchmark. However, Canada recently passed amendments to the fuel charge regulations, exempting home heating from the fuel charge under the GHGPPA. Although Canada's fuel charge meets the federal benchmark, the exemption of home heating oil from the fuel charge means Canada now ranks Yellow.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		reaches $50 per tonne in 2022), which will rise by $15 per tonne annually to reach $170 per tonne in 2030." Schedule 2 of the Greenhouse Gas Pollution Pricing Act shows specific fuel charge rates (below) Rates of charge applicable after March 31, 2023  Late in 2023, amendment to the *Fuel Charge Regulations were made as follows*: no charge is payable under subsection 17(1) of the Act in respect of a quantity of light fuel oil that is delivered by a registered		

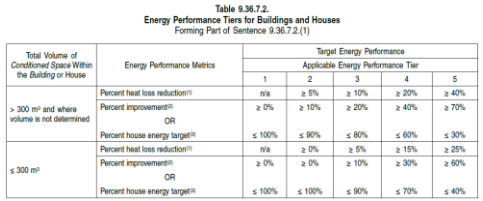
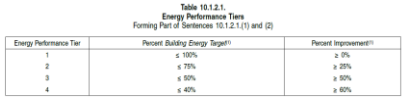
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11
Item	Type	Unit	Rates of charge applicable for the period beginning on April 1, 2023 and ending on March 31, 2024	Rates of charge applicable for the period beginning on April 1, 2024 and ending on March 31, 2025	Rates of charge applicable for the period beginning on April 1, 2025 and ending on March 31, 2026	Rates of charge applicable for the period beginning on April 1, 2026 and ending on March 31, 2027	Rates of charge applicable for the period beginning on April 1, 2027 and ending on March 31, 2028	Rates of charge applicable for the period beginning on April 1, 2028 and ending on March 31, 2029	Rates of charge applicable for the period beginning on April 1, 2029 and ending on March 31, 2030	Rates of charge applicable after March 31, 2030
1	Aviation gasoline	$/litre	0.1592	0.1959	0.2326	0.2694	0.3061	0.3428	0.3795	0.4163
2	Aviation turbo fuel	$/litre	0.1678	0.2065	0.2453	0.2840	0.3227	0.3614	0.4001	0.4389
3	Butane	$/litre	0.1157	0.1424	0.1691	0.1958	0.2225	0.2492	0.2759	0.3026
4	Ethane	$/litre	0.0662	0.0815	0.0968	0.1121	0.1273	0.1426	0.1579	0.1732
5	Gas liquids	$/litre	0.1081	0.1331	0.1581	0.1830	0.2080	0.2329	0.2579	0.2828
6	Gasoline	$/litre	0.1431	0.1761	0.2091	0.2422	0.2752	0.3082	0.3412	0.3743
7	Heavy fuel oil	$/litre	0.2072	0.2550	0.3028	0.3506	0.3984	0.4462	0.4941	0.5419
8	Kerosene	$/litre	0.1678	0.2065	0.2453	0.2840	0.3227	0.3614	0.4001	0.4389
9	Light fuel oil	$/litre	0.1738	0.2139	0.2540	0.2941	0.3342	0.3743	0.4144	0.4545
10	Methanol	$/litre	0.0714	0.0878	0.1043	0.1208	0.1373	0.1537	0.1702	0.1867
11	Naphtha	$/litre	0.1465	0.1803	0.2142	0.2480	0.2818	0.3156	0.3494	0.3832
12	Petroleum coke	$/litre	0.2452	0.3018	0.3584	0.4149	0.4715	0.5281	0.5847	0.6413
13	Pentanes plus	$/litre	0.1157	0.1424	0.1691	0.1958	0.2225	0.2492	0.2759	0.3026
14	Propane	$/litre	0.1006	0.1238	0.1470	0.1703	0.1935	0.2167	0.2399	0.2631
15	Coke oven gas	$/cubic metre	0.0455	0.0560	0.0665	0.0770	0.0875	0.0980	0.1085	0.1190
16	Marketable natural gas	$/cubic metre	0.1239	0.1525	0.1811	0.2097	0.2383	0.2669	0.2954	0.3240
17	Non-marketable natural gas	$/cubic metre	0.1654	0.2035	0.2417	0.2799	0.3180	0.3562	0.3944	0.4325
18	Still gas	$/cubic metre	0.1396	0.1718	0.2040	0.2362	0.2684	0.3006	0.3328	0.3650
19	Coke	$/tonne	206.58	254.38	302.07	349.77	397.46	445.16	492.86	540.55
20	High heat value coal	$/tonne	145.02	178.48	211.95	245.41	278.88	312.35	345.81	379.28
21	Low heat value coal	$/tonne	115.21	141.80	168.38	194.97	221.56	248.14	274.73	301.31
22	Combustible	$/tonne	129.82	159.78	189.74	219.70	249.66	279.62	309.58	339.54

