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Cooling the Great White North: A Mixed-Methods Approach Analysing Canada's Challenges to

Implementing Effective Policies Reducing Greenhouse Gas Emissions

Dissertation submitted by

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Abstract

This research explores the challenges that the current Canadian government faces in implementing effective policies tackling greenhouse gas emissions. Canada has a significant role to play in reducing greenhouse gas emissions as a large G7 emitting nation, yet studies show that there has been slowed and ineffective implementation of climate policies, which have limited Canada's capacity to reduce its greenhouse gas emissions by 30% below 2005 levels by 2030, and a commitment to reach net-zero emissions by 2050. Previous literature indicates that three main challenges influence the federal government's capacity to implement effective climate policies, which include public opinion, lobbying from the oil and gas industry, and Canada's federalist system. This thesis seeks to determine whether these three independent variables continue to influence Canadian climate policymaking in the context of the current federal government since 2015.

The methodology used was a mixed-methods approach including expert interviews and descriptive statistics of each independent variable, utilizing a QUAL-Quant approach to best capture the opinions from experts in climate policymaking, as well as descriptive statistical analysis to attempt to achieve data triangulation. The summary of the findings shows that all three independent variables influence the outcome of climate policymaking, however, federalism has a higher degree of influence, demonstrated by the number of climate policies yet to be implemented from ongoing negotiations and opposition, as well as the expert testimonies on effective climate policymaking.

Keywords: Climate governance, greenhouse gas emissions, climate policies, cost-effectiveness, lobbying, public opinion, federalism, renewable energy, oil and gas industry.

Acknowledgements

As I wrote this thesis, Canada was on fire. Canada saw wildfires take over its landscape from coast to coast, heavily impacting the lives of Canadians and even our southern neighbours. Ironically on Clean Air Day on June 7, 2023, many parts of Canada saw absolutely no indication of clean air: instead, Canadians saw some of the worse air quality and thick smog caused by the raging wildfires. Canada is not immune to wildfires historically, however, 2023 was a groundbreaking year of air quality abnormalities. My hometown of Montreal experienced never-seen-before smog warnings, with the air quality index reaching near 10 for days. This thesis is close to my heart, I took on this ambitious journey of writing about climate policymaking wishing to make a difference in Canadian climate policymaking.

My thesis could not have been complete without the support of my family who pushed me to follow my dreams and write on this important topic. I would like to thank my wonderful Mundus MAPP cohort, who provided support and motivation, but most importantly kindness throughout our degree. I would especially like to thank my thesis supervisors, Dr. Florian Weiler and Dr. Charles Roger, for their guidance throughout my thesis. Lastly, I cannot thank enough my interviewees who provided their expert opinions on this topic and truly contributed to the essence and success of my thesis. I am forever grateful for their support.

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1. Introduction

The current Liberal government of Canada under the leadership of Prime Minister Justin Trudeau has set ambitious goals within their climate policies to meet its Paris Agreement targets. This government, which has been in power since 2015, signed the Paris Agreement in 2016 and has pledged to reduce its greenhouse gas emissions by 30% below 2005 levels by 2030, and a commitment to reach net-zero emissions by 2050 (Office of the Auditor General of Canada, 2021). The current emissions reduction plans require each sector to reduce its greenhouse gas emissions, with the oil and gas sector demanding the greatest reduction as it represents 30% of Canada's national emissions (Canada Energy Regulator, 2023). The Trudeau government set in place these climate policies after nearly a decade of federal Conservative leadership under Stephen Harper, who placed little importance on climate policies.

In light of the political landscape change in 2015, there has been evidence of change in the opinion polls reflecting greater importance towards climate issues, however, the oil and gas industry and the federal-provincial relationship on natural resources in the form of federalism require additional work. The Trudeau government is keen on implementing effective policies reducing greenhouse gas emissions, however, the legacy from the previous government has created specific challenges for the current government, notably the change of salience among Canadian polls on climate issues, the role of lobbying from the oil and gas industry in climate policies, and the federal-provincial jurisdiction issue on climate policies in the form of federalism. Therefore, this thesis aims to answer the following research question: How are public opinion, lobbying from the oil and gas industry, and Federalism influencing federal effective climate policy outcomes in tackling greenhouse gas emissions?

This research question derives from the literature review conducted on this topic. During the previous government of Stephen Harper, polls demonstrated that Canadians were not so focused on climate change (Harrison, 2012), therefore climate policies specific to greenhouse gas emissions were not developed during that time. In 2015, when the Trudeau government was elected to government, the polls lacked strong climate literacy and a foundation for measuring the public's opinion on climate policies, a consequence of a previous government that placed little importance on the public's views on climate. Moreover, the previous government promoted a vision of national prosperity linked to natural resource exploitation, with the oil and gas industry accounting for

nearly 40% of export earnings (MacNeil & Paterson, 2016). As such, the embedded nature of an oil-dependent economy remains a powerful obstacle to the future of climate policies. Not only has the legacy of the oil industry had an impact on current climate policies, but the powerful lobbying from this sector has prevented meaningful change in the climate arena. The oil and gas industry has successfully lobbied against some significant legislation seeking to reduce greenhouse gas emissions: these include the delays, weakening and killing of carbon pricing proposals in 2019, adding 55 megatons of methane emissions, weaker water protection laws, the exemption of high carbon projects, and the replacement of weaker protection policies for land, air and water (Environmental Defence Canada, 2019). This sector is significantly important in Canadian climate policymaking, as it represents 30% of Canada's greenhouse gas emissions (Canada Energy Regulator, 2023), and it is out of sync with its net zero pathway, making it more difficult to meet its emissions reduction targets (Forman & al., 2022). The oil and gas industry continues to have a powerful influence on climate policies, even with a more climate-oriented federal government, due to its lack of tangible action to reduce its greenhouse gas emissions. Finally, the federal government is not alone in stepping in to implement more effective climate policies: the provinces had repeatedly stepped in to fill in the lack of climate action under the Harper administration, where provincial actions were responsible for most policy-induced emissions reductions (MacNeil & Paterson, 2016). The lack of climate action from the previous federal Conservative government resulted in Canada having a poor track record on climate issues worldwide: according to the Climate Change Performance Index, Canada ranked 58th worldwide in 2015 in terms of its effective climate policies, where "Canada is about to miss its 2020 emissions reduction target by about 20% and the only effective policies in place are provincial initiatives (Burck & al. 2015)". Upon its election in 2015, the current federal government is now filling the gaps in climate policymaking, however, it faces major opposition from provincial powers due to Canada's federalism and its division of powers as defined in its constitution. The 2021 Supreme Court of Canada's decision to rule the federal carbon pricing law as constitutional, despite resistance from certain provinces, illustrates how the federalist dynamic of natural resources management is impeding faster and more effective climate policies. The federal government has limited capacity to control major energy initiatives, as such this government has an exceptionally challenging task to enforce climate policies that were previously heavily managed by the provincial governments.

The ambition of this thesis is to provide an analysis of how the three independent variables of public opinion, lobbying from the oil and gas industry, and Canada's federalism influence the dependent variable, which is the policy outcome of federal effective climate policies seeking to reduce greenhouse gas emissions. The justification of the choice of variables derives from a literature review of the work of author Kathryn Harrison on *The Struggle of Ideas and Self-Interest in Canadian Climate Policy*, published in 2010. The author describes the limitations in Canadian climate policies, however almost ten years have passed since the publication of this book, and there has not been significant work that has continued on these specific variables in an aggregated matter. This thesis seeks to fill the literature gap between the publication of this book and the present day and see if these variables are still applicable to the current federal government, and how have these specific variables influenced current Canadian climate policies.

This research question has been answered using a mixed-methods methodology, specifically using a QUAL-quant approach, where expert interviews were conducted first to provide a qualitative analysis of the opinions shared by the experts on climate policies to measure their opinion on the degree of influence of each independent variable. Following the qualitative analysis, a quantitative analysis was employed to measure the degree of influence of each independent variable, which was gathered using data sets for each independent variable: public opinion polls, lobbying registries, and reports on federal and provincial/territorial climate policies. Then, an aggregate analysis was completed to measure the degree of each independent variable. Prior to the start of the data collection, the null hypothesis was the following:

H0: Public opinion, lobbying from the oil and gas industry, and federalism continue to influence the outcome of federal effective climate policies reducing greenhouse gas emissions.

To analyze how the independent variables influenced the dependent variable, this research sought to determine the effectiveness of current climate policies using the methodology employed by Auffhammer & al. (2016) who describe specific criteria when implementing effective climate policies (Auffhammer & al., 2016). Determining the effectiveness of the current climate policies is required in this context, as this research jointly seeks to determine if the effectiveness of these policies is influenced by the independent variables. To quantify the degree of influence of each independent variable on the dependent variable, an analysis of the number of policies implemented

and the number of policies yet to be implemented was conducted to determine how much the independent variables have had an impact on the policies implemented and see if the policies yet to be implemented can be attributed to the independent variables.

The goal of this thesis is to contribute to the literature on climate policymaking in Canada. This is a particularly critical area of research, considering that according to the Climate Change Performance Index of 2023, Canada has ranked among the bottom G20 countries, and among the lowest of countries surveyed worldwide (Burck & al., 2023). As such, the data shows that more work can be done to improve Canadian climate policies seeking to reduce greenhouse gas emissions, and this thesis seeks to propose solutions to this issue to various audiences working on this issue.

2. Literature Review

2.1. Theory

The main variables to analyze effective policymaking in Canadian climate policies in the context of this thesis are categorized as the following: the salience of public opinion, the number of lobbying registrations from the oil and gas industry, and the federal-provincial jurisdiction on environmental issues in the form of federalism. These variables are interconnected through the theoretical frameworks of Consociationalism and Advocacy Coalition Framework. These two theoretical frameworks explain the historical predisposition of Canadian climate policymaking and illustrate the tendencies among actors.

Consociationalism

Consociationalism was developed as an academic concept in studies of power-sharing arrangements among different social groups, where political representation is based on proportionality, and thus the need for consensus among bloc or representative groups leading to coalition governments (Ulrichsen, 2018). Consociationalism was inducted by Dutch political scientist Arend Lijphart, who sought to explain democracy tendencies to conflict resolution among different organized groups and explain stability in segmented polities (Cannon, 1982). Lijphart identifies four key characteristics of democracies engaging in consociationalism behaviour: grand coalition, mutual veto, proportionality, and segmental autonomy (Lipjphart, 1977). Consociational states are fragmented into autonomous subcultures, which are ideologically antagonistic and possess limited political consensus, therefore coalition practices, mutual veto, proportionality, and segmental autonomy are key to avoiding confrontation and pursuing political stability.

The theoretical framework of Consociationalism is highly relevant to Canadian climate policymaking since it requires cooperation among an internally divided country on environmental issues. Canada is an already heavily divided country due to its history: it has an ethnic-linguistic cleavage pattern similar to other countries associated as consociational states, considering it has a territorial English-French division, religious disparity, and regional interests. Canada's major regions are also divided, with the Western Prairie provinces having distinct subcultures from the Eastern Maritimes regions. This presence of subcultural particularism has prevented the development of a strong Canadian national ethos that distinguishes Canada as a whole with a strong guiding belief (Cannon, 1982). Implementing national climate policies to represent the national belief of Canada is extremely challenging, therefore coalitions are needed to represent the interests of individuals coming together as one, and thus further implement effective climate policies.

Advocacy Coalition Framework

The Advocacy Coalition Framework (ACF) developed by Sabatier and Jenskins-Smith emphasizes shared beliefs as the essence of politics and the use of advocacy for knowledge and policy analysis (Liftin, 2000). The main objectives of ACF are:

"(a) to add more theoretical rigour to the policy literature by devising propositions regarding policy change and continuity, and

(b) to address the empirical shortcomings of early approaches based upon distinct stages in the policy process" ((Liftin, 2000).

The authors emphasized the relevance of ACF in policymaking, as they argued the importance of multiple interacting cycles among multiple levels of government, to encourage various actors of all levels of government with shared beliefs seeking to manipulate governmental institutions to further their goals over time.

ACF is particularly useful in the study of climate policy, considering that climate policy involves multiple agencies and levels of government, it is driven by coalitions of diverse stakeholders, it drives technical and analytical knowledge, and scientific information is easily politicized (Liftin, 2000). The very nature of ACF involving multiple stakeholders seeking agenda-setting within federal climate policies illustrates the complicated nature of climate policymaking, and each independent variable of this thesis attempts to explain the complexity of climate policymaking in Canada. The following section will seek to explain the definition and the importance of effective climate policy making, and how each independent variable influences the federal government's ability to implement effective climate policies.