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		distributor in respect of light fuel oil to a person if the light fuel oil is for use exclusively in eligible heating activities, the person is not a registered distributor in respect of light fuel oil and the quantity of light fuel oil is delivered to the person after November 8, 2023 but before April 2027 https://fin.canada.ca/drleg-apl/2023/dramfcr-aprmrrc-1123-l-eng.html [exempting home heating oil from the carbon tax]		
Price on industrial emitters: Does the jurisdiction have a carbon price on industrial emitters that meets the IPCC 2030 target?	● Price achieves IPCC 2030 target ● Price does not achieve IPCC target, and/or excludes some emissions covered by the federal benchmark ● The jurisdiction does not have a carbon price on heavy emitters	Canada's Output-Based Pricing System Regulations, under the *Greenhouse Gas Pollution Pricing Act, regulates emissions from "covered facilities".* A covered facility that emits less than its annual emissions limit will receive surplus credits, with each credit representing one tonne of CO_2e. When the GHG emissions of a covered facility are above its annual limit, the facility will be required to provide compensation for its excess emissions by the prescribed deadline. The facility can meet its compensation obligation by paying the excess emissions charge specified in Part 2 of the GGPPA or by remitting compliance units. The excess emissions charge is set at $20 per tonne of excess CO2e in 2019, increasing by $10 per tonne each year to $50 per tonne of excess CO2e emissions in 2022. **Benchmark:** National minimum price on carbon pollution starting at $20 per tonne in 2019, increasing at $10 per tonne to $50 in 2022…. the minimum price on carbon pollution (for direct pricing systems) will increase by $15 per tonne per year starting in 2023 through to 2030. https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/carbon-pollution-pricing-federal-benchmark-information.html The Greenhouse Gas Pollution Pricing Act Schedule 4 outlines excess emission charges	Industrial companies are charged according to schedule 4 for exceeding their emissions limits, which is in line with the federal benchmark. Therefore, Canada ranks Green.	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		SCHEDULE 4 **(Paragraph 174(3)(b), subsections 174(5), 178(2), 181(3) and section 191)** Excess Emissions Charge Column 1 / Column 2 Item / Calendar Year / Charge per CO_2e Tonne ($) 1 / 2018 / 10 2 / 2019 / 20 3 / 2020 / 30 4 / 2021 / 40 5 / 2022 / 50 6 / 2023 / 65 7 / 2024 / 80 8 / 2025 / 95 9 / 2026 / 110 10 / 2027 / 125 11 / 2028 / 140 12 / 2029 / 155 13 / 2030 / 170		

Table B.2: Evaluation criteria, indicators, rating system, summary of Canadian climate policy, evaluation rating and discussion of ratings for Canada's sector-specific climate policy evaluation.

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
A. Buildings				
New Buildings Jurisdiction has adopted the CER and IEA target of zero-carbon-ready requirements into building code by 2030 for all new buildings *(a zero-carbon-ready building is highly energy efficient and either uses renewable energy directly, or an energy supply that can be fully decarbonized, such as electricity or district heat (IEA, 2023)).*	🟢 Has committed to zero carbon ready buildings by 2030 🟡 Has committed to zero carbon ready buildings without specifying implementation date 🔴 Has not committed to zero carbon ready buildings	The Government of Canada has committed to invest in, and develop a national net zero by 2050 buildings strategy, the Canada Green Buildings Strategy (2030 ERP). Under the Canadian Free Trade Agreement, all provinces and territories agree to harmonize their building codes with national ones. 1. According to the Canada Green Building Strategy Discussion Paper "all new buildings need to be net-zero carbon-ready as early as 2027 and no later than 2032 and conform to the latest applicable codes, standards and guidelines for climate resilience as early as 2025 and no later than 2030".Actions: Additional info… Canada has committed to "Develop a "net-zero energy ready" model building code, with the goal that provinces and territories adopt it by 2030." https://www.canada.ca/en/services/environment/weather/climatechange/climate-action/federal-actions-clean-growth-economy/homes-buildings.html From Climate Action Tracker: "new building codes were adopted in 2022, after a two year delay (but are referred to as the '2020' codes). These codes adopted a tiered system for the first time, which includes a 'net zero energy ready' level. ('Net zero energy ready' means that the building is efficient enough that a renewable energy system, once added, would be able to provide all of the building's energy needs). The aim is to move to progressively more stringent tiers so that by 2030 all new buildings are net zero energy ready. Provinces have agreed to implement this code within the next two years (by March 2024) and subsequent updates with a year and a half from	*Has Canada adopted the CER and IEA target of net-zero energy ready requirements into building code by 2030 for all new buildings?* Yes? Canada has a zero energy ready tier in their latest building codes, with the goal of it being adopted by the provinces by 2030. Canada does not have jurisdiction to enforce building codes, however, under the CFTA all provinces and territories agree to harmonize their building codes with national ones. Canada is also in the process of developing	🟢