2.2 Conceptualization

Policy Context

Climate policymaking in Canada is a recent but important issue, considering Canada's role in contributing to global greenhouse gas emissions. Canada is a major producer and consumer of oil and gas, ranking 5th in the world in oil production, and 9th in the world in oil consumption (Worldometers, 2016). The province of Alberta's oil sands accounts for 11% of Canada's total greenhouse gas emissions, and 0.1% of global emissions (Murphy, 2019). As a result, the current federal government has pledged to reduce Canada's greenhouse gas emissions by 30% below 2005 levels by 2030, and a commitment to reach net-zero emissions by 2050. The federal government's plans to reach these goals are highly dependent on collaboration with oil-exporting provinces, which significantly limits the federal government's jurisdiction power. To mitigate its national greenhouse gas emissions, the current federal government has established three climate plans:

- 1. Pan-Canadian Framework on Clean Growth and Climate Change (2016)
- 2. A Healthy Environment and a Healthy Economy (2020)
- 3. 2030 Emissions Reduction Plan: Clean Air, Strong Economy (2022)

These plans have included numerous climate measures that have evolved since 2015, with the most recent 2022 plan including specific policies on setting a cap on emissions, advance carbon capture, storage and utilization, funding to the Low Carbon Economy Fund, further reducing methane emissions, increase employment opportunities in the clean energy sector, and eliminating subsidies for fossil fuels (Environment and Climate Change Canada, 2022). These policies have advanced the reduction of greenhouse gas emissions, however, the most notable climate policy that has never been implemented nationally in Canada before was the carbon pricing model. Officially known as the *Greenhouse Gas Pollution Pricing Act: An Act to mitigate climate change through the pan-Canadian application of pricing mechanisms to a broad set of greenhouse gas emission sources and to make consequential amendments to other Acts, it sets in place a price on pollution across Canada, where provinces and territories can design their own pricing systems, or can choose to implement the federal pricing system (CanLII, 2022). The revenue from the price on pollution initiative is returned to the province or territory where it was collected: provinces or territories that have set in place their own carbon pricing system will receive their revenue from their respective jurisdiction, whereas the provinces or territories that follow the federal carbon tax system will*

receive the proceeds from the federal government, which is returned to individuals, families and businesses in the form of payments and climate action programs (Environment and Climate Change Canada, 2022). After numerous appeals to remove the carbon tax, including the provinces of Alberta, Ontario and Saskatchewan challenging the constitutionality of the Act, the Supreme Court of Canada ruled that the federal carbon pricing law is constitutional, and the Supreme Judges found that "global warming causes harm beyond provincial boundaries and that it is a matter of national concern under the 'peace, order and good government' clause of the Constitution" (Supreme Court of Canada, 2021). As a consequence of this ruling, provinces and territories are subject to the federal government's price on pollution, or they may set in place their own carbon regulations that conform with the standards set in place by the federal government. This precedent has granted the federal government still faces significant challenges, which are the topic of this thesis. The following section will describe the main challenges as the independent variables, as well as how they impact the dependent variable.

Dependent Variable: Effective Climate Policy Outcome

Climate policymaking, like any other policy field, requires evidence-based implementation to result in effective outcomes. This research specifically involves effective climate policies reducing greenhouse gas emissions, therefore effective policies will be defined as the most costeffective policies that reduce the greatest amount of greenhouse gas emissions. The literature demonstrates that specific points need to be taken into consideration when implementing effective climate policies, including cost-benefit analysis, market-based instruments, technological innovation, distributional impacts, international cooperation, and policy design and flexibility (Auffhammer & al., 2016). To determine the impact on the dependent variable, i.e., effective climate policy outcomes, this research seeks whether the conditions associated with effective climate policymaking are being implemented in the present federal climate policies. To quantify the degree of influence of each independent variable, an analysis of the number of climate policies reducing greenhouse gas emissions implemented and the number of climate policies reducing greenhouse gas emissions yet to be implemented was conducted to determine how much the independent variables have influenced the climate policies implemented and see if the climate policies yet to be implemented can be attributed to the independent variables.

Independent Variable 1: Public Opinion

Existing research demonstrates a relationship between public opinion and policy adoption; however, the precise nature of the relationship remains unclear. Current evidence shows that policymakers are incentivized to address highly salient issues in accordance with their constituency to pursue re-election goals (Bromley-Trujillo & Poe, 2018). Re-election is a major goal for any politician, therefore implementing policies aligned with the degree of salience of public opinion on a specific issue is key for any government. The general public is a key stakeholder engaged in ACF, as it has the power to vote in favour of the government if the policies align with their beliefs, and they are inclined to further their agenda in policymaking by using their voting power to keep in power those who favour their interests. Moreover, public opinion highly contributes to climate policymaking, considering that is a method to analyze consumer behaviour changes on climate policy implementations. In the context of climate policies tackling greenhouse gas emissions, such as carbon pricing, consumers are responsive to carbon pricing due to the change in the price of gasoline. Consumers are more responsive to salient prices and tax changes (Li & al., 2014), which may lead them to become active in climate policymaking to voice their concerns. In the context of Canadian climate policymaking, public opinion polls demonstrate a highly divided public on climate issues, particularly on carbon pricing, with half the population being in favour of carbon taxes and half the population being opposed to carbon taxes (Lachapelle & Borick, 2022), a phenomenon commonly occurring in highly fragmented countries according to Consociationalism. This polarization of climate policies presents itself as a challenge for the federal government as it provides weak guidance on the salience of public opinion. As such, public opinion represents one of the many actors involved in advocacy work for Canadian climate policies, and the continuous number of divided polls on climate issues represent an internally divided population on climate issues.

Independent Variable 2: Oil & Gas Lobbying

Lobbying plays an extensive role in climate policymaking due to certain industries having greater financial means than others to advocate for their self-interest. Lobbying, defined as a payment or a form of communication about a specific topic with a federal public officer (Office of the Commissioner of Lobbying of Canada, 2020), is a form for a stakeholder to further their interest in a specific policy by utilizing their resources in their favour. There have been concerns about the role of political lobbying over climate policies as lobbyists can attempt to strengthen or weaken climate policies in their favour and weaken the burden of climate policies on the emitter. This is often attributed to the free-riding nature of climate policy: "any jurisdiction faces weak incentives to reduce emissions when it can benefit from the reductions of others" (Meng & Rode, 2019). Even though lobbying is presented as a challenge in policymaking, the lack of data on political lobbying, the lack of transparency of available data, and the uncertainty on how the data made an impact on the policy are key obstacles to quantifying how lobbying affects climate policy (Meng & Rode, 2019). Lobbying is commonly practiced by interest groups, who have a significant role in shaping proposed regulations by influencing federal rulemaking through knowledge transfer and suggestions on policy outcomes, and they can influence the final policy outcome by making changes benefiting their own interests (Yackee, 2004). Lobbying can take different forms, including political donations, participating in public forums, and providing comments on proposed policies; however, policymakers tend to be more attentive to groups with substantial resources, rather than those that account for the wider public opinion (Schultz, 1982). Thus, the continuous number of lobbying activities from the oil and gas industry continues to delay and weaken federal climate policies.

Moreover, the "regulatory capture" claims that regulatory capture happens when regulators are influenced more by the needs of regulated industries than by those of the general public since they are well-versed in the issues and procedures and frequently have access to more resources than other participants in the process (Carpenter & Moss, 2013). Interest groups can have a substantial impact on regulations that are partial to the supervised businesses and do not serve the interests of the public. This can happen when regulators are influenced by the objectives of the supervised industries rather than the needs of the public. Interest groups have a disproportional influence on policy decisions due to available resources, knowledge, and expertise, which may

lead policy choices to prioritize interest groups over the public (Baumgartner, F.R. & al., 2010). Thus, lobbying by interest groups can influence the implementation of regulations, considering that interest groups can change how strict regulations are enforced and how much money is devoted to enforcing them, which could lead to inadequate enforcement and ineffective regulation. This phenomenon is highly relevant in Canadian climate policymaking, as the oil and gas industry has the resources to lobby for weaker regulations, and result in weaker policy outcomes.

Independent Variable 3: Federalism

In the case of Canadian climate policies, decision-making is set by its constitutional division, where the Canadian government is constrained by its constitutional arrangement, which grants the provinces considerable authority on environmental jurisdiction (Liftin, 2000). Federalism has presented itself as a significant obstacle to Canada's efforts to address climate change since any "perceived incursions into provincial jurisdiction are guaranteed to provoke opposition from provincial governments" (Harrison, 2010). As a result, the federal government has historically taken a relatively narrow position of its environmental authority, especially on greenhouse gas emissions, according to Harrison. Provinces are subject to managing their environmental resources, and they control the natural resources most relevant to climate policy, including "oil, gas, and coal on one hand, and forest sinks and sites for generation of hydroelectricity" (Harrison, 2010). This constitutional limitation is a challenge to effective climate policymaking for the federal government, however, external factors including public attention have shown that the federal government tends to adopt a more activist stance when there is greater public attention towards the environment, whereas during normal periods of low salience, it tends to enact inadequate jurisdiction and thereby allocate environmental protection the provinces (Liftin, 2000). The current government is seeking to take on a more active role in federal climate policymaking compared to the previous Conservative government, however, the dialogue with provinces requires diligent work, as provinces can take drastic measures to oppose the federal government when it infringes their jurisdiction. A prime example would be the 2021 Supreme Court of Canada's decision to rule the federal carbon pricing law as constitutional, despite resistance from certain provinces (Supreme Court of Canada, 2021). Therefore, the constitutional divide of federal and provincial powers leaves climate issues in a vulnerable position and prone to be weaker, which derives from an

internally divided country on climate issues, a key factor according to Consociationalism. Thus, the continuous number of oppositions from provincial governments in the form of federalism creates significant delays and weakening of federal climate policies.

In sum, the three independent variables researched in this thesis are part of the existing literature explaining the challenges of Canadian climate policies. These variables derive from the pre-existing conditions of Canadian policymaking, due to its internal divide on major national issues, as well as a missing national ethos. The interaction between Consociationalism and Advocacy Coalition Framework is highly relevant in Canadian policymaking, as federal policies are highly contested by a highly divided country and significant advocacy work from several interest groups. The following section will describe how the three independent variables identified above have influenced the dependent variable.

3. Methods and Analysis

3.1. Methodology

To answer the research question of how the three independent variables influence the climate policy outcomes, this thesis employed a mixed-methods approach, more precisely a QUAL-Quant approach, where the qualitative analysis takes precedence over the quantitative research and guides the primary research and outcomes. The decision behind implementing a mixed methods approach derives from the desire to better illustrate the decision-making behind climate policies, i.e., qualitative methods, which is not always illustrated in numerical reports, i.e., quantitative methods. A quantitative approach is necessary to demonstrate the data on opinion polls, lobbying activities and federal-provincial negotiations, however, qualitative methods can also bring important perspectives on the decisions behind the policies, and more importantly the implementation process of the policies. Qualitative methods are a proper tool for analyzing policies tackling greenhouse gas emissions and can yield insights into gaps between public understanding and the hidden challenges the federal government faces to implement effective policies. Understanding these perceptions is important as they drive behaviours and inform policymaking (Weber, 2010).

The data was collected following a sequential contribution form, where the qualitative data, i.e., induction, was collected first to generate the theory from the observation and orient the theory to discovery and exploration. Following the qualitative data collection, quantitative research, i.e., deduction, was collected to emphasize things that can be measured and analyze the variables. The data collected through quantitative methods should validate the data collected from qualitative methods, where the input collected from the interviews was furthered research to complement the data and thus achieve triangulation and validation of the data.

The justification of the choice of variables derives from a literature review conducted on climate policymaking, primarily from the work of author Kathryn Harrison on *The Struggle of Ideas and Self-Interest in Canadian Climate Policy* (2010). Harrison conducted an analysis seeking to explain two distinct outcomes: Canada's decision to ratify the Kyoto Protocol in December 2002, and Canada's failure to date to adopt effective policies to mitigate climate change. Harrison used three domestic variables that influence policymakers' decisions: electoral incentives, political

institutions and policymakers' ideals. The literature described how electoral incentives in the form of seeking re-election and public opinion polls are heavily related to policy writing. (Harrison, 2010). Moreover, the lobbying activities from environmental groups and businesses, as well as the provinces, require active negotiation and compromises, which will affect policy-making decisions (Harrison, 2010). Following the analysis of the author's findings, the literature review for this thesis was conducted based on similar variables that are more prominent to this federal government, which resulted in the three independent variables described in this thesis. Finally, this thesis also supports the work from literature emphasizing the role of multiple non-governmental actors such as interest groups in the role of climate policies (Hochstetler & Viola, 2012). The following section will describe the process of data collection for each variable, as well as the findings of the analysis.

3.2. Data Collection

This thesis seeks to answer how public opinion, lobbying from the oil and gas industry, and the federal-provincial jurisdiction on climate issues referred to in this thesis as federalism influence effective federal climate policies. The previous chapter explained the rationale behind the influence of each independent variable on the policy outcome. Following the literature review, the first step in this mixed-methods approach includes a qualitative analysis using expert interviews in climate policies. The following section explores the rationale behind the choice of expert interviewees, and finally the findings of the interviews. Following the qualitative data collection will be the quantitative data collection, which explains the choice of data sets used to measure the degree of influence of the three independent variables on the dependent variable. The data analysis will include both the qualitative and quantitative analysis, by presenting each independent variable with the results from the expert interviews and the quantitative data analysis.

3.2.1 Qualitative Data Collection

This research followed a QUAL-Quant approach, where the qualitative analysis took precedence over the quantitative analysis. The qualitative analysis was given greater priority in this research due to the highly influential and polarizing issues surrounding climate policymaking. Expert interviews were selected as the source of qualitative data as it would allow input from experts in the field to share their opinions that quantitative analysis would not be able to illustrate in the same manner. Considering that this thesis seeks to measure independent variables that are highly influenced by subjective opinions and background experience, interviews with experts were chosen as the best method to capture those opinions. 14 experts were interviewed in the context of this thesis, which were selected based on their contribution to the field of climate policymaking in Canada, and each has a different background in the topic of this thesis. During the literature review portion of the thesis, there was a substantial number of relevant reports, panels and conferences on the topic of climate policymaking, as such, the authors of those reports and discussions were contacted to participate in this thesis. Data protection and confidentiality measures were taken during the interviews, where interviewees were asked if they had granted their consent to use their identity in this thesis or remain anonymous. The list of interviewees and the interview questions can be found in Annex A and B.

3.2.2 Quantitative Data Collection

The quantitative analysis seeks to illustrate the degree of influence of each independent variable on the policy outcome and validate the results from the qualitative analysis to reach data triangulation. Considering this thesis analyses the challenges of this current federal government, the timeline selected for data collection dates from 2015 to the present time, since 2015 was the year this current federal government was elected to power. As for data collection sources, this thesis utilized three main data sources for each independent variable and the dependent variable.

Independent variable 1: Public opinion

For the first independent variable on public opinion, election polls for the three election years of the current federal government were used, notably 2015, 2019 and 2021. To measure the degree of influence of public opinion in climate policies, the topic of climate policymaking was compared across the three election years to analyze its evolution. The data sets were gathered from Nanos Research, a large-scale research and strategy organization in data visualization since 1987. The topic of climate policy, specifically greenhouse gas emissions policies, was compared across all three election years, however, it was not possible to measure the same question for all three years, due to slight variation of question-wording in the three election polls. As such, the following questions were used to measure the influence of public opinion on climate policymaking:

2015: "Do you support, somewhat support, somewhat oppose or oppose the following: 'Increasing taxes on fossil fuels such as gasoline to reduce greenhouse gas emissions' (Nanos, 2015).

2019: "Do you support, somewhat support, somewhat oppose or oppose the following: Having new taxes on fossil fuels such as gasoline, heating oil, and natural gas to reduce greenhouse gas emissions" (Nanos, 2019).

2021: "Are you willing, somewhat willing, somewhat not willing or not willing to pay more in taxes or more for things like the price of gas to help achieve Canada's emission reduction targets on the environment?" (Nanos, 2021).

Independent variable 2: Oil and gas lobbying

For the second independent variable on lobbying from the oil and gas industry, lobbying registrations were retrieved from the Office of the Commissioner of Lobbying of Canada, which

includes a searchable registry of information reported by lobbyists. Considering that climate policies include a variety of topics that pertain to several industries, the data collection was narrowed down to lobbying registrations on the subject of "greenhouse gas emissions." This topic resulted in 4056 registrations as of July 2023, which were then filtered by year and by lobbying institution (Office of the Commissioner of Lobbying of Canada, 2023)

Independent variable 3: Federalism

As for the third independent variable on federalism, this variable was the most challenging to find a proper data set, considering that it represents a constitutional division of powers related to natural resources between the federal and provincial governments, therefore it is challenging to quantify negotiations, opposition, and agreements between the two governing bodies. As such, the solution was to quantify the federal and provincial/territorial climate policies underway and analyze commitments and agreements between the governing powers. This was done using Canada's Energy Future Report 2023, a long-term energy report modelling net zero by 2050. This report describes the Global and Canada Net-zero scenarios, including all in-place federal, provincial, and territorial climate policies. Both net-zero scenarios also include all announced but not-yet-implemented policies, to the extent possible. (Canada Energy Regulator, 2023).

Dependent variable: Policy outcome

The dependent variable measuring the outcome of climate policies reducing greenhouse gas emissions is measured by the effectiveness of the government's climate policies. There are many policies described in the 2016, 2020 and 2022 climate plans that have been announced by the federal government, however, their implementation has not taken place yet. This thesis seeks to determine this very notion of delays in effective climate policies implemented which are expected to be influenced by the three independent variables. To measure the effectiveness of policy outcomes, interviewees were asked to describe the effectiveness of climate policies, based on the theory of Auffhammer & al. on efficient climate policies. Interviewees described the effectiveness of climate policies, which was then later assessed to see if they followed the criteria by Auffhammer & al. To quantify the degree of influence on the dependent variable, i.e., the policy outcome, an analysis of the list of policies specifically targeting greenhouse gas emissions implemented and yet to be implemented developed by the Canada Energy Regulator was assessed, as described in the previous paragraph (Canada Energy Regulator 2023). The report includes the list of policies announced and list of policies developed by the federal government, therefore the policy outcome will be measured by the number of policies that have been announced but not been developed yet by the federal government and will aim to determine whether the three independent variables have influenced the number of policies not yet implemented. The following section will describe the findings of this analysis.

3.3. Data Analysis

The previous section presented the methodology used in the QUAL-Quant approach and introduced the sources of data collection for each variable. The following section will present the findings from the expert interviews, as well as the quantitative analysis of the datasets.

Figure 1, the *Degree of influence of each independent variable on the policy outcome*, illustrates the quantification of the degree of influence of each independent variable according to the 14 interviewees. The figure shows that federalism has the highest degree of influence since the greatest distribution of numerical values is situated at the third quartile and has the highest minimum value. Public Opinion has the lowest degree of influence, as it has a greater variation of numerical values, and has the lowest minimum value.



Figure 1: Degree of influence of each independent variable on the policy outcome. Source: Own data from interviews, 2023

Interviewees were asked to rank the degree of influence of each independent variable on a scale from 0 to 10, where 10 is the highest degree of influence, however, they specified that their comments are the primary explanation of the degree of influence of each variable. The following section will present the analysis of the expert interviews for each independent variable.

3.3.1. Independent Variable 1: Public Opinion

The degree of influence of public opinion in the form of the public's input to federal climate policymaking received an average ranking of 6.86 out of 10 among interviewees. Quantifying public opinion was generated using Nanos Research reports by year, which conducted public opinion surveys on various trending topics in Canada. The polling question chosen was on measuring the public opinions on increasing taxes to reduce greenhouse gas emissions, measured in all three election years. The polling question varied minimally for all three election years, but it generally aimed to rank the level of support for increasing taxes to reduce greenhouse gas emissions. Figure 2: *Level of Support from Canadians on Increasing Taxes to Reduce Greenhouse Gas Emissions for 2015, 2019 and 2021* was generated to illustrate the trends from the public on taxes related to greenhouse gas emissions (Nanos, 2015, 2019, & 2021).



Figure 2: Level of Support from Canadians on Increasing Taxes to Reduce Greenhouse Gas Emissions for 2015, 2019 & 2021 Source: Nanos Reports, 2015, 2019 and 2021

Figure 2 shows a high opposition to increasing taxes to reduce greenhouse gas emissions in 2015, the year that the current federal government was elected, and 3 years before the federal carbon pricing model was set in place. At the time there was no federal carbon pricing model, which illustrates how the public was not in favour of the policies due to poor climate literacy from the previous federal government, according to the interviewees. In 2018, Parliament passed the

Greenhouse Gas Pollution Pricing Act, thus implementing the federal carbon pricing model. The federal government also released the 2016 and 2020 climate plans during that period, which contributed to a higher degree of awareness of climate issues and climate literacy. Figure 2 shows in 2019 remarkably high support for this Act, where the climate policies are supported by the public. Nevertheless, the federal election in 2021 shows very conflicted public opinions, where opposition and support for greenhouse gas emission taxes are almost the same, with the opposition having a 3% advantage. Many factors may explain this variance, including COVID-19, inflation, housing market crisis, food insecurity and other factors. The quantitative analysis shows a slight relationship between public opinion and climate policymaking since the public tends to reflect the climate policies in place, however, other external factors also explain decision-making. The quantitative analysis also demonstrates how public opinion marginally influences climate policymaking due to the following scenarios. Firstly, the federal government established its first climate plan in 2016 and introduced the carbon pricing model in 2018 despite having little support from the public in the 2015 polls. Secondly, the 2019 polls reflect high support for greenhouse gas emissions policies, which may have influenced the government's trajectory to continue to introduce greater policies in their 2020 and 2022 plans. Finally, the federal government introduced a new climate plan in 2022 despite having a conflicted public in 2021 on greenhouse gas emissions taxes. This demonstrates how the federal government introduces climate plans without much consideration of public opinion polls, which grants the variable of public opinion a lower degree of influence. The following analysis illustrates how public opinion influences federal climate policymaking according to the interviewees.

Divided population

Even though the public may have little resources and power to express their opinions on climate issues compared to other actors, they still hold the power of electing the policy makers developing the policies. The public shares their views on climate issues through elections, as well as public forums, petitions, and other forms of communication with the government. Nevertheless, the issue surrounding public opinion is a divided population on climate issues and policies, including carbon pricing, where there is great support for the policy but hesitancy to pay more out of their pocket. Policymakers make this undecisive issue an even bigger problem when they make claims on the effects of climate policies without the data and evidence to support it, which creates

a level of distrust towards policymakers. The federal opposition party has at times connected climate policies with increasing inflation, volatility, housing crisis, and food insecurity. This creates a level of distrust and uncertainty among policymakers and policies, which divides public opinion. The population is also divided on climate issues due to climate literacy, considering that climate issues have evolved significantly over the last decade, including the science and terminology used in describing climate issues. Climate policies are often worded in a manner that is difficult for the public to easily understand, and modern technologies are not often easy to understand for the public, therefore it creates a greater division in climate terminology. Additionally, the public will not all feel the effects of climate change in an equal manner, therefore the degree of salience on climate issues will vary depending on several factors, including economic status, gender, race, sex, geographic location, and other factors. This polarization has made a difference in dividing public opinion and creating a division of desire for effective climate policies.

Degree of salience

Nevertheless, policymakers take public opinion into effect to a certain degree, not only during election season but at different moments in their mandates. When a topic has a high degree of salience during an election period, it becomes a very pressing issue for the government to quickly implement. When a topic has a lower degree of salience during non-election season, it gives the government more time to improve and work on the topic, and therefore implement it more effectively. Moreover, the public is the reason why policymakers develop their policies: for the good of the general population. Therefore, policymakers are inclined to make effective climate policies for the general population, and as such have their support in seeking re-election.

Limitations of polls

On the other side of the spectrum, policymakers are not constantly chasing public opinion as public polls do not indicate the specifics of public opinion desires in climate policies. National polls may indicate general trends of increasing desire for better climate policies, however specific acts are not illustrated in public opinion polls. The public is not looking into the details of each climate policy and voicing their discontent for each issue, therefore public opinion polls do not illustrate where the needs are for the public. Moreover, climate policies that tackle greenhouse gas emissions, such as carbon pricing, take a long time to see the effects of the policies, due to the nature of the science implications behind emissions reductions. The effects of climate policies do not always fit election cycles; therefore, it may take several election cycles before the changes are reflected, which affects the public opinion's views on a political party's climate policies. Thus, opinion polls are not always an accurate representation of climate policy orientation, considering that the public cannot always capture accurate timelines of climate policies.

Outcomes of climate policies

The public will be less reactive to climate policies when climate policies send mixed messages regarding economic benefits. For instance, the terminology used in a 'carbon tax' creates a hesitancy on how much economic revenue will it grant to taxpayers. Considering that carbon pricing is the climate policy getting the most attention in Canada, it can be dangerous for the government to rely on public opinion for one policy. Therefore, greater simplification of climate policies would increase the degree of salience of other climate policies, and not create such a divided population. In sum, as indicated previously, the public is not always extremely literate on climate issues, therefore, the degree of influence from a very divided public that is not necessarily knowledgeable on the details of climate policies grants it a lower degree of influence for policymakers implementing climate policies, compared to other influencing factors, according to the interviewees.