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		publication." Table of Energy Performance Tiers for Buildings and Houses from the National Building Code of Canada:2020 (pg. 1089):  **Table 9.36.7.2.** **Energy Performance Tiers for Buildings and Houses** Forming Part of Sentence 9.36.7.2.(1) Total Volume of *Conditioned Space* Within the *Building* or House / Energy Performance Metrics / Target Energy Performance — Applicable Energy Performance Tier: 1 / 2 / 3 / 4 / 5 > 300 m³ and where volume is not determined: Percent heat loss reduction[1] — n/a / ≥ 5% / ≥ 10% / ≥ 20% / ≥ 40% Percent improvement[2] OR Percent house energy target[3] — ≥ 0% OR ≤ 100% / ≥ 10% OR ≤ 90% / ≥ 20% OR ≤ 80% / ≥ 40% OR ≤ 60% / ≥ 70% OR ≤ 30% ≤ 300 m³: Percent heat loss reduction[1] — n/a / ≥ 0% / ≥ 5% / ≥ 15% / ≥ 25% Percent improvement[2] OR Percent house energy target[3] — ≥ 0% OR ≤ 100% / ≥ 0% OR ≤ 100% / ≥ 10% OR ≤ 90% / ≥ 30% OR ≤ 70% / ≥ 60% OR ≤ 40% Energy Performance Tiers from the National Energy Code of Canada for Buildings 2020 (pg. 267):  **Table 10.1.2.1.** **Energy Performance Tiers** Forming Part of Sentences 10.1.2.1.(1) and (2) Energy Performance Tier / Percent *Building Energy Target*[1] / Percent Improvement[1] 1 / ≤ 100% / ≥ 0% 2 / ≤ 75% / ≥ 25% 3 / ≤ 50% / ≥ 50% 4 / ≤ 40% / ≥ 60% According to the 2030 ERP Progress Report, Canada is committed to "continue to develop the Canada Green Buildings Strategy to support a net-zero emissions and climate-resilient buildings sector, explore further opportunities to minimize embodied emissions from the built environment, and explore the potential to update energy and greenhouse gas performance standards in federally funded homes and buildings programs."	the Canada Green Building Strategy. The discussion paper on this Strategy includes the acknowledgement that all new buildings need to be net-zero ready no later than 2032, as well as the need to phase out fossil fuel heating systems. This shows ambition towards adopting the CER and IEA targets. However, there is a paucity of information on the timeline for the release of the Canada Green Building Strategy. Given that Canada does have a net-zero energy ready tier in its latest building codes, and the goal of having this tier adopted by 2030, I think Canada should rank Green in this category.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
Existing Building Retrofits. Jurisdiction has: 1. A plan to meet the following IEA targets to retrofit existing buildings to zero energy ready: 20% by 2030; 35% by 2035 and 50% by 2040 (or 2.5% per year) 2. Incentives for the installation of heat pumps to replace fossil fuel heating. 3. A ban on or commitment to ban installation of new standalone fossil fuel heating systems by 2030.	● Has at least two of these measures (may or may not include regulations) ● Has one of these measures ● Has neither measure	1. No specific commitments to retrofit targets in the 2030 ERP. "The Pembina Institute projects that reaching net-zero in 2050 will require carrying out retrofits at an annual pace of nearly 600,000 homes (11.4 million in total) and the equivalent of 32 million m2 of commercial property until 2040, at a cost of roughly $21 billion per year. While a foundation for progress has been laid through federal investments, such as the Canada Greener Homes Grant (provides up to 700,000 grants of up to $5,000 to help homeowners make energy efficient retrofits to their homes), the Energy Efficient Buildings program, the Green Municipal Fund, and the Green and Inclusive Community Buildings program, additional investments from the public and private sector are required." (2030 ERP). To lay the foundation for a net-zero buildings sector, the Government will invest $150 million to develop a national net zero by 2050 buildings strategy, the Canada Green Buildings Strategy. Working with partners, the strategy will build off existing initiatives and set out new policy, programs, incentives and standards needed to drive a massive retrofit of the existing building stock (2030 ERP). At the current annual retrofit rate of under 1%, Canada would need 142 years to retrofit all homes and 71 years to retrofit all commercial and public buildings.viii We don't have that much time. (Canada Green Building Strategy Discussion Paper). we need to retrofit nearly all the existing buildings in this country, and take advantage of joint opportunities for resiliency upgrades. The deep retrofit rate would need to reach 3% to 5% of buildings annually by 2025 and applicable codes, standards and guidelines for climate-resilient retrofits would need to be referenced in building retrofit programs at all levels as soon as possible . (Canada Green Building Strategy Discussion Paper). The Canada Green Buildings Strategy will set milestones along our path to achieving a net-zero emission, climate-resilient buildings sector. The potential key *areas where milestones may need to be set* are noted below…Existing buildings –	1. *Has a plan to meet the following IEA targets to retrofit existing buildings to net-zero energy ready?* Canada has no plan to meet the IEA targets to retrofit existing buildings, but has acknowledged the need to increase the rate of retrofits across the country. 2. *Has a plan that includes incentives and targets for the installation of heat pumps consistent with net-zero targets?* Canada has a number of incentive programs to help with the installation of heat pumps. but does not yet have targets to ensure alignment with net-zero targets.	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		Deep retrofit rate . (Canada Green Building Strategy Discussion Paper). According to the an article in the National Observer, "A separate set of codes for existing buildings is set to come in 2025". Canada has a Deep Retrofit Accelerator Initiative, which has an objective (in part) to "contribute to transforming the buildings sector in support of the Government of Canada's climate goals. 2. The Canada Greener Homes Initiative (2023) provides grants from $125 to $5,000 to get part of your costs back for eligible home retrofits, up to $600 as a maximum contribution toward the total costs of your pre- and post-retrofit EnerGuide evaluations, and interest-free loans of up to $40,000, with a repayment term of 10 years to help you undertake major home retrofits. Eligible retrofits include home insulation upgrades, air-sealing, window and door replacement, thermostat upgrades, space and water heating, renewable energy, and resiliency measures. Within this initiative is the Oil to Heat Pump Affordability Program (OHPA, launched in March, 2023): Canadian homeowners who are eligible (with low to moderate income) for the Oil to Heat Pump Affordability program may receive up to $10,000 towards the costs associated with switching to an eligible heat pump system, with an additional grant up to $5,000 for homeowners in Nova Scotia, Newfoundland and Labrador, and Prince Edward Island. The Low Carbon Economy Fund (Budget 2017 and Budget 2022) "supports climate actions by provinces, territories, municipalities, universities, colleges, schools, hospitals, businesses, not-for-profit organizations, and Indigenous communities and organizations… including… programming to support lower-income homeowners' move from home heating oil to more affordable low-emitting technologies, like electric heat pumps and electric furnaces"	*3. Does Canada have a ban on the installation of new fossil fuel heating systems by 2030?* No – Canada has stringent performance requirements for boilers, but no prohibition targets. The Canada Green Building Strategy Discussion Paper acknowledges the need for phase-out of fossil fuel boilers. (Note: We may see targets for these categories set once the Canada Green Building Strategy is released, and/or upon the release of the building codes in 2025.)	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		"Accelerated adoption of heat pumps holds enormous potential to further reduce emissions, help maintain comfortable and safe indoor temperatures during extreme heat events, and lower costs for Canadians." (2030 ERP Progress Report) "Areas requiring change: Targeting incentives toward deep retrofit projects with high potential for significant decarbonization and enhanced climate resilience that require financial support to achieve a deeper retrofit" (Canada Green Building Strategy Discussion Paper). Actions: Develop Regulatory Standards and an Incentive Framework for Transitioning off Fossil Fuels for Heating Systems: The federal government will work with partners to, for example, set phased timelines for ending the installation of new oil or natural gas heating systems, with accommodation for electric-gas hybrid systems and remote buildings with no or limited access to the electricity grid. This would be complemented with an incentive framework. An incentive framework for heat pumps will be important to facilitate rapid uptake. (Canada Green Building Strategy Discussion Paper). Over $458 million for the new Greener Affordable Housing stream of the Canada Greener Homes Loan program to provide low-interest loans and grants for energy efficient retrofits of affordable housing, which reduces operational costs for non-profit housing providers. (Budget 2024) $800 million over five years, starting in 2025-26, to launch a new Canada Greener Homes Affordability Program that will support the direct installation of energy efficiency retrofits for Canadian households with low- to median-incomes. It will also be complemented by CMHC's Greener Homes Loan program, which provides interest-free loans of up to $40,000 for energy efficiency home retrofits. (Budget 2024)	Given that Canada has a number of strong incentives for replacing fossil fuel heating systems with heat pumps, but lacks targets for retrofits and heat pumps, and does not have a ban on installation of new fossil fuel heating systems by 2030, Canada should rank Yellow.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		3. According to the Canada Green Building Strategy Discussion Paper "Phased timelines for transition off of fossil fuel heating systems are needed". Actions: "Develop Regulatory Standards and an Incentive Framework for Transitioning off Fossil Fuels for Heating Systems: The federal government will work with partners to, for example, set phased timelines for ending the installation of new oil or natural gas heating systems, with accommodation for electric-gas hybrid systems and remote buildings with no or limited access to the electricity grid." The National Building Code of Canada:2020 (pg. 1069) and the National Energy Code of Canada for Buildings 2020 (pg. 153), and Canada's Energy Efficiency Regulations contain stringent performance requirements for boilers, but no targets for phasing out or prohibiting. According to the 2030 ERP Progress Report, Canada is committed to "continue to develop the Canada Green Buildings Strategy to support a net-zero emissions and climate-resilient buildings sector, explore further opportunities to minimize embodied emissions from the built environment, and explore the potential to update energy and greenhouse gas performance standards in federally funded homes and buildings programs."		