3.3.2 Independent Variable 2: Oil and Gas Lobbying

The degree of influence of the oil and gas industry in the form of lobbying activities to the federal government received an average ranking of 7.57 out of 10 according to the interviewees. To quantify the degree of influence of the oil and gas industry, the lobbying registry from the Office of the Commissioner of Lobbying of Canada was consulted, where the lobbying registrations were downloaded to present a data visualization of the lobbying registrations. The lobbying registrations were filtered on the topic of 'greenhouse gas emissions', which generated 4056 results (Office of the Commissioner of Lobbying of Canada, 2023). The results were labelled by industry and by year, resulting in the following figure:



Figure 3: Lobbying Registrations regarding 'Greenhouse Gas Emissions' Source: Office of the Commissioner of Lobbying of Canada, 2023.

Figure 3 shows the lobbying registrations from the oil and gas industry from 2015 to the present, which have the most significant amount compared to any other industry. The legend in Figure 3 is ordered chronologically by industries with the highest to lowest lobbying registrations regarding greenhouse gas emissions. We can see that following the oil and gas industry as the highest lobbying registrations, Climate Research Institutes ranked second on the list, and their number of registries increased over time. In 2022, when the latest federal climate plan was released, Climate Research Institutes had a significantly high number of lobbying registrations, demonstrating the great contribution of climate experts in the 2022 climate plan. The automobile, manufacturing, renewable energy and transportation industries also had a considerable number of lobbying registrations throughout the timeline, considering how these industries are very interconnected to climate plans targeting greenhouse gas emissions. The quantitative analysis demonstrates a high degree of influence from the oil and gas industry on climate policymaking due to their significant lobbying registrations compared to other industries. The interviewees also discussed the high degree of influence of the oil and gas industry in climate policy making, but they also described the importance of other actors relevant to the discussion of climate action, many of them being present in Figure 3. The following analysis illustrates how lobbying from the oil and gas industry influences federal climate policymaking according to the interviewees.

Lobbying as an effective policy tool

The act of lobbying in the context of federal climate policies is a simple exchange of communication products, knowledge transfer and interests between a lobbyist and the federal government. Lobbying registrations are transparent and made available to the public. Many are not aware that there are caps to lobbying activities, which are monitored by Elections Canada, and there are severe repercussions for engaging in improper lobbying activities. When lobbying is done correctly, it is used as a form to express concerns and interests between stakeholders and the federal government, an advantageous tool in comparison to the limited powers of the public, however the transparency from lobbying consultations is missing, and makes it exceedingly difficult to compete with this industry. When it comes to the oil and gas industry, they have a significant role in climate policymaking, as their interests directly affect climate policies. The oil and gas industry continues to lobby for greater leniency for their survival, including fossil fuels subsidies, which is a huge opposition from the public and climate experts. The oil and gas industry can lobby for weaker

policies considering they have more resources than any other industry and have strong political ties, which has even led to the threat of western separation. This industry also has the advantage of attracting many workers as it pays high salaries and heavily contributes to Canada's GDP, however employment in this sector is very geographically specific, and does not employ that many people nationally. These advantages have allowed the oil and gas industry to get away with increasing its emissions every year, the only sector doing so in Canada, and it is out of sync with its net zero goals. Experts from across sectors are calling for stronger regulations on the oil and gas industry, notably the fossil fuels subsidies. Nevertheless, the Canadian oil and gas industry is not the only challenge for Canada: oil and gas are global commodities, which are subject to market forces, and are harder for Canada to control. The oil and gas industry is not the hardest industry to decarbonize, yet it continues to ask for subsidies for its net zero goals. Canadian oil production continues to grow in emissions instead of reducing emissions compared to other industries: "The growth of the oilsands in more recent decades, with higher emissions intensity than conventional oil, shifted the overall average intensity of Canadian production higher. The share of oilsands production increased from only 27% in 2000 to 65% in early 2023" (Al-Aini, 2023). Despite introducing models targeted at reducing greenhouse gas emissions in the oil and gas industry, this industry continues to increase in emissions, which heavily shifts away from the path to net zero. As such, the oil and gas industry does have a high degree of influence on federal climate policies since its reluctance to enact fast changes in its emissions reductions and request for subsidies continue to increase greenhouse gas emissions at the national level. However, experts have called for better action to cap emissions from this industry, as they have yet to be implemented.

Influence from other actors

Interviewees have identified other actors that influence climate policymaking in Canada, including the United States, the global oil market, the automobile industry, and Indigenous people. The United States being the closest trading partner to Canada creates a strong relationship between both countries, and Canada is susceptible to their climate policies. For instance, the Inflation Reduction Act, the opposition to pipelines, and increased subsidies in the renewable energy sector in the United States have changed the direction of Canadian policymakers to remain competitive. The global oil and gas prices have also been identified as a key challenge, considering that Canada's oil is expensive in relative terms, and it is outside of Canada's control. Moreover, the

automobile industry also advocates against clean fuel standards and keeping the dependent lifestyle of car use. The automobile industry has managed to lobby for weaker fuel acts and more car-friendly infrastructures, which has been a big challenge to the demand for better public transportation. As such, it has not been possible to advocate for more affordable and effective public transportation in Canada since the automobile industry has worked to maintain the status quo of maintaining a highly car-dependent country. Lastly, Indigenous people have limited power to influence climate policies, yet their relevance in climate policies is highly influential. Indigenous people have historically been left out of negotiations on their rights, therefore greater integration of Indigenous knowledge needs to be prioritized for any government implementing climate policies.

3.3.3 Independent Variable 3: Federalism

The degree of influence of federalism in the form of opposition to federal climate policies due to the constitutional jurisdiction of natural resources received an average ranking of 8.43 out of 10, ranking the highest among the three independent variables according to the interviewees. Capturing quantitative data from available data sets was a challenge for this specific variable since this variable of federalism describes a constitutional relationship between the federal government and the provincial and territorial governments in Canada to manage natural resources. Quantifying the number of oppositions, negotiations, responses, support, or discussions between these two governing bodies required extensive research in various data sets and reports, however, there was not a single data set to properly define this variable. As such, various reports from various sources were utilized to illustrate how Federalism influences climate policymaking.

Figure 4: Federal and Provincial/Territorial Policies on Greenhouse Gas Emissions *Targets*, illustrates the number of federal and provincial/territorial policies specific to greenhouse gas emissions reduction targets from 2015 to the present (Canada Energy Regulator, 2023). The figure illustrates a general increasing trend of climate policies from both governing bodies, a trend that was also described by the interviewees. The interviewees described how the federal government has increased its climate policies to compensate for existing gaps in provincial climate policies, which unfortunately is not captured properly in this graph. To better explain this phenomenon, Figure 5: Proportion of Provinces and Territories on Track to Meet 2030 GHG Emissions Targets, was generated to show the gaps in provincial policymaking regarding greenhouse gas emissions (Dusyk & al., 2021). Figure 5 shows that out of the 13 provinces and territories in Canada, 9 have set 2030 emissions reduction plans, representing 45% of national emissions, however, only 3 of those plans are on track to meet their 2030 emissions targets, which represent less than 5% of national emissions. This scenario reveals that 95% of emissions are not covered by provincial or territorial 2030 reduction targets, leaving a significant amount of greenhouse gas emissions targets not on track. The All Hands on Deck Report explains how the lack of accountability remains a barrier to achieving climate targets (Dusyk & al., 2021), a similar response provided by the interviewees.



Figure 4: Federal and Provincial/Territorial Policies on Greenhouse Gas Emissions Targets Source: Canada's Energy Future 2023 Report, Canada Energy Regulator



Figure 5: Proportion of Provinces and Territories on Track on 2030 GHG Emissions Targets. Source: All Hands on Deck 2021 Report, Dusyck & al. (Pembina Institute)



Figure 6: Total Greenhouse Gas Emissions by Province Source: Canada's Future Energy Report 2023, Canada Energy Regulator

Following the analysis of Figures 4 and 5, we can see the influence of federalism in federal climate policymaking, since provincial governments have jurisdiction over their resources; however, their plans are not on track to reach their emissions reduction goals. This limits the federal government's capability to fill gaps among provincial climate policies, thus creating significant gaps in national emissions reductions. Provincial climate plans require effective emissions reduction plans, considering how much the provinces contribute to national greenhouse gas emissions, as illustrated in Figure 6: *Total Greenhouse Gas Emissions by Province* (Canada Energy Regulator, 2023). Thus, the quantitative analysis demonstrates that both the federal and provincial/territorial governments have introduced increasing climate plans, however poor climate policy plans by the provinces and territories are preventing the national emissions from going down, and the federal government is limited in acting due to its jurisdictional limitation. The following analysis illustrates how federalism influences federal climate policymaking according to the interviewees.
Opposition delays

Canada's constitution grants provincial governments the jurisdiction over natural resources management, leaving the federal government to fill the gaps in this sector. The current federal government has sought to compensate for the lack of climate policies from the previous federal government by implementing numerous climate policies, however, these have been met with heavy opposition. Experts have shared how clean energy regulations have been met with great opposition by provinces since they affect their provincial energy industry. Unfortunately, provincial leaders have prioritized short-term gains over long-term gains, therefore rejecting any proposition affecting their energy governance as it would affect their re-election. The provinces continue to challenge the federal government's policies by reassuring their sovereignty over their natural resources, such as the Alberta Sovereignty Act, an act by the province of Alberta to fight against federal climate policies. Nevertheless, experts share how this jurisdictional setback is not a dispute: it is a dynamic and a division of responsibility on shared issues. As such, there needs to be more outcome-based negotiations with the provinces, instead of opposition slowing down policy implementation. Experts also express a call to effort for all levels of government: federal, provincial, and municipal governments need to be held responsible for their climate plans and prioritize implementation over opposition. When a policy is met with opposition, alternatives should be quickly suggested to avoid delays and opposition.

Interprovincial barriers

Experts have also shared it is not only opposition from provinces in terms of policies, but it is also trade and energy. Many barriers within Canada prevent interprovincial trade of goods, labour and more importantly energy. Currently, each province in Canada regulates its energy with some provinces having exceptionally low-emission energy sources like Quebec and British Columbia, while others have high-emission energy sources like Alberta. Experts explained how if there was a regulatory energy body with an interconnected grid that would allow the flow of energy across the country instead of just to the neighbours to the South, it would make a difference in emissions reductions, as well as energy affordability for all Canadians. Unfortunately, a lack of an energy regulatory body as well as geographic and cultural identities have left energy regulations heavily associated with provincial powers. Thus, the weak climate policies and barriers set in place by the provinces have significantly slowed the implementation of federal climate policies, therefore having an exceedingly high degree of influence on federal climate policymaking. The following section will describe the multilevel analysis of all independent variables, illustrating the relationship between the variables and capturing the highest degree of influence.

3.3.4 Multilevel Analysis

The previous section described the data collection and data analysis of each independent variable, both by the interviewees and the statistical results in an independent matter, without considering relationships between the variables. The following section will describe the relationship factor between the variables and determine if there is a higher degree of influence among the variables. The original hypothesis of this thesis was described as the following:

H0: Public opinion, lobbying from the oil and gas industry and federalism influence the policy outcome of climate policies tackling greenhouse gas emissions.

After conducting quantitative and qualitative analysis, the research indicates that the hypothesis fails to be rejected, considering that interviewees rank all three independent variables as influential, with some variation of influence, and the data shows relationships between the independent variables. However, the data shows there are varying degrees of influence between the independent variables, and there is one variable that appears to have a greater degree of influence on the dependent variable. Interviewees ranked all the independent variables above 50%, and they shared how all three independent variables are truly relevant in climate policymaking. However, both their ranking of each variable's degree of influence and their testimonies indicate how federalism has a higher degree of influence over the two other independent variables. Interviewees shared how the provinces' jurisdiction over natural resources has delayed several federal climate policies, due to short-term political interests and interprovincial barriers. Interviewees indicated many attempts to implement federal climate policies that were met with opposition from provincial leaders, causing delays from continuous negotiations, and as such having a substantial influence in federal climate policy making.

However, both the quantitative and qualitative analyses indicate the foremost importance of non-state actors in climate policy development. Figure 3 illustrates the number of times the oil and gas industry lobbies the federal government on matters relating to greenhouse gas emissions. We see from the figure the undeniable influence of the oil and gas industry in this field considering they have the highest number of lobbying registries, however, emerging actors in the climate research field have had an increasing influence on climate policymaking, as they have the second highest number of lobbying registrations concerning greenhouse gas emissions. We see for the year 2022 a significant number of lobbying registrations across all actors, which corresponds to the year that the federal government announced the 2030 Emissions Reduction Plans. All sectors had a significant number of lobbying registrations that year, indicating a great number of consultations across all stakeholders, which could also suggest how this specific emissions reduction plan was conducted with a significant number of consultations with relevant actors. Nevertheless, many of the measures announced in the 2030 Emissions Reduction Plans have not been implemented as of July 2023, which is due to the ongoing negotiations with industries and provinces, according to the interviewees, thus illustrating their influence on climate policymaking.

Public opinion was not considered to have a high degree of influence as the other two variables according to the interviewees: they explain that policymakers do not actively rely on the public for specific measures considering that polls do not accurately illustrate where the gaps are, and the public are not experts on each policy implemented. As such, lobbying in the form of consultations and knowledge sharing is far more useful for policymakers, thus explaining how ongoing lobbying consultations influence climate policymaking. Nevertheless, interviewees shared how the provinces are the biggest influence and the biggest challenge in climate policymaking, due to the provincial jurisdiction on natural resources management. They also mentioned how the provinces and industries are often intertwined, considering that provincial governments are protective of the industries in their provinces, which leads to delays in policy implementation. In sum, the quantitative and qualitative analysis demonstrates that the three independent variables influence the dependent variable, thus achieving data triangulation, however, the qualitative analysis gave a great explanation of the degree of influence due to data set limitation in the quantitative analysis.

To analyze how the independent variables influenced the dependent variable, which is the outcome of effective climate policies, the interviewees described if the current policies integrate the specific points when implementing effective climate policies according to Auffhammer & al., including cost-benefit analysis, market-based instruments, technological innovation, distributional impacts, international cooperation, and policy design and flexibility (Auffhammer & al., 2016).

1. Cost-benefit analysis

The interviewees explained how the best example of effective climate policies is the carbon pricing system, as it is an easy-to-implement policy that is not expensive and does not involve much bureaucracy. The current model of carbon pricing is strong, but experts say the revenues could be better in the implementation process, as not all stakeholders were included. According to the interviewees, efficient climate policies are those that include flexible regulations, which can change over time. Some examples of effective policies described were the carbon tax, the zeroemissions vehicle mandate, the methane regulation of the oil and gas industry, the Canadian net zero emissions accountability legislation, and the relevant regulations about decarbonization. Ineffective policies are those that do not have flexible regulations with very specific number goals, non-compulsory policies, as well as policies that do not announce what happens after long-term commitments. Some examples of ineffective policies described were all the policies announced that have yet to be implemented and without development plans, the oil and gas cap on emissions, as well as policies that required a lot of resources and energy for little reductions, including the ban on single-use plastics. The consensus among effective climate policies is the policies that are most capable of reducing emissions and cost-effectiveness, time, resources, and political measures. Overall, the interviewees have stated that this current government has introduced more policies than the previous government, however the persisting policies yet to be implemented, specifically those targeting fossil fuels, demonstrate a certain degree of ineffectiveness in their climate plans.

2. Market-based instruments

Experts shared how improper and ineffective policies targeting the oil and gas sector are the biggest weakness in Canada's current policies, as it is the highest emitting sector with its emissions not on track to reach net-zero goals. Recommendations included strengthening the industrial carbon pricing, considering that the heavy industry and freight industry are the biggest emitters. Interviewees discussed the incentives to implement decarbonization measures among companies are lacking. There needs to be greater incentives and public training on decarbonization, considering that companies and industries have a significant role to play in reducing greenhouse gas emissions. Thus, interviewees shared how the lack of proper targeting of the oil and gas industry contributes to ineffective policy outcomes.

3. Technological innovation

There is also a need to accelerate electrification and greater transparency in how companies will meet their targets. The current government has many policies that are not sufficient for the 2030 targets for net zero emissions: electrification and decarbonization need to be better implemented to reach those goals. What remains to be implemented are better procurement strategies, which include greater demand and accessibility of cleaner technologies, and create better incentives for companies to transition to cleaner energy, according to interviewees. Greater incentives to decarbonize encourage companies to implement net-zero plans and avoid relocating abroad, which would increase the effectiveness of climate plans.

4. Distributional impacts

One of the most important criteria for effective climate policies is the distributional impacts of policies. To assess the distributional impact of climate policies in Canada, the Commissioner of Sustainable Development of Canada released a report on the federal government's carbon pricing model, which suggested that the current carbon pricing model follows the "polluter pays" principle, where the responsibility is placed on those who manufacture and generate the carbon emissions, as well as those purchasing carbon-emitting products such as oil and gas (Office of the Auditor General of Canada, 2022). The report illustrated the disproportionate effects of carbon pricing, where smaller enterprises and Indigenous groups remained disproportionately burdened, and there were very weak requirements for larger-emitter programs, which created an unequal effect of this initiative, and reduced its effectiveness. Due to a lack of transparency of information on the changes in carbon pricing, the efficiency of carbon pricing is ineffective for the Commissioner. According to the interviewees, the current model of carbon pricing is not developed at its full potential, as the distributional impacts are felt greater upon consumers, and not on the industries. This can be shown by the increasing emissions from the oil and gas industry, despite climate measures set in place. Therefore, the disproportionate effects of carbon pricing and the weak regulations towards the fossil fuel industry leave significant gaps in climate policymaking, which demonstrates how the current policies still lack work to become more effective.

5. International cooperation

Canada has a significant role to play in the international sphere and must take into consideration foreign policies related to greenhouse gas emissions, such as the Inflation Reduction Act in the United States, considering that it involves companies and industries relocating for better energy transition benefits. However, in the case of Canada, it is improper national cooperation that is causing the greatest inefficiency in climate policymaking. Opposition from provincial powers has delayed the implementation of climate policies, which allow for heavy-emitting industries to continue to increase national emissions. Negotiations with provinces heavily delay and weaken implementation, whereas there needs to be greater negotiations that result in policy outcomes, according to interviewees. This demonstrates how federalism greatly influences climate policymaking.

6. Policy design and flexibility

Policy design and flexibility are key factors in assessing efficient policies, and interviewees shared how policies that have greater flexibility in goals and measures are considered more effective. When designing policies, they need to have strong measures and accountability and be flexible for unforeseen circumstances. In light of this, the biggest challenge mentioned by experts is the poor and slow implementation of policies tackling fossil fuels. Interviewees described how the ineffective policies allowing fossil fuels to continue to receive subsidies led to this industry's increase in emissions without repercussions. However, in July of 2023, the government of Canada released the Inefficient Fossil Fuel Subsidies Government of Canada Self-Review Assessment Framework and the Inefficient Fossil Fuel Subsidies Government of Canada Guidelines, which provide specific criteria for inefficient fossil fuels subsidies, therefore Industries must comply with specific criteria to receive funding (Environment and Climate Change Canada, 2023). This specific policy has been long waited for 14 years in Canada, and it has been widely praised for finally being implemented, however, the criteria leave some significant gaps in implementation, which is a concern according to the interviewees. The interviewees shared how this announcement is a step forward in the right direction, however, lack of information on implementation measures, as well as the dangers of carbon capture, utilization and storage continue to give little restrictions to the oil and gas industry, which demonstrates its continuous influence in implementing effective climate policies. The fact that only one of the six criteria ensures efficiency shows very weak

implementation and monitoring policies, and thus weak effectiveness, according to the interviewees. In sum, the interviewees shared how overall this federal government has implemented significant policies tackling greenhouse gas emissions, however, there are remaining gaps that contribute to inefficiency, therefore more work is required to implement effective climate policies.

To quantify how the three independent variables impacted the dependent variable, Table 1. Overview of Federal Climate Policies Specific to Greenhouse Gas Emissions, was generated to describe the federal climate policies specific to greenhouse gas emissions. The table indicates that there are 7 policies implemented and 6 policies yet to be implemented, the latter representing 40% of federal policies specific to greenhouse gas emissions yet to be implemented (Canada Energy Regulator, 2023). Even though there are very few policies yet to be implemented, these policies are crucial to greenhouse gas emissions regulations according to the interviewees. Interviewees shared how specific policies like the oil and gas emission cap and strengthening of the current carbon pricing model have a significant impact on reducing greenhouse gas emissions considering that the oil and gas industry represents approximately 30% of national greenhouse gas emissions (Canada Energy Regulator, 2023). The implementation of these policies is crucial to interviewees because Canada cannot reach its emissions reduction and net zero goals without the implementation of these policies. The recent announcement by the federal government on Inefficient Fossil Fuel Subsidies Government of Canada Self-Review Assessment Framework is intended to address the oil and gas emissions cap not yet implemented, however, the announcement has not been implemented yet, and there has not been much discussion on the mechanisms surrounding monitoring and evaluation. In sum, the delays of these specific policies and improper policy monitoring and evaluation have made climate policies less effective in reducing greenhouse gas emissions, and therefore more challenging in reaching the federal government's net-zero goals. Many of these delays can be attributed to the independent variables analyzed in this thesis, with federalism having the greatest degree of influence since it has contributed to the greatest number of delays in the implementation of climate policies, according to the interviewees.

Table 1: Overview of Federal Climate Policies Specific to Greenhouse Gas EmissionsSource: Canada Energy Regulator, 2023

Policies implemented	Policies not yet implemented
Carbon pricing	Clean electricity regulations
Zero-emissions vehicle subsidies	Zero-emission vehicle mandate
Investment tax credit for clean	
technologies	National net-zero emissions building strategy
Clean fuel regulations	Oil and gas emissions cap
Coal phase-out	Methane regulations
Energy efficiency regulations	Carbon pricing
Investment tax credit for carbon capture	
utilization, and storage	

4. Conclusion

The purpose of this research was to explore the challenges that the current Canadian government faces in implementing effective policies tackling greenhouse gas emissions. Canada has a significant role to play in reducing greenhouse gas emissions considering its contribution to global emissions, yet studies have shown that there has been slowed and ineffective implementation of climate policies, despite having overcome the many obstacles left by the previous Conservative federal government. Previous literature from Kathryn Harrison, author of *The Struggle of Ideas and Self-Interest in Canadian Climate Policy* (2010) and other relevant reports indicate that public opinion, lobbying from the oil and gas industry, and Canada's federalist system influence the outcomes of climate policies specific to greenhouse gas emissions. This thesis intends to determine whether these three independent variables continue to influence Canadian climate policymaking in the context of the current federal government under Prime Minister Justin Trudeau since 2015.

The method used to achieve this research was a mixed-methods approach of expert interviews and descriptive statistics of each independent variable, notably public opinion, lobbying from the oil and gas industry, and federalism. A QUAL-Quant approach was utilized to best capture the opinions from experts in climate policymaking, as well as descriptive statistical analysis to attempt to achieve data triangulation. The summary of the findings shows that all three independent variables influence the outcome of climate policymaking, however, federalism has a higher degree of influence, which can be demonstrated by the number of delayed climate policies still yet to be implemented from ongoing negotiations and opposition, as well as the testimonies from the expert interviews.

The results from the interviews demonstrate that public opinion has the least influence on climate policymaking since public opinion polls cannot articulate the specific needs of climate policies. Interviewees also indicated the relevance of the oil and gas industry in climate policymaking considering they represent 30% of national greenhouse gas emissions, however, other relevant actors in the climate industries have increased their influence over the past years. Finally, the interviewees described how federalism has the highest degree of influence on federal climate policymaking due to the provinces having jurisdiction over natural resources, therefore they are protective of their industries.

The quantitative analysis did not capture the level of degree of influence of each variable in the same manner as the qualitative analysis, however, the quantitative analysis demonstrates the following results: Firstly, public opinion tends to illustrate the overall satisfaction of climate policies, and also indicates how climate literacy and climate relevance has significantly increased during this government's mandate, since in 2015 the public polls indicate low interest in climate issues (Nanos, 2015, 2019 & 2021). The polls also demonstrated that the government announces climate plans with slight consideration of public opinion, demonstrating a low degree of influence. Secondly, the oil and gas industry has a big influence on climate policymaking as it is the industry with the highest lobbying registrations on greenhouse gas emissions, and we see it has a high number of lobbying registrations during the years that the federal government has implemented national emissions reduction plans (Office of the Commissioner of Lobbying of Canada, 2023). However, the data also shows the significance of other non-state actors, particularly climate research institutions, who have increased their influence in climate policymaking. Finally, federalism, the highest degree of influence variable according to interviewees, is a challenging issue that involves cooperation between the federal and provincial governments, which leads to delays and opposition to climate policies. The data shows how the delays and improper implementation of climate policies have left 95% of national greenhouse gas emissions unable to meet their 2030 emissions reduction goals (Dusyk & al., 2021). Therefore, we see that both the quantitative and qualitative analysis indicate how the three independent variables influence the policy outcomes, however, greater emphasis from expert interviews shows that federalism has the highest degree of influence in climate policymaking, which has made it the greatest challenge for the federal government to implement climate policies.