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
B. Transportation				
Passenger/light -duty vehicles: Does the jurisdiction have: 1. A legislated ZEV sales mandate equal to or greater than CER and IEA targets (60% of sales by 2030 and 100% by 2035), and 2. ZEV sales and infrastructure incentives	● Jurisdiction has legislated ZEV sales mandate equal to or greater than IEA targets with penalties for non-compliance and has ZEV sales and infrastructure incentives ● Jurisdiction has either ZEV sales mandate *or* ZEV sales and infrastructure incentives ● Jurisdiction has no ZEV sales mandate targets *and* no ZEV sales and infrastructure incentives	Sales Mandate: The Government of Canada committed to achieve 100% zero-emission vehicle sales by 2035 **for all new light -duty vehicles**, including interim targets of at least 20% by 2026 and at least 60% by 2030 (https://tc.canada.ca/en/road-transportation/innovative-technologies/zero-emission-vehicles/canada-s-zero-emission-vehicle-zev-sales-targets The Government will also put in place a sales mandate to ensure at least 20% of new light-duty vehicle sales will be zero-emission vehicles by 2026, at least 60% by 2030 and 100% by 2035. (2030 ERP). These sales mandates are legislated under the Regulations Amending the Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations (2023), and as of the 2026 model year, a company accumulates compliance credits in respect of its combined fleet if its ZEV value is greater than the ZEV requirement for the year in question, and incurs a deficit in respect of its combined fleet if its ZEV value is less than the ZEV requirement for the model year in question. "If a company exceeds its ZEV sales target, it earns compliance units (hereinafter referred to as the "credits") for excess ZEVs offered for sale. These credits can be used to offset a deficit for a limited number of years in the future. If a company misses its ZEV sales target, it incurs a compliance deficit, which must be satisfied by obtaining credits within a limited time frame. Compliance deficits can be satisfied with banked credits (see below) by purchasing credits from other companies or by creating some credits through financial contribution to charging stations." (Regulations Amending the Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations, 2023) Penalties:	Canada's 2030 and 2035 sales mandates are legislated and align with the CER and IEA targets of 60% of sales by 2030 and 100% by 2035. Noncompliance can result in enforcement under the EPA. Canada also has incentives for both ZEV sales and infrastructure. Therefore, Canada should be ranked Green.	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		"If an automaker does not meet their requirements, they are subject to enforcement under the Canadian Environmental Protection Act. The act provides the authority to carry out inspections and investigations to ensure that the regulation is followed, and the ability to impose a variety of penalties from a warning to a criminal prosecution. However, this enforcement mechanism differs from leading jurisdictions with similar regulations. These jurisdictions use administrative penalty regimes with predictable financial penalties of $20,000 fine per credit deficit. This type of financial penalty is transparent, enforceable, and certain, and has proven to be a successful incentive for compliance. While a Canadian Environmental Protection Act prosecution is a serious matter, it is not certain or timely, as charges often take months to years to resolve. It is ultimately unlikely a prosecution would be undertaken against automakers falling short of their requirements by a few credits." (Clean Energy Canada, 2023) In order to encourage the adoption of ZEVs by Canadians and Canadian businesses, the Government of Canada launched the Incentives for Zero-Emission Vehicles (iZEV) Program in May 2019…with an incentive of up to $5,000. (https://tc.canada.ca/en/road-transportation/innovative-technologies/zero-emission-vehicles/incentives-zero-emission-vehicles-izev?utm_campaign=tc-zev-hub-ongoing&utm_medium=doormat-link&utm_source=zev-hub-incentives-page-en&utm_content=izev-program-light-duty-vehicles).		