This thesis also aimed to determine whether the variables presented by Harrison in 2010, who sought to explain the domestic variables that influence climate policymaking, are still relevant to today's climate policymaking by the current federal government. Harrison characterized Canadian climate policy as a "series of ambitious but unfulfilled commitments" (Harrison, 2010), and this sentiment appears to still be relevant today, according to the interviewees. Interviewees shared how they are overall satisfied with this current government's attempt to introduce numerous climate policies since 2015, considering the significant gaps in climate policies from the previous Conservative government. The current government has set in place the first national carbon pricing program, an initiative that was rejected and heavily critiqued by previous governments and has

developed national emissions reduction plans never seen before. Nevertheless, the Canada Energy Regulator and experts in climate policy highlight the necessity to quickly implement strong climate policies, not simply announcing them and delaying their implementation, including the oil and gas emissions cap, ending fossil fuels subsidies, and strengthening carbon pricing. These policies alongside better outcome-based negotiations with the provinces and industries would allow for a better energy sector across Canada and align with international standards on emissions reductions. By capping the emissions of the oil and gas sector, all while developing large-scale deployment of future technologies, Canada is on track to meet its net-zero goals, however many of these emerging technologies are yet to be commercialized (Al-Aini & al., 2022). The levels of carbon capturing are also not occurring at the rate needed to achieve net zero, therefore it is needed to implement nature-based offsets and negative emissions are energy-related (Canada Energy Regulator, 2023): stronger climate policies with evidence-based outcomes are required to reach its emissions reduction goals.

The Supreme Court of Canada's decision to grant the federal carbon pricing policy as constitutional has set an important precedent in Canadian climate policies: the Supreme Court agreed global climate change is real and is caused by greenhouse gas emissions resulting from human activities. This statement sets a great precedence for future climate policies, considering that the federal government can now better implement national emissions policies knowing that the *Greenhouse Gas Pollution Pricing Act* is constitutional and therefore within their jurisdiction. The future of Canadian climate policies is full of opportunities to be more effective, and with proper consultations with relevant stakeholders, Canada can overcome these challenges and take stronger action.

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Annex A – Interviewees

- 1. Fernando Melo, Senior Associate and Client Director at PAA Advisory
- 2. Gabriella Kalapos, Executive Director at Clean Air Partnership
- 3. Mathieu Côte, Executive Director at the Canadian Institute for Energy Training
- 4. Kris Nanda, former Senior Policy Advisor at the Office of the Commissioner of Environment and Sustainable Development
- 5. Phil Gass, Lead for Transitions Program at the International Sustainable Development Institute
- 6. Climate Policy Expert at Anonymous Institution
- 7. Policy Advisor at Anonymous Institution
- 8. Manager at Environmental Organization
- 9. Dave Gray-Donald, co-author of 'The End of This World: Climate Justice in So-Called Canada'
- 10. Phil de Luna, Adjunct Professor at the University of Toronto, Carbon tech expert.
- 11. Rachel Doran, Director of Policy and Strategy at Clean Energy Canada
- 12. Gabrielle Diner, Energy, Emissions and Economist Modeler at Canada Energy Regulator
- 13. Researcher at Anonymous Institution
- 14. Jonathan Arnold, Clean Growth Research Lead at Canadian Climate Institute

Annex B - Interview Questions

General information on climate policymaking.

- a. Describe the work you do related to climate policies.
- b. Describe how you (and/or your office/institution) have worked to advocate for more effective climate policies:
- c. Does your work deal with federal climate policies on greenhouse gas emissions?
 - a. If so, what are your general thoughts on the federal government's climate policies?
 - b. What are some of the strengths the current federal government has achieved in writing effective climate policies?
 - c. What are some of the gaps within federal decision-making on climate policies?

1st variable: Public Opinion

Canadian surveys show that most of the Canadian public consistently believes that climate change is happening¹, however social, political, and economic factors differ on how to implement effective federal climate policies. As seen in Figures 7 and 8 below, most Canadians believe that climate change should be a 'very high' or 'high' priority government priority, with over 70% of Canadians supporting this statement in 2022, and 73% of Canadians in 2021. The literature describes how the salience of climate policy in Canada depends on public opinion and trends in the global economy. ² The following questions will measure how public opinion influences climate policy writing.

 On a scale from 0 to 10, where 10 is the highest degree of influence, how much does public opinion affect your advocacy work for better climate policies? Do you think public opinion is important in the context of climate policies?

¹ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4972305/

² Advocacy Coalitions Along the Domestic-Foreign Frontier: Globalization and Canadian Climate Change Policy. Karen T. Liftin. Policy Studies Journal, Vol. 28, No. 1, 2000 (236-252).

Climate change should be a government priority



Figure 7: Percentage of population who think climate change should be a 'very high' or 'high' government priority in 2022.



Climate Change Should Be a Government Priority

Feb 2021



The level of support for climate policies has marginally changed in the past decade, as seen in Figure 10 illustrating the level of support for carbon taxes by Canadians in 2011, 2017 and 2020. The level of total support and level of total opposition are marginally close in all three years.

2. Does the level of support by the Canadian population affect your advocacy work for better climate policies? If so, how does the close margin of support and opposition to climate policies affect your advocacy work for more effective policies reducing greenhouse gas emissions?

	CANADA			
	2011	2017	2020	
Strongly support	20%	16%	29%	
Somewhat support	30%	37%	25%	
Somewhat oppose	20%	21%	14%	
Strongly oppose	26%	24%	28%	
Not sure/Refused	4%	2%	4%	
Total support	50%	53%	54%	
Total opposition	46%	45%	42%	

Figure 9: Level of Support by Canadians of Carbon Taxes between 2010 and 2020

Among the most important topics of the 2019 federal election, climate change and the environment ranked last with 62% of Canadians stating they consider this topic especially important in comparison with other issues, as seen in Figure 10 illustrating the issue salience in the 2019 federal. 3. Does the level of salience of environmental issues affect your advocacy work for more effective climate policies? If so, how does a lower salience of climate change in comparison to other national issues affect your advocacy work for more effective policies?

	VERY IMPORTANT	SOMEWHAT	
John and the Economy	(7-10)	1.406	206
Jobs and the Economy	84%	14%	2.90
Government Ethics and Accountability	82%	17%	2%
Healthcare	86%	13%	2%
Climate Change and the Environment	62%	24%	14%

TABLE ELEVEN: Issue Salience in	2019 Federal	Election in Canada
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Question wording: How important were the following issues in deciding which party received your vote in the 2019 federal election?

Figure 10: Issue Salience in the 2019 Federal Election in Canada

2nd variable: Lobbying

According to the literature, one of Canada's biggest challenges to reduce greenhouse gas emissions is the oil and gas sector. According to the Canadian Climate Institute, the oil and gas sector is out of sync with its net zero pathway, making it more difficult to meet its emissions reduction targets³. The following questions will measure how lobbying activities impact climate policies reducing greenhouse gas emissions.

- Based on this information and from your experience, on a scale from 0 to 10, where 10 is the highest degree of influence, how has the oil and gas industry affected your advocacy work for more effective policies to reduce greenhouse gas emissions?
- 2. Do you think the Federal government can have better strategies and policies to better target the oil and gas industry? If so, how?
- 3. Do you think there is another actor or institution that poses a greater challenge to reduce Canada's greenhouse gas emissions?
 - a. If so, on a scale from 0 to 10, where 10 is the highest degree of influence, how has this actor affected your advocacy work for more effective policies to reduce greenhouse gas emissions?
 - b. How has this actor in general affected the implementation of better climate policies at the national level reducing greenhouse gas emissions?
- 3. Do you think lobbying activities from other stakeholders such as businesses, Indigenous groups, environmental groups, and other actors affect your advocacy work for better climate policies?
 - a. If yes, on a scale from 0 to 10, where 10 is the highest degree of influence, how much do these actors affect your advocacy for better climate policies?
 - b. Additionally, on a scale from 0 to 10, where 10 is the highest degree of influence, how have these actors in general affected the implementation of better climate policies at the national level reducing greenhouse gas emissions?
- 4. Do you (and/or your organization/institution) engage in advocacy/lobby work?
 - a. If so, how do you advocate/lobby for more effective climate policies?

³ https://climateinstitute.ca/wp-content/uploads/2022/09/Aligning-Oil-Gas-with-net-zero.pdf

b. If you do advocacy/lobby work, on a scale from 0 to 10, where 10 is the highest degree of influence, how important is advocacy/lobby work to better implement climate policies at the national level reducing greenhouse gas emissions?

3rd variable: federal and provincial negotiation

Due to the nature of Canada's Constitution which does not list "the environment" as a subject matter specifically assigned to one level of government or the other⁴, the Government of Canada must overcome federal-provincial jurisdiction disputes to implement effective climate policies reducing greenhouse gas emissions at the national level. A notable example is the 2018 Supreme Court of Canada's decision to rule the federal carbon pricing law as constitutional, despite resistance from certain provinces⁵. As such, the dual levels of governance lead to specific issues for the different decision-making entities, which may nudge provinces to engage in coalitions. ⁶ The following questions will measure how federalism on greenhouse gas emissions policies, and negotiations with provinces affect climate policies reducing greenhouse gas emissions.

- 1. Does Federalism regarding greenhouse gas emissions regulations affect your ability to advocate for more effective climate policies?
 - c. If so, on a scale from 0 to 10, where 10 is the highest degree of influence, how much does federalism regarding greenhouse gas emissions regulations affect your advocacy work for more effective policy writing?
 - d. The 2018 Supreme Court of Canada's decision to rule the federal carbon pricing law as constitutional is a prime example of how Canadian federalism is a challenge to implement effective climate policies. Have there been any other examples where limitations to federal jurisdictions on greenhouse gas emissions regulations have been a challenge to implement effective climate policies in your advocacy work?
- 1. Do you engage in negotiations with provincial leaders/entities on climate policies?

⁴ https://lop.parl.ca/sites/PublicWebsite/default/en_CA/ResearchPublications/201386E

⁵ https://www.scc-csc.ca/case-dossier/cb/2021/38663-38781-39116-eng.aspx

⁶ Canadian energy and climate policies: A SWOT analysis in search of federal/provincial coherence.

- a. If you do, on a scale from 0 to 10, where 10 is the highest degree of influence, how much do negotiations with provinces affect your advocacy for better climate policies?
- b. How do you negotiate climate issues that fall within provincial jurisdiction? Is it different from negotiations with the Federal government?
- 2. Do you engage in coalitions with other entities/stakeholders?
 - a. If you do, on a scale from 0 to 10, where 10 is the highest degree of influence, how much do these coalitions affect your advocacy for better climate policies?

General remarks

The goal of this thesis is to contribute to the literature of policy writing in Canadian climate policies. This is a particularly major area of research, considering Canada's position in climate policies. According to the Climate Change Performance Index of 2023, Canada has ranked among the bottom in the G20 and worldwide, as shown in Figure 11. ⁷ As such, the data shows that more work can be done to improve Canadian climate policies.

- 1. In your opinion, what is the biggest challenge for Canada to implement effective policies reducing greenhouse gas emissions?
- 2. How can Canada improve its goals to reduce greenhouse gas emissions?
- 3. Do you have any other comments or opinions on the future of Canada's path to reducing its greenhouse gas emissions?

⁷ <u>https://ccpi.org/download/climate-change-performance-index-2023/</u>



Figure 11: Worldwide Greenhouse Gas Emissions Category Results Source: Climate Change Performance Index, 2023

Proposed thesis title:

An analysis of Canada's current environmental policies tackling greenhouse gas emissions

Thesis report submitted to

Mundus MAPP consortium

Thesis supervisors:

Florian Wieler, Central European University (CEU)

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Introduction

The current liberal government of Canada under the leadership of Prime Minister Justin Trudeau has set ambitious goals within their environmental policies to meet its Paris Agreement targets. This government, which has been in power since 2015, has pledged to reduce Canada's greenhouse gas emissions by 30% below 2005 levels by 2030, and a commitment to reach netzero emissions by 2050 (Government of Canada, 2022). The current Emissions Reduction Plan seeks to target each component of Canada's economy to reach its emissions reduction target and reduce its overall emissions of carbon dioxide. The plan requires each sector to reduce its greenhouse gas emissions, with the transportation and oil and gas sectors needing the most reduction. A massive reduction in emissions of those two sectors would heavily reduce the overall emissions in Canada.

However, Canada is a major producer and consumer of oil and gas, ranking 5th in the world in oil production, and 9th in the world in oil consumption (World meters, 2016). The province of Alberta's oil sands accounts for 11% of Canada's total greenhouse gas emissions, and 0.1% of global emissions (Murphy, 2019). The federal government's plan to reach these goals is highly dependent on collaboration with oil-exporting provinces, which renders the federal government's power at a limited level. Negotiation with Alberta and other oil-producing provinces in Canada has always been a challenge, considering that these provinces seek to continue to expand this energy sector, as it is a source of economic revenue and employment. Reducing the development of the oil and gas sector would be beneficial for the federal government to reach its greenhouse gas emissions targets, however, it would be a detrimental political and economic move since the oil and gas sector heavily contributes to Canada's economy, and plays a crucial role in political campaigns. The oil and gas sector has a strong lobbying power in dictating environmental legislation in Canada since it finances political campaigns to dictate legislation in its favour. Shifting towards cleaner technologies requires substantial funding for the development of such technologies, however, it is argued by many experts that not enough effort is being made at the speed required. There have been many calls to take greenhouse gas emissions reduction more seriously due to the natural catastrophes that intensify every year, as well as the danger of dependency of relying on a non-renewable energy source that highly dictates inflation, which

affects the high prices for goods and services of not just Canadians, but at an international level. The movement towards renewable energy has been advocated for in many parts of the country, however political motives and insufficient strategies to deploy greener technologies have made the transition much more challenging. As such, the federal government has limited powers in narrowing down the power of the oil and gas sector, which may further its course towards cleaner technology, and thus become more challenging to achieve its net-zero emissions goal for 2050. Since the federal government cannot intercede in the lobbying tactics of the oil and gas sector, it cannot seek stronger environmental policies that reduce greenhouse gas emissions. Therefore, the drafting of environmental policies reducing greenhouse gas emissions is heavily restricted to satisfy the interests of the oil and gas industry and continue financing political needs. The oil and gas industry has successfully lobbied against significant legislation seeking to reduce greenhouse gas emissions. These include the delays, weakening and killing of carbon pricing proposals in 2019, adding fifty-five megatons of methane emission, weaker water protection laws, the exemption of high carbon projects, and the replacement of weaker protection policies for land, air and water (Environmental Defence Canada, 2019).

Taking into consideration the lobbying powers that exist in the drafting of greenhouse gas emissions policies at the federal level, it poses the question if the current environmental policies drafted are sufficient to reduce Canada's greenhouse gas emissions and meet its proposed targets. The ambition of this paper is to provide an analysis of the policy outcomes from the insider and outsider lobbying strategies of the oil and gas industry, as well as the policy impact from the current environmental policies seeking to reduce greenhouse gas emissions. In addition, this research aims to enrich the drafting of environmental policy, by highlighting the necessity to include evidencebased policymaking through the incorporation of consultations with different stakeholders. This paper will analyze the policy impact of the lobbying powers of the oil and gas industry by focusing on the continuous funding to this specific energy sector every year, even if the government advocates reducing its development, using quantitative and qualitative methods. I will give an overview of the current environmental policies drafted by the current government, which includes the targeting of the oil and gas sector with the use of the current federal carbon pricing program, since 2019 (Government of Canada, 2022). I will conduct quantitative research to determine if there has been a significant reduction in greenhouse gas emissions since the implementation of the carbon tax and to analyze the investments intended for the development of the renewable energy

sector from the revenue generated by the carbon tax. I will also conduct qualitative research by interviewing different experts in environmental policy, to obtain the opinions of government officials who draft environmental policies, and non-governmental experts who argue that the current environmental policies are not sufficient to reduce Canada's greenhouse gas emissions. Based on my findings and outcomes of the interviews with the environmental policy experts, I will identify other directions to further my research and support my analysis.

Hypothesis

This research will follow an interpretive approach, which will seek to 'puzzle out' the efficiency behind environmental policies designed to reduce greenhouse gas emissions. As such, there is no current formalized hypothesis, considering that the expectations will drive the research. The research question, which is whether the current environmental policies are sufficient to reduce greenhouse gas emissions and meet its targets, may evolve as the collection and review of relevant data. The research will be done following a mixture of quantitative methodology, which includes the analysis of the federal government reports about their environmental policies, as well as independent reports from non-government entities that provide critical research on the government's energy policies, as well as following a qualitative methodology by conducting interviews from different experts on this topic from the government and non-government sector. The development of the research question has been formulated because of the complexity of climate policies, and ongoing changes in the scientific community, as well as differing political practices, particularly in Canadian politics. Canada faces many challenges to strengthen its environmental policies all while being a top exporter of petroleum, therefore this work seeks to 'puzzle out' the complexity of this very important issue in a time where environmental issues are taking greater importance in the political arena around the world.

Policy context

1. Pan-Canadian Framework on Clean Growth and Climate Change (2016)

In December 2016, the Liberal government under the recently appointed Prime Minister Justin Trudeau adopted the Pan-Canadian Framework on Climate Clean Growth and Climate Change, which was built on four pillars: "pricing carbon pollution; complementary actions to reduce emissions across the economy; adaptation and climate resilience; and clean technology, innovation and jobs" (Government of Canada, 2020). In the drafting of the framework, many key moments were needed and calculated to anticipate the emissions trajectory towards the 2030 goals, which included federal measures for increasing energy efficiency of equipment in buildings; Ontario's commitment to join the Western Climate Initiative cap-and-trade system; Alberta's coal phase-out, carbon levy, and oil sand emissions cap; and British Columbia's low carbon fuel standard (Environment and Climate Change Canada, 2016).

As of 2022, 6 years after the conception of the Pan-Canadian Framework, there have been notable investments in energy efficiency in buildings from the Ministry of Natural Resources Canada, through the implementation of the Energy Efficient Building RD & D, an investment of 182 million CAD to increase energy efficiency by accelerating the development and adoption of greener technologies, provide cost-effective solutions and build according to net-zero building codes (Natural Resources Canada, 2020). However, the other components of the federal measures to anticipate the emissions trajectory towards the 2030 net-zero goals were not as successful.

In 2017, the province of Ontario joined the neighbouring province of Quebec and the state of California to join the Western Climate Initiative (WCI) cap-and-trade market, which allowed those three actors to harmonize regulations and reporting of greenhouse gas emissions (Government of Ontario, 2017). This initiative would have allowed the three leaders to set in place a cap on greenhouse gas emissions, incentivize job creation, have easier trading partners, and promote effective collaboration. However, in 2018, with the arrival of a new provincial government, the Government of Ontario passed legislation to repeal the province's cap-and-trade system, which generated close to 3 billion CAD in a series of cap-and-trade auctions since the implementation of the system (The Canadian Press, 2018). By passing the *Cap-and-Trade Cancellation Act*, the

government established its own greenhouse gas emissions targets, by creating A Made-In-Ontario Environment Plan, which according to the Ministry aligns with Canada's 2030 targets (Office of the Auditor General of Ontario, 2021). However, the Auditor General of Ontario analyzed the development of the Plan, and found the Ministry's projected emissions forecast was not supported by sound evidence: it follows a 'business-as-usual' plan where renewable energy contracts have been cancelled, low carbon vehicles programs have been discontinued, an improper calculation of higher costs in natural gas, an overestimation of emissions reductions overlapping in different sectors, and a lack of evidence-based programs aimed to reduce emissions (Office of the Auditor General of Ontario, 2021). The Office found a lack of experts appointed to manage the new Plan and did not take into consideration federal and provincial decisions that would impact their Plan. Hence, the argument for cancelling the Cap-and-Trade program for a Made-In-Ontario is heavily flawed in the policy-making process, and it is not set to reach its targets. As such, Ontario's participation in the Western Climate Initiative cap-and-trade system sets the federal government back in reaching its carbon neutrality goal.

Another element of the emissions trajectory towards the federal government's 2030 goal was Alberta's coal phase-out, carbon levy and oil sand emissions cap. In 2015, the government of Alberta maintained its promise by setting out the Climate Leadership Plan, which included phasing out all pollution from burning coal and transitioning to renewable energy; maintaining reasonable stability prices to consumers and businesses, a price on carbon, an overall oil sand emissions limit, and a methane reduction strategy (Government of Alberta, 2015). These initiatives, proposed by the former New Democratic Party government of Premier Rachel Notley, were set to have a significant impact on reducing Canada's greenhouse gas emissions, considering that Alberta's oil and gas industry is the main emitter of greenhouse gas emissions in the country. However, much has passed since 2015, considering that in 2019, the United Conservative Party under the leadership of Premier Jason Kenney won the provincial election, which would drastically impact environmental policies both at the provincial and federal levels. Alberta Energy Regulator, the province's energy watchdog, reported significant amendments to emissions regulations by the government that had a detrimental effect on complying with reporting deadlines on methane emissions. Due to the COVID-19 pandemic, the government of Alberta suspended temporarily environmental assessments to ensure the population had access to energy sources during the pandemic in 2020 (Government of Alberta, 2022). These suspensions of reporting on methane

emissions have created data gaps in tracking how much methane was emitted and has been underreported for the year 2020. There has been a 45% reduction in methane emissions since 2015, however the under-reporting of emissions in 2020 has now created uncertainty on the current methane emissions, and a sense of doubt about reaching the 45% reduction in methane emissions target by 2025 (Alberta Energy Regulator, 2022). This lack of reporting heavily influences the federal government's ambitions within the Pan-Canadian Framework on Clean Growth and Climate Change and may set the government back in reaching its carbon neutrality goal.

The final component of the federal government's emissions trajectory toward its 2030 goal was British Columbia's Low Carbon Fuel Standard Act (BC-LCFS). This act, set in place in 2010, was introduced to reduce the carbon intensity of fuels used in the province to reduce its reliance on non-renewable fuels and has targets that decline each year (Rensing, 2019). It has been the province's most successful emission reduction initiative to date: it has reduced British Columbia's annual greenhouse gas emissions from the transportation sector by an average of six percent per year between 2010 and 2020 and is expected to drive 31 percent of British Columbia's 2030 greenhouse gas reduction targets (Juan Ding, 2022). With British Columbia leading the example as the most successful emissions reduction plan in Canada, it works in parallel with the federal government's policy on *Clean Fuel Regulations (CFS)*, which requires gasoline and diesel primary suppliers to reduce their carbon intensity. However, the development of Canada's Clean Fuel Standard has not been received positively by all: it has been argued that the current CFS draft could be transformed into another subsidy for fossil fuels. The draft "virtually ensures that fossil fuels, not low-carbon alternatives, will be the single biggest beneficiary: fossil fuel producers can double-count actions already taken in response to other policies, including industrial and consumer carbon prices" (Kim & al., 2022). It continues the dependency on subsidized oil and gas emissionreduction project investments, which only continues the reliance on non-renewable energy. It has been argued that the government needs to set a higher target and ensure that "fossil fuels do not dominate CFS compliance actions" (Kim & al., 2022). As such, British Columbia's LCFS has been deemed successful in reducing greenhouse gas emissions, however, its trickle-down effect on Canada's greenhouse gas emissions targets does not seem to be as effective.

2. A Healthy Environment and a Healthy Economy (2020)

To strengthen the pathway toward reducing greenhouse gas emissions, the federal government released a new environmental strategy in 2020 called "A Healthy Environment and a Healthy Economy" to establish a series of interim emissions reduction targets at 5-year milestones toward that goal (Environment and Climate Change Canada, 2020). The new plan continues to work on previous themes presented in the previous 2016 plan, including home retrofits to reduce energy consumption, making zero-emission cars more accessible and affordable and investing in clean power. The plan highlights the costs associated with climate change, and how this plan returns proceeds to investing in renewable energy, as well as back in the pockets of Canadian taxpayers. Throughout the COVID-19 pandemic, priorities have shifted, notably in energy use, which has created the need for the Canadian government to shift gears and propose a new plan taking into consideration the current energy crisis and keep on track with their carbon neutrality goals.

3. 2030 Emissions Reduction Plan: Clean Air, Strong Economy (2022)

The Canadian government has produced the 2030 Emissions Reduction Plan, to keep track of its previous policies and continue its goal to carbon neutrality by 2050. The plan continues to work on previous goals, including the price of pollution, energy-efficient building, and transitioning to renewable energy in different sectors. The plan also provides innovative nature-based solutions, incorporating Indigenous climate leadership and Indigenous submissions, provincial and territorial cooperation, international cooperation, and a Gender-Based Analysis seeking to strengthen the policies proposed (Environment and Climate Change Canada, 2022). The oil and gas sector continues to contribute to Canada's greenhouse gas emissions, and the government has committed to continue to cap emissions, advance carbon capture, storage, and utilization, further reducing methane emissions, increase employment opportunities in the clean energy sector, and eliminating subsidies for fossil fuels. The last proposal to end subsidies to fossil fuels abroad by the end of 2022 has been taken on by 20 countries at COP26, which has been received as a historic move towards ending energy dependency on non-renewable energy (Abnett & Jessop, 2021). This is certainly an ambitious goal to bring the government closer to reaching its carbon neutrality, nevertheless, the lobbying powers from the oil and gas industry remain powerful in Canada and abroad. The federal government faces the great challenge of the strategies employed by the oil and gas lobbying groups that have successfully managed to alter legislation in their favour.