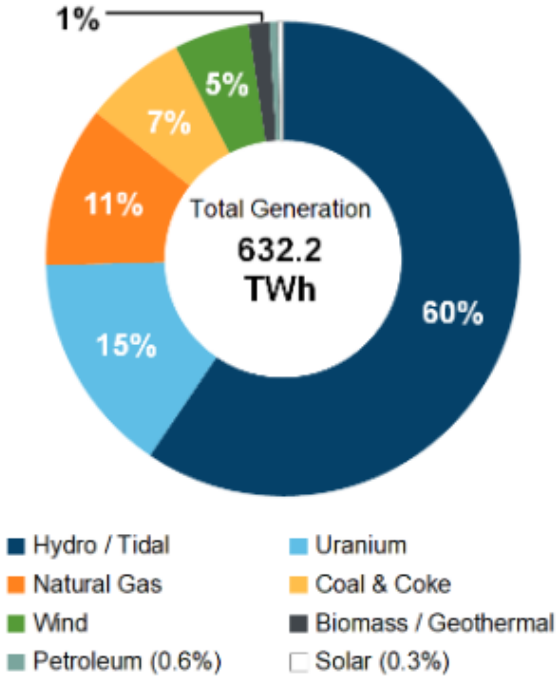
Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		The Government also launched the Zero Emission Vehicle Infrastructure Program "The Zero Emission Vehicle Infrastructure Program (ZEVIP) provides funding towards the deployment of electric vehicle (EV) chargers and hydrogen refuelling stations across Canada. This $680 million initiative addresses a key barrier to the adoption of zero-emission vehicles (ZEV)—the lack of charging and refuelling stations in Canada—by increasing the availability of localized charging and hydrogen refuelling opportunities where Canadians live, work, and play. This is administered through three key funding streams and is available until 2027."		
Medium- and Heavy-Duty Vehicles: Does the jurisdiction have: 1. A legislated ZEV sales mandate equal to or greater than CER net zero plan targets (35% by 2030, and 100% by 2040), and 2. ZEV sales and infrastructure incentives	● Jurisdiction has legislated ZEV sales mandate equal to or greater than IEA targets with penalties for non-compliance and has ZEV sales and infrastructure incentives. ● Jurisdiction has ZEV sales mandate targets without legislated penalties for non-compliance and/or has ZEV sales and infrastructure incentives.	Discussion paper on heavy-duty vehicles and engines in Canada (December 2021): "To meet its targets, Canada will need to significantly reduce emissions from HDVs in the medium-term with the goal of accelerating the transition of the entire fleet to ZEVs as soon as the technologies and availability of these vehicles will allow." "Charging and fuelling infrastructure is also an important consideration and is one of the key barriers to ZEV adoption, and the Government is committed to facilitating the development of a widespread network of charging and refuelling infrastructure." "The Zero Emission Vehicle Infrastructure Program (ZEVIP) is a 5-year $280 million program to address the lack of charging and refuelling stations in Canada. Among other things, the program supports infrastructure deployment for on-road and off-road commercial and public fleets" On November 15th, 2022, Canada signed an international Memorandum of Understanding (MOU) on Zero-Emission Medium- and Heavy-Duty Vehicles, which was announced at COP 26. In this MOU, "countries commit to working together to enable 100% zero-emission new truck and bus sales by 2040 with an interim goal of 30% zero-emission vehicle sales by 2030, to facilitate achievement of net-zero carbon emissions by 2050."	Canada has signed an international MOU for MHDV ZEV sales targets of 30% by 2030 and 100% by 2040, and in the 2030 ERP, Canada set an aim to achieve 35% of total MHDV sales being ZEV by 2030 and committed to develop regulations to require 100% of sales be ZEV by 2040 (for a subset of vehicle types based on feasibility). While these closely align with the CER targets of 35% by 2030, and 100% by 2040, there are currently no penalties for non-compliance.	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
	● Jurisdiction has no ZEV sales mandate targets and no ZEV sales and infrastructure incentives	To reduce emissions from medium-and heavy-duty vehicles (MHDVs), the Government of Canada will aim to achieve 35% of total MHDV sales being ZEVs by 2030. In addition, the Government will develop a MHDV ZEV regulation to require 100% MHDV sales to be ZEVs by 2040 for a subset of vehicle types based on feasibility, with interim 2030 regulated sales requirements that would vary for different vehicle categories based on feasibility, and explore interim targets for the mid-2020s. (2030 ERP). As of September 2023, the Government has committed to develop a MHDV regulation to require that all MHDV sales be ZEVs by 2040 for a subset of vehicle types, based on feasibility (Zero Emission Vehicle Awareness Initiative) . In order to encourage the adoption of medium- and heavy-duty ZEVs by Canadian businesses, the Government of Canada launched the Incentives for Medium- and Heavy-Duty Zero-Emission Vehicles (iMHZEV) Program on July 11th, 2022. There are many different makes and models of eligible zero-emission vehicles for purchase or lease that provide eligible purchasing/leasing organizations with iMHZEV Program incentives of up to $200,000. (https://tc.canada.ca/en/road-transportation/innovative-technologies/zero-emission-vehicles/medium-heavy-duty-zero-emission-vehicles?utm_campaign=tc-zev-hub-ongoing&utm_medium=doormat-link&utm_source=zev-hub-incentives-page-en&utm_content=imhzev-program-medium-heavy-duty-vehicles). According to the 2030 ERP Progress Report, the government is exploring opportunities to deploy charging and hydrogen stations for medium- and heavy-duty ZEVs.	Canada also has sales incentives for MHDV ZEVs, and is exploring opportunities for MHDV ZEV infrastructure. Based on the fact that Canada has sales incentives for MHDV ZEVs and unlegislated sales mandate targets, Canada should rank Yellow.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		The Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations aim to "reduce GHG emissions from heavy-duty vehicles and engines by establishing emission standards and test procedures"		
Public transit/active transportation: Does the jurisdiction have: 1. Public transit and active transportation (PTAT) policies included in its climate plan; 2. Targets for significantly increasing PTAT trips; 3. Initiatives to increase PTAT to meet the targets; 4. An estimate of the impact of the initiatives on PTAT use; 5. A plan to make public transit carbon neutral no later than 2040.	Jurisdiction has four or more measures in place or in development Jurisdiction has two or three measures in place or in development Jurisdiction has one or no measures in place or in development	1. "Building a zero-emission public transit system across Canada is a key step to cutting emissions, while helping people get around faster, safer and cheaper. Public transit systems contribute to the decarbonization of the transportation sector by encouraging modal shift, combatting congestion, and reducing reliance on personal vehicles. However, maximizing transit benefits in terms of emissions reductions also depends on encouraging intensification and effective land-use planning in communities, especially along higher-frequency transit corridors. Active transportation also provides a zero-emissions and healthy transportation alternative." (2030 ERP) (pg. 57) "Since 2015, the Government of Canada has made the most significant public transit investments in Canada's history with over 10 times the federal investments made in the decade prior. Over $30 billion has been allocated to public transit through Infrastructure Canada's programs. Additionally, in 2021 the Government of Canada committed to permanent public transit funding of $3 billion per year beginning in 2026-2027, to allow for careful and long-term project planning and delivery." (2030 ERP) (pg. 60) "Through the Permanent Public Transit Program (PPTP), announced in February 2021, the Government of Canada is providing significant funding under the Zero Emission Transit Fund (ZETF), the Active Transportation Fund (ATF) and the Rural Transit Solutions Fund (RTSF). These programs, which represent well over $2B in funding are active now with ongoing intakes and approvals that will see hundreds of projects built in the near-term across the country. The second phase of permanent funding begins in 2026-27 and will see tens of billions in funding to support public transit and active	1. *Are PTAT policies included in the climate plan?* Yes – the Government of Canada committed to permanent public transit funding of $3 billion per year beginning in 2026-2027, to allow for careful and long-term project planning and delivery (Permanent Public Transit Program) 2. *There are targets for significantly increasing PTAT?* No – Canada has acknowledged the need to set targets, but no targets regarding	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		transportation infrastructure in communities across the country." (2030 ERP Progress Report) (pg. 134) 2. Canada's National Active Transportation Strategy (launched July 28, 2021) acknowledges the need for targets that focus on modal share, but also "targets must also prioritize greater diversity and inclusion, health and wellness, benefits on the environment, and reflect what active transportation means to tourism and business in Canada". Section 3 of the strategy is focused on collecting data and setting targets: "In order to set targets effectively, we need to prioritize data and be aware that a 'one-size' approach will never fit all Canadians: different communities, groups, governments and researchers have varying capacities and access to methods, tools, data and reporting." No targets for public transit ridership could be found. 3. "Since 2015, the Government of Canada has invested more than $236 million in over 300 active transportation projects for cities and towns across the country through the Investing in Canada Infrastructure Program. Moving forward, Infrastructure Canada will be developing its priorities for permanent transit funding: $3 billion of annual investment, beginning in 2026."(National Active Transportation Strategy). Rural Transit Solutions Fund ($250 million) "This Fund supports locally-driven transit solutions for rural and remote communities, with flexibility for different local transit system innovations from fixed route to on-demand services to ride-shares." Zero Emission Transit Fund ($2.75 billion) This Fund supports public transit and school bus operators plan for electrification, supports the purchase of 5,000 zero emission buses and build supporting infrastructure. Active Transportation Fund ($400 million) This Fund invests in projects that build new and expanded networks of pathways, bike lanes, trails and pedestrian bridges, in addition to supporting active	PTAT could be found. 3. *There are initiatives to increase PTAT?* Yes – Canada has initiatives in place to increase PTAT and electrify public transit. 4. *There is an estimate of the impact of the initiatives on PTAT use?* No – the Zero Emission Transit Fund estimates it can support the purchase on 5000 ZEV buses, but no other estimates of impacts could be found. 5. *There is a plan to make public transit carbon neutral no later than 2040?* No –	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		transportation planning activities (applications now closed). "As of November 2023, the ATF has approved and announced more than 180 projects with a total program contribution of more than $100M." (2030 ERP Progress Report) (pg. 135) 4. Zero Emission Transit Fund ($2.75 billion) "This Fund supports public transit and school bus operators plan for electrification, supports the purchase of 5,000 zero emission buses and build supporting infrastructure." No other estimates of impacts could be found. The Zero Emission Transit Fund is aimed at purchasing zero emission buses. The 2030 ERP Progress Report acknowledges Canada's commitment to "Examine options for the development of a new blueprint for a sustainable, net-zero transportation system by 2050 that takes an integrated transportation sector approach, ensures coordination across governments and stakeholders, and supports low-emitting modes where appropriate.", although admits this is in the early stages of exploration. There is no official plan to make public transit carbon neutral by 2040.	Canada is exploring options for developing a net-zero transit system by 2050. Canada meets two of these measures (1 and 3). Canada includes PTAT policies in the 2030 ERP and subsequent Progress Report, and Canada has incentives in place that increase PTAT. However, Canada does not have targets for increasing PTAT, an estimate of the impact of PTAT policies, or a plan to make PTAT net-zero by 2040. Therefore, Canada should rank Yellow.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
C. Electricity				
Electricity generation: Does the jurisdiction have a plan consistent with CER and IEA targets to fully decarbonize the electricity sector by 2035	Electricity generation is decarbonized, or there is a plan to decarbonize electricity sector by 2035 Electricity generation is not decarbonized, but there is a plan under development to decarbonize electricity sector by 2035 Electricity generation is not fully decarbonized and there is no plan to decarbonize by 2035	Canada's electricity production by source (CER, 2024)  The Government of Canada has the goal/objective of decarbonizing the energy sector by 2035, which is found in Powering Canada Forward: Building a Clean, Affordable, and Reliable Electricity System for Every Region of Canada (2023). The Government of Canada has passed regulations to accelerate the phase out of unabated coal-fired electricity by 2030. The Government is currently developing a Clean Electricity Standard (CES) to support a net-zero electricity grid by 2035, which will provide a clear path	Canada's power grid is not fully decarbonized, but is over 80% non-emitting. Canada does not have an official plan for electricity decarbonization, but one is expected to be released sometime this year (2024). They currently have an interim guiding document for electricity decarbonization (Powering Canada Forward: Building a Clean, Affordable, and Reliable Electricity System for Every Region of Canada), which states the goal of decarbonizing the energy sector by 2035.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		forward and certainty for industry. The A clean electricity standard in support of a net-zero electricity sector: discussion paper shows intent by the Government of Canada to move forward with regulations to achieve a net-zero electricity system by 2035. Canada's proposed Clean Electricity Regulations were released in April, 2023 (https://www.gazette.gc.ca/rp-pr/p1/2023/2023-08-19/html/reg1-eng.html), with the final regulations set to come out in 2024 https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/clean-electricity-regulation.html Canada's Clean Electricity Strategy is expected to be released in 2024 and is expected to hold official targets for electricity decarbonization. Currently, Canada's power grid is "power grid is over 80% non-emitting" (Powering Canada Forward: Building a Clean, Affordable, and Reliable Electricity System for Every Region of Canada) From the 2030 ERP: What's Next: "Require net-zero electricity by 2035 through a Clean Electricity Standard: Developing a Clean Electricity Standard (CES) to support a net-zero electricity grid by 2035 will provide a clear path forward and certainty for industry. To achieve this goal, the Government has released a discussion paper and launched a collaborative process with provinces, territories, and Indigenous partners to inform the design and scope of the standard. This process will help ensure that the design of the CES provides a clear and workable basis for provinces and territories to be able to plan and operate their grids in a way that will continue to deliver clean, reliable and affordable electricity to Canadians. Establishing a net-zero-emitting electricity sector will require substantial effort from provinces and territories, and a CES will provide the regulatory signal to support decision-making at all levels of government to achieve this goal" According to the 2030 ERP Progress Report, "Canada remains committed to releasing its first Clean Electricity Strategy in 2024"	Since Canada's electricity sector is not fully decarbonized, but they have a plan under development for decarbonization, Canada should rank Yellow.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
D. Oil and Gas				
Methane: Does the jurisdiction have a plan consistent with CER and IEA targets to reduce methane emissions from 2012 levels by 40% by 2025 and 75% by 2030?	● Jurisdiction has legislated requirements to meet the 40% 2025 reduction target and has legislated requirements or is in the process of developing legislative requirements to meet the 2030 target ● Jurisdiction has adopted CER/IEA methane reduction targets but has not legislated the targets and is not in the process of developing legislative requirements to meet the 2030 target	Canada joined the Global Methane Pledge in October 2021, which aims to reduce global anthropogenic methane emissions across all sectors by at least 30% by 2030, relative to 2020 (https://www.canada.ca/en/environment-climate-change/news/2021/10/canada-confirms-its-support-for-the-global-methane-pledge-and-announces-ambitious-domestic-actions-to-slash-methane-emissions.html). Canada has adopted both of the IEA methane reduction targets: 40 to 45% reduction of methane emissions by 2025 of 2012 levels, and at least 75% reduction of methane emissions by 2030 of 2012 levels (Canada's Methane Strategy, 2022) Canada's Methane Strategy (2022) is a comprehensive methane reduction strategy designed to help Canada reach its methane reduction targets. It provides a pathway to further reduce methane emissions from across the economy. It builds on Canada's progress and commitments since 2015, including the 2030 Emissions Reduction Plan. It includes sections on measurement, science, innovation and reporting; mitigation action; economic opportunities; international engagement; natural sources and sinks; and looking ahead. (From the 2030 ERP Progress Report): "The methane strategy outlines how Canada will: • Implement measures across sectors of the economy, including oil and gas, to reduce the largest sources of methane emissions; • Strengthen the clean technology sector and provide tools to industry to achieve cost-effective methane emissions reductions while creating good-paying jobs;	Canada has adopted the CER/IEA methane reduction targets for 2025 and 2030. They currently have methane reduction regulations in place and are on track to meet the first target, and are in the process of passing more stringent regulations help to meet the second target. Canada addresses methane emissions reduction in their climate plan, and also have a specific strategy for reducing methane emissions.	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
	● Has not adopted reduction targets	• Advance scientific knowledge and technical capacity to improve methane detection, measurement, and reporting; • Meet international climate targets under the Paris Agreement and Global Methane Pledge; and, • Solidify its global leadership and provide funding, tools, and best practices for other countries to achieve emissions reductions. • As part of the strategy, Canada recently released draft methane regulations for consultation that aim to reduce methane emissions from the oil and gas sector by at least 75% below 2012 levels by 2030. The existing Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) fulfill Canada's commitment to regulate the oil and gas sector to reduce emissions of methane by 40% to 45% below 2012 levels by 2025. In 2021 Canada committed to the IEA target of 75% reduction below 2012 levels by 2030 (Canada confirms its support for the Global Methane Pledge and announces ambitious domestic actions to slash methane emissions). Canada is currently proposing amendments to the Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector). The proposed Amendments are intended to achieve further methane emission reductions in the oil and gas sector, and thus contribute to meeting the 2030 target. https://www.gazette.gc.ca/rp-pr/p1/2023/2023-12-16/html/reg3-eng.html Canada is on track to meet its 2025 target https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/review-methane-regulations-upstream-oil-gas-sector.html	Given that Canada has adopted the with CER and IEA targets to reduce methane emissions from 2012 levels by 40% by 2025 and 75% by 2030, and Canada has a specific Methane Reduction Strategy and policies to support it, Canada should rate Green.	