Considering the ambition of this paper to describe the policy outcomes from the insider and outsider lobbying strategies of the oil and gas industry, as well as the policy impact from the current environmental policies seeking to reduce greenhouse gas emissions, further research will be developed on the successes from the lobbying strategies of the oil and gas industry in Canada, and how it has shaped current environmental policies.

Initial literature review

The concept of carbon pricing in Canada is a contemporary issue, with the current federal carbon tax having received royal assent in 2018. Officially known as the Greenhouse Gas Pollution Pricing Act: An Act to mitigate climate change through the pan-Canadian application of pricing mechanisms to a broad set of greenhouse gas emission sources and to make consequential amendments to other Acts, it sets in place a price on pollution across Canada, where provinces and territories can design their own pricing systems, or can choose to implement the federal pricing system (CanLII, 2022). The revenue from the price on pollution initiative is returned to the province or territory where it was collected: provinces or territories that have set in place their own carbon pricing system will receive their revenue from their respective jurisdiction, whereas the provinces or territories that follow the federal carbon tax system will receive the proceeds from the federal government, which is returned to individuals, families and businesses in the form of payments and climate action programs (Government of Canada, 2022). The federal carbon tax has been highly contested by primarily conservative provinces, who argue that the high price of gas is a financial burden for families trying to make ends meet with the excessive cost of food and services. After numerous appeals to remove the carbon tax, including the provinces of Alberta, Ontario and Saskatchewan challenged the constitutionality of the Act, the Supreme Court of Canada ruled that the federal carbon pricing law is constitutional, and the Supreme Judges found that "global warming causes harm beyond provincial boundaries and that it is a matter of national concern under the 'peace, order and good government' clause of the Constitution" (Supreme Court of Canada, 2021). As a consequence of this ruling, provinces and territories are subject to the federal government's price on pollution, or they may set in place their own carbon regulations that conform with the standards set in place by the federal government.

The federal government has chosen to follow a carbon pricing model to manage its greenhouse gas emissions due to several beneficial reasons. Carbon pricing is a simple and administratively easy policy to implement to control the externalities associated with greenhouse gas emissions, which may include the overall reduction of greenhouse gas emissions, as well as improving local air pollution and reducing overall natural catastrophes associated with this resource including oil spills and the effects on marine, wildlife and human health. It is also a way to reduce dependency on a non-renewable source of energy that is highly imported and exported around the world, is subject to geopolitical wars, and is subject to high price volatility, which

heavily dictates inflation and thus the price of all our goods and services. Finally, carbon pricing is also a way to alter consumer behaviour on gasoline consumption since a carbon price would increase gasoline prices. Nevertheless, carbon pricing is difficult to monitor considering that consumers respond little to rising gasoline prices in the short run: There is a need to analyze the effects in the long run or require a substantial increase in carbon pricing to reduce significant fuel consumption (Li et al, 2014). There are socioeconomic, political, demographic industrial variables that render gasoline prices a very inelastic phenomenon, where the demand for the good does not change depending on the price, considering that gasoline is necessary for all aspects of our modern society. As such, there are disproportionate effects of carbon pricing on different populations. Rural and remote communities do not have as much access to public transport and must drive longer distances than urban communities, which makes it more challenging to consume less gasoline. Moreover, the lack of affordable public transportation connecting Canada is nearly nonexistent: Canadians have to pay extremely high prices for trains connecting only major cities, and buses are no longer an option in many provinces. As such, is not possible for Canadians to simply reduce their consumption of gasoline by taking public transport, as the alternative is nearly more expensive than driving a vehicle. Therefore, carbon pricing has its limitations in determining consumer behaviour.

With the federal government setting environmental policies such as the federal carbon pricing law, it is important to analyze whether there has been a significant reduction in greenhouse gas emissions since the implementation of these policies. Different entities aim to analyze such data, including the Office of the Auditor General of Canada. The Auditor General of Canada appoints every seven years a Commissioner of the Environment and Sustainable Development, to conduct performance audits. These include the sustainable development strategies of the federal departments, the federal government's engagement in environmental and sustainable development issues and overseeing the environmental petition process (Office of the Auditor General of Canada, 2022). The Commissioner conducts independent reports to analyze the federal government's programs on environmental affairs, and table their findings to the Parliament of Canada, as well as for the public to consult. The most recent report published by the Commissioner was on carbon pricing, and the report highlighted its main findings on the federal government's track record on this topic. Carbon pricing follows the "polluter pays" principle, where the responsibility is placed on those who manufacture and generate the carbon emissions, as well as those purchasing carbon-
emitting products such as oil and gas (Office of the Auditor General of Canada, 2022). The most recent report from the commissioner illustrated the disproportionate effects of carbon pricing, where smaller enterprises and Indigenous groups remained disproportionately burdened, and there were very weak requirements for larger-emitter programs, which creates an unequal effect of this initiative, and reduces its effectiveness. Due to a lack of transparency of information on the changes in carbon pricing, the efficiency of carbon pricing is considered to be ineffective by the Commissioner. Therefore, greenhouse gas policies in the form of carbon pricing have been contested as not being as effective as they are presented by the federal government.

The federal government addressed in 2021 the issue of lack of transparency presented by the Commissioner by passing the Canadian Net-Zero Emissions Accountability Act: An Act respecting transparency and accountability in Canada's efforts to achieve net-zero greenhouse gas emissions by the year 2050. This Act, which received Royal Assent on June 29, 2021, sets out the Government of Canada's commitment to achieving the target for 2030 by the Paris Agreement and highlights its reporting obligations under the United Nations Framework Convention on Climate Change to publish the biennial transparency report, as well as domestic reporting obligations under the Greenhouse Gas Pollutions Pricing Act (Minister of Justice, 2021). This act aims to improve transparency and accountability regarding greenhouse gas emissions and describe its action plan to reach its net-zero emissions goal by 2050. The progress reports must include progress reports for the year 2025 and contain an assessment of the progress towards the 2030 greenhouse gas emissions target. When making recommendations, the Minister of the Environment and Climate Change must consider an advisory composed of different experts including climate and energy scientists, as well as Indigenous leaders (Minister of Justice, 2021). The Commissioner of the Environment is responsible for monitoring these reports at least once every five years to examine the measures aimed at mitigating climate change, including the reports on the greenhouse gas emissions targets. Even with the effort from the federal government to remain transparent in its reports on greenhouse gas emissions, the Commissioner still deems the reports unsatisfactory in terms of transparency, and the burden of carbon pricing is disproportionate upon vulnerable populations.

The federal carbon pricing model is not the only method that the federal government has set in place to reach its net-zero targets: it has implemented a series of programs and strategies to invest in cleaner renewable energy to offset greenhouse gas emissions at a national level, as well as assisting provinces and territories. For instance, the federal government funded 2.2 billion dollars to the Low Carbon Economy Fund, a project that supports the reduction of greenhouse gas emissions by identifying emissions reduction projects to receive funding, as well as offering rebates on the purchase of approved energy-efficient products (Environment and Climate Change Canada, 2022). With these investments funding a pathway toward clean energy, Canada set a course toward becoming carbon neutral, however, some experts argue that there is more work to be done. Clean Energy Canada, a climate and clean energy program at Simon Fraser University, recommends that the federal government fast-track the process by limiting the use of fossil fuels to produce electricity and increasing the uptake of clean electricity sources (Clean Energy Canada, 2021). They argue that there is a need to install new generation energy-efficient technologies to meet their goals, all while having active consultations with different stakeholders, including Indigenous people. Transitioning to clean electricity would reduce the dependency on oil and gas, encourage competitive markets, reduce inflation, and be better prepared for the rise of gasoline prices during global recessions. Additionally, the Pembina Institute, a national non-partisan think tank advocating for clean energy transition policies, highlights the pledge of oilsands companies to reduce absolute emissions, however, the road is quite challenging without evidence-based policymaking (Pembina Institute, 2022). The Pembina Institute supports the Oil and gas emissions cap, a policy implemented by the federal government, which will focus on caps on emissions, rather than production, to maximize opportunities for investments in decarbonizing the sector (Environment and Natural Resources Canada, 2022). The Pembina Institute argues that by capping the emissions of the oil and gas sector, all while developing large-scale deployment of future technologies, Canada is on track to meet its net-zero goals, however many of these emerging technologies are yet to be commercialized (Pembina Institute, 2022). The levels of carbon capturing are also not occurring at the rate needed to achieve net zero; therefore, it is crucial to implement nature-based offsets and negative emission technologies as 2050 approaches.

In sum, the federal government has set an ambitious goal to reach carbon neutrality by 2050, and the policies implemented seem promising in getting to those goals, however, there are many gaps highlighted by experts indicating the gaps in knowledge on this topic, and the work that still needs to be done to achieve net-zero emissions by 2050. The research and collection of data will be continued following the submission of this thesis report.

CEU eTD Collection

Methodology

The research methodology will include qualitative methodology through interviews with different experts on environmental policies. The aim is to obtain five to ten interviews from a variety of experts on the topic, including environmental policy advisors at the federal level who draft the environmental policies, a few research experts on climate and renewable energy, as well as environmental experts working in the non-for-profit sector advocating for stronger policies.

The methodology will consist of analyzing some explanatory variables to answer the research question. The methodology will include completing the following steps, which are subject to change throughout the research and feedback received:

1. First, I will delimit my scope starting from 2015: the year the current Prime Minister Justin Trudeau came into power and began enacting environmental policies under his liberal government.

2. Second, I will analyze the environmental policies intended to reduce greenhouse gas emissions, notably Canada's federal carbon pricing, and determine if it has made significant reductions to greenhouse gas emissions since its implementation.

3. Third, I will analyze the biggest emitters contributing to Canada's greenhouse gas emissions, notably the oil and gas industry. I will seek information on the lobbying powers from the oil and gas sector, primarily how the oil and exporting provinces, including Alberta, Saskatchewan and Newfoundland and Labrador, manage to exercise their power to limit the federal government to strengthen their environmental policies tackling greenhouse gas emissions.

4. Fourth, to diversify the data from the federal government, I will analyze the reports from independent experts who diligently examine the environmental policies presented by the federal government. These would include the reports of the Commissioner of the Environment, as well as other independent research, and think tanks that work in the clean energy sector.

5. Additionally, after conducting the preliminary review of the reports of the independent research and auditing entities, I will seek expert knowledge from the authors of those reports, and conduct interviews with them, to listen to their expertise and see how the federal government's environmental policies tackling greenhouse gas emissions can be stronger. I will also seek to determine if there is enough effort being made to transition to renewable energy. This will be determined by seeing if the current transition and investment into cleaner technologies is being implemented at the required speed, according to the experts interviewed.

6. Finally, after conducting the preliminary literature review and completing the interviews with various experts on this topic, I will assemble the findings and then determine whether the current Canadian environmental policies on greenhouse gas emissions are efficient enough.

Interviewees selection

To obtain a variety of environmental policy expertise, I aim to seek different opinions from different specialists on the efficiency of Canada's current environmental policies on greenhouse gas emissions. The desire is to have the opinion of those who write environmental legislation and describe why the current environmental legislation is strong enough to reduce greenhouse gas emissions, as well as to have critical opinions from experts who argue that the current environmental policies are not sufficient and seek their input on better strategies. The scope will be limited to policy writers and critics at the federal level on environmental policies on greenhouse gas emissions, and non-governmental experts whose work includes providing policy recommendations to improve the current policies proposed by the federal government. The goal is to have five to ten interviewees, which will include two to five government officials involved in the drafting of environmental policies and two to five non-governmental experts who advocate for better policies. The potential interviewees will consist of:

Government interviewees: (removed for data privacy)

Non-government interviewees: (removed for data privacy)

Having a variety of government and non-governmental opinions will provide a better understanding of the efficiency of the current environmental policies: the opinion of the government officials who write environmental policies, and those who advocate that the current policies are not enough.

Work plan

- a. June 2022 August 2022: Conduct an initial literature review.
- b. August 2022: initial consultation with thesis supervisors
- c. October 2022-December 2022: redaction of interview questions and conduct interviews
- d. January 2023 March 2023: analysis of interviews
- e. April 2023 June 2023: Final analysis and draft of thesis report
- f. July 2023: Submission of thesis report

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