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
		The 2030 ERP acknowledges reducing methane emissions as a key part of reaching the emissions reduction target. It outlines actions already taken to reduce methane emissions, and lays out future actions: "The Government of Canada intends to release its plan to reduce methane emissions across the economy this year, aligned with Canada's methane reduction commitments. This plan will highlight science and clean technology innovation for measurement and quantification to inform reporting, policy development, and mitigation measures across the Canadian economy. The strategy will strengthen the clean technology sector, provide tools to industry and governments to achieve methane emission reductions effectively, and protect our climate, reaffirming Canada's global leadership and providing tools and best practices for other countries to achieve emission reductions. Further, the Government of Canada has committed to establishing a global centre of excellence on methane detection and elimination."		
Emissions Cap:	● Has adopted or is in the process of adopting legislated reduction targets consistent with the CER net zero plan	The Government of Canada has committed to cap and reduce greenhouse gas emissions (GHG emissions) from the oil and gas sector at a pace and scale necessary to contribute to Canada's 2030 climate goals, to achieve net-zero GHG emissions by 2050. "The Government plans to implement a national emissions cap-and-trade system through regulations to be made under the *Canadian Environmental Protection Act, 1999* (CEPA)." "The regulations would be designed to ensure GHG emissions from the upstream and liquified natural gas (LNG) subsectors decline over time to reach net-zero by 2050." "The regulations are targeted to come into force upon registration of the final regulations in 2025." "It is proposed that the 2030 emissions cap (the number of allowances issued) be set at a level slightly below what emissions would be if covered sources achieved technically achievable emission reductions by 2030 and production was at 2019 levels. Based on current estimates, this would result in issuing a total quantity of allowances in 2030 of between 106 and 112 Mt CO2e, which would be 35% to 38% below 2019 emission levels."	Canada has committed to developing a cap and trade system in the oil and gas sector in line with the target of net-zero by 2050, which is expected to come into regulation in 2025. Therefore, Canada was rated Green.	●

Indicator	Rating System	Current Policy Summary	Discussion of Rating	Rating
Does the jurisdiction have an emissions reduction plan for the oil and gas sector consistent with the CER net zero scenario target to reduce emissions from 2005 by 31% by 2030, 60% by 2040 and net zero by 2050.	🟡 Has adopted or is in the process of adopting reduction targets but the reduction targets will not reduce emissions to the levels in the CER net zero scenario and/or is supportive of the federal government's initiative to adopt reduction targets for the oil and gas sector 🔴 Has not adopted and is not in the process of adopting reduction targets for the oil and gas sector	(Regulatory Framework for an Oil and Gas Sector Greenhouse Gas Emissions Cap, 2023) According to the 2030 ERP Progress Report, Canada is committed to "Continue to implement regulations that are addressing emissions in the oil and gas sector, including carbon pricing, methane regulations, and the Clean Fuel Regulations, develop and implement a national cap on emissions from the production of oil and gas, and provide financial supports for decarbonization activities in the oil and gas sector, including through the Carbon Capture, Utilization, and Storage Investment Tax Credit." Oil and Gas Sectoral Emissions (from Canada's NIR Part 1, Table 2-12) 2005: 168 Mt CO_2e 2019: 201 Mt CO_2e Canada's allowance under the Regulatory Framework for an Oil and Gas Sector Greenhouse Gas Emissions Cap, 2023: 106 to 112 Mt CO_2e in 2030 This equates to a reduction of 33% to 37% below 2005 levels in 2030		

Appendix C.

Canada's fuel charge rates 2024-2030, by type of fuel

Table C.1: Schedule of fuel charge rates in Canada

Rates of charge applicable after March 31, 2023

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11
Item	Type	Unit	Rates of charge applicable for the period beginning on April 1, 2023 and ending on March 31, 2024	Rates of charge applicable for the period beginning on April 1, 2024 and ending on March 31, 2025	Rates of charge applicable for the period beginning on April 1, 2025 and ending on March 31, 2026	Rates of charge applicable for the period beginning on April 1, 2026 and ending on March 31, 2027	Rates of charge applicable for the period beginning on April 1, 2027 and ending on March 31, 2028	Rates of charge applicable for the period beginning on April 1, 2028 and ending on March 31, 2029	Rates of charge applicable for the period beginning on April 1, 2029 and ending on March 31, 2030	Rates of charge applicable after March 31, 2030
1	Aviation gasoline	$/litre	0.1592	0.1959	0.2326	0.2694	0.3061	0.3428	0.3795	0.4163
2	Aviation turbo fuel	$/litre	0.1678	0.2065	0.2453	0.2840	0.3227	0.3614	0.4001	0.4389
3	Butane	$/litre	0.1157	0.1424	0.1691	0.1958	0.2225	0.2492	0.2759	0.3026
4	Ethane	$/litre	0.0662	0.0815	0.0968	0.1121	0.1273	0.1426	0.1579	0.1732
5	Gas liquids	$/litre	0.1081	0.1331	0.1581	0.1830	0.2080	0.2329	0.2579	0.2828
6	Gasoline	$/litre	0.1431	0.1761	0.2091	0.2422	0.2752	0.3082	0.3412	0.3743
7	Heavy fuel oil	$/litre	0.2072	0.2550	0.3028	0.3506	0.3984	0.4462	0.4941	0.5419
8	Kerosene	$/litre	0.1678	0.2065	0.2453	0.2840	0.3227	0.3614	0.4001	0.4389
9	Light fuel oil	$/litre	0.1738	0.2139	0.2540	0.2941	0.3342	0.3743	0.4144	0.4545
10	Methanol	$/litre	0.0714	0.0878	0.1043	0.1208	0.1373	0.1537	0.1702	0.1867
11	Naphtha	$/litre	0.1465	0.1803	0.2142	0.2480	0.2818	0.3156	0.3494	0.3832
12	Petroleum coke	$/litre	0.2452	0.3018	0.3584	0.4149	0.4715	0.5281	0.5847	0.6413
13	Pentanes plus	$/litre	0.1157	0.1424	0.1691	0.1958	0.2225	0.2492	0.2759	0.3026
14	Propane	$/litre	0.1006	0.1238	0.1470	0.1703	0.1935	0.2167	0.2399	0.2631
15	Coke oven gas	$/cubic metre	0.0455	0.0560	0.0665	0.0770	0.0875	0.0980	0.1085	0.1190
16	Marketable natural gas	$/cubic metre	0.1239	0.1525	0.1811	0.2097	0.2383	0.2669	0.2954	0.3240
17	Non-marketable natural gas	$/cubic metre	0.1654	0.2035	0.2417	0.2799	0.3180	0.3562	0.3944	0.4325
18	Still gas	$/cubic metre	0.1396	0.1718	0.2040	0.2362	0.2684	0.3006	0.3328	0.3650
19	Coke	$/tonne	206.68	254.38	302.07	349.77	397.46	445.16	492.86	540.55
20	High heat value coal	$/tonne	145.02	178.48	211.95	245.41	278.88	312.35	345.81	379.28
21	Low heat value coal	$/tonne	115.21	141.80	168.38	194.97	221.56	248.14	274.73	301.31
22	Combustible waste	$/tonne	129.82	159.78	189.74	219.70	249.66	279.62	309.58	339.54

Source: Schedule 2 of the Greenhouse Gas Pollution Pricing Act, (2018). Retrieved from https://laws-lois.justice.gc.ca/eng/acts/g-11.55/page-27.html#h-247